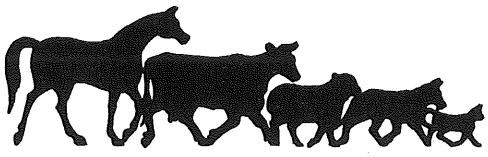


NORTHERN VALLEY ANIMAL CLINIC

J.W. BENNETT, DVM
K.F. NIGON, DVM

M.D. HERMAN, DVM
B.G. TREDER, DVM

September 7, 1995

Mr. Mike Michaud , Staff Engineer
State of Minnesota Public Utilities Commission
121 Seventh Place East
Suite 350
St. Paul, MN 55101-2147

Dear Mr. Michaud:

Thank you for the opportunity to be of service in your herd assessment project. In my enclosed report, I have tried to address all the points of the Attachment A and have attempted to limit my comments to those points that were raised. As you will see, the tables and graphs make for a rather lengthy report. The data provided in the graphs was based on my judgment of pertinent data to be graphed based on what was requested.

There is one small problem with two pieces of data for cow #403, specifically the blood sample results for calcium and magnesium were erroneous. The other seven indices for cow 403 were accurate values. I apologize for this. The reason for the erroneous readings on calcium and magnesium were a sample handling error on my part. I would suggest that it is not a significant enough deficiency to require any further work. However, since I am required by contract to provide that data, I would be willing to resample that cow if needed. Please advise me if this is necessary.

I hope you find this report useful and complete. If you have any questions about anything in the report, please call me.

Thank you.

Sincerely,

James W. Bennett, D.V.M.

1303 EAST CIRCLE DRIVE • ROCHESTER, MINNESOTA 55906 • TELEPHONE (507) 282-0867 OR (507) 876-2898

HERD ASSESSMENT PROJECT - Donald Wolbeck Farm

September 5, 1995

INTRODUCTION

This report is intended to satisfy the requirements laid out in Attachment A. All data was either collected from the Public Utilities Commission , the Wolbecks, on farm assessment, or from blood sample results. No other data has been collected and interpretations of data and comments concerning data are limited only to that data that was provided or collected and are only provided when requested in Attachment A. This is not meant to be an exhaustive herd evaluation report. There is much additional information that would be required to evaluate the general health and productivity of the Wolbeck herd.

I. MILK PRODUCTION DATA

A. Appendix A, pages A-l through A-20 are a tabular summary of milk production data from the Wolbeck farm from November l6, 1993 through June 30, 1995. Milk per cow per day was calculated by dividing total pounds of milk by number of cows milking by number of days included in pick up. Milk production per day is demonstrated graphically on pages A-2l through A-40. Total pounds per day , number of cows milking , and milk per cow per day are indicated by various patterns on the bar graph.

B. An analysis of the milk production data for November l6, 1993 through June 30, 1995 suggests fairly stable production in pounds of milk per cow per day ranging from approximately 35.2 pounds minimum to approximately 48.3 pounds maximum. Typical production during this time period was approximately 40 to 44 pounds per day. Data presented in the December l, 1993 report showed milk production ranging from 37 to 42.3 pounds. Thus the milk production for the two time periods in question are relatively similar although individual daily production is occasionally higher during the time period from November l6, 1993 through June 30, 1995. I would not consider there to be any significant trends or changes presented by these graphs.

C. Milk quality data provided include somatic cell count, plate loop counts, sediment count, and cryoscope reading as well as bulk tank cultures . Normal values for somatic cell counts will vary. However, in order for milk to be sold to a processor, the somatic cell count needs to be under 750,000. The numbers are reported in thousands on the load tickets provided and on the table starting on page A-l and ending on page A-20. Higher somatic cell counts indicate white blood cells in the milk. Typically, white blood cells in the milk are found in response to mastitis causing organisms. Typically, an individual cow is considered to be infected if her somatic cell count is somewhere over 200 to 400 thousand. While we would obviously like to see herd somatic cell counts as low was possible, it is not unusual to see four to five hundred thousand somatic cells per milliliter of milk in bulk tank milk on Minnesota dairy farms. From November l6, 1993 to June 30, 1995, somatic cell counts on bulk talk milk varied from approximately l90,000 to 700,000 cells per milliliter of milk. Counts seem to be highest in the Spring months, in fact, the highest readings are recorded in April, 1994 and again in July, 1994. Comparing this to data presented in the 1993 report, we see that somatic cell counts ranged from 230,000 to a high of 480,000. This is somewhat higher than was seen in November, 1993, and somewhat lower than was seen in October and November of 1994. Nevertheless, the differences in somatic cell count are fairly insignificant and I wouldn't consider there to be a significant difference between these numbers in the 1993 report to what we see in the report today.

Plate loop count reported as PLC on the Table starting on page one is a bacteria count measure that is recorded at the processor. Again, it is reported in thousands on the Table. Normals are less than l00,000, although we typically see counts on dairies below l0,000. Plate loop counts from November, 1993 through June 30, 1995 varied from l,000 to 34,000. Plate loop counts on the 1993 report varied from 2,000 to

4,000. It is difficult to make an accurate comparison between the 1993 data and the current data because we only have two data points in the 1993 report.

Sediment reported as SED on the Table starting on Page One is a measure of sediment or foreign particles in milk . According to Kraft General Foods in Melrose, acceptable milk will have a sediment of less than four. Sediment was recorded as one for the entire time period from November 16, 1993, through June 30, 1995. It was also recorded as one in the 1993 report.

Cryoscope reading is reported as CRY on the Table. This is measure of added water in the milk according to Kraft General Foods. Acceptable milk has a cryoscope reading of greater than 535. Cryoscope readings for November 16, 1993 through June 30, 1995 varied from 535 to 547. Again, there were only two data points in the 1993 report. They were 538 and 546.. I would not consider there to be a significant difference between the 1993 data and the current data.

Bulk tank culture reports from December 9, 1993 through June 7, 1995 show a pattern of primarily environmental and skin inhabitant bacteria in the bulk tank. Occasionally, staphylococcus aureus was identified which is a contagious pathogen and often results in culling of affected animals. Staphylococcus species is a normal inhabitant of bovine skin and human skin and often gets into the milk supply during milking. Keeping teats clean and especially dry before attaching units helps keep the levels of these bacteria fairly low. Coliforms, non-coliforms and the category mold/bacillus are environmental organisms, that is, they are found in the environment of the cow. Again, keeping teats clean and dry when attaching units will keep these organisms out of the milk supply. The environment in which the cow is found also effects the levels of these organisms in the milk because cows can become infected between milkings. Thus, the levels of these organisms in milk can reflect both the environment of the cow and the milking hygiene of the producer. The environmentals as well as staphylococcus species are also effected by the performance of the milking equipment found on the dairy. The pattern of organisms found in the milk on this dairy is common in midwestern dairies. The two reports found in the 1993 report show a similar type of pattern. I would not consider there to be a significant change in the pattern of bacteria found in the milk on the current reports versus the 1993 report.

II. **BLOOD SAMPLE DATA**

A. A tabular summary of blood sample data is provided in pages A-41 through A-43. A graphical analysis of blood sample data is provided from pages A-44 through A-67. (no pages A68-69)

Note that cow 403 has calcium and magnesium levels reported as erroneous . These levels should be disregarded due to a sampling handling error.

B. Normal values for each blood parameter are listed at the top of the Table on page A-42. On page A-41 is a table of values taken from the November, 1993 report. Normal values are provided at the top of the Table. Notice that normal values reported in the 1993 report do not always agree with normal values as provided to me by Wolff Labs for the current time period. Normal values for blood parameters in the cow need to be provided by the laboratory running the analysis and it is possible that over time those values may change . Therefore, it is not unusual that the range of normal values may be slightly different for some of the parameters. Page A-43 shows a comparison of blood sample values for the eight cows that were tested both in 1993 and again in 1995.

Diagnostic value of each parameter on an individual basis is somewhat difficult to ascertain. In very general terms, the following is a brief description of what some of the values could mean:
Albumin is a blood protein and it may reflect levels in the diet or it may reflect organ function in the cow. Its value can also be effected by dehydration. Globulin is also a protein, but globulins are proteins that function in the immune system. Levels may be related to the amount of challenge the immune system is

under or may be related to the function of the immune system. Blood urea nitrogen or BUN can be a function of dietary protein or can be a function of organ function.

Total protein can be related to dietary protein, organ function or immune system function or immune system challenge.. Magnesium can be related to dietary intake or organ function or dehydration. Glucose can be related to dietary intake of energy or organ function in the cow. Calcium levels can be related to dietary intake, acid/base status of the cow, dehydration, or organ function. Phosphorus can be related to diet or organ function. The diagnostic value of each parameter at one point in time without additional data is probably very limited. For example, without knowing the diet of the cow it may be inappropriate to try to determine what an abnormal BUN level means. Therefore, the diagnostic value of an individual sample of any parameter in a case such as this where no additional information is available, to me is quite limited, in my opinion.

C. Individual animals deviation from normal can be determined by looking at the tabular summaries found in page A-42. Abnormal numbers will be underlined and shown in a bold type. It is more valuable to discuss deviations from normal on the entire sample of 18 cows rather than in individual cows (1.). Again, values for individual cows are probably of limited value without further information. When we look at the pattern of all eighteen animals, however, some interesting deviations are present.

First, all eighteen animals showed elevated globulin levels. This could indicate the presence of inflammatory condition affecting the cows. Examples might be diseases such as Bovine Leukosis or Johnes disease. They could also reflect relative dehydration of the animals. Albumin levels were elevated in three cows and produced in one cow. This is probably not a significant finding except that in dehydration I would expect the albumin levels to also be elevated, so this could suggest that perhaps the animals are not dehydrated. Blood urea nitrogen, of BUN, was elevated in one animal and depressed in six animals. This is using a normal value of 15 to 30. Note that in the November, 1993 report, a normal value of 20 to 30 was indicated. Typically in dairy cows we expect to see BUN values over 18 in lactating animals. In this herd, 15 of 18 animals were below 18. The most likely explanation of this is a relative shortage of dietary protein.

Calcium levels were elevated in 12 of the animals. This could be due to dehydration. It could also be due to relatively low milk production. High producing animals will typically have calcium significantly lower than these. Fifteen animals have elevated magnesium levels. This could be related to diet or again it could be related to dehydration. Five animals have low phosphorus levels. This is possibly related to diet or it may be insignificant. Eleven animals have elevated total protein levels and this may be the result of elevated globulin levels previously discussed. One animal has a depressed glucose level and this is probably not significant

Thus, looking at all the perimeters, it may be safe to say that it is possible that there is relative dehydration in the animals, although one would have expected elevations in albumin as well as the other parameters. It is also possible that there is a relative shortage of dietary protein as reflected by the BUN levels. When we compare these levels to the levels present in the November, 1993 report, one can see that there were 14 of 18 animals with BUNs less than 20 which was reported as normal BUN or 12 animals with BUNs below 18. Six animals had elevated calcium, 16 had elevated magnesium, and 9 had low glucose levels. Two had elevated total protein and two had depressed total protein. Three had depressed phosphorus levels. Thus the profiles show somewhat similar patterns in 1995 as they did in November, 1993.

III. ANIMAL INSPECTION REPORTS

A. Body scores for each animal inspected are found on page A-70. Scores for November, 1993, are also listed for the cows tested at both inspections.

B. Pages A-71 through A-75 are graphical description of the body scores recorded in August, 1995. Cows inspected in November, 1993, and August, 1995, show body scores from both inspection dates.

C. Body scoring is based on the degree of flesh covering the skeleton of the lumbar vertebrae (loin), the pelvis (hooks, pin, and the area between them), and the sacral and coccygeal vertebrae (tail head). Palpation may be helpful, but visual inspection alone is sufficiently accurate. Scoring can usually be done to a quarter-point level. Most lactating dairy cows fall between body scores of 2 and 4. The following summarizes the criteria for conditioning scoring(2.).

Score l: Severe Emaciation. Individual bony parts are all prominent: the vertebrae are sharp and distinct, hooks and pins are sharp, with negligible flesh covering them, and the pararectal fossa below the tail head is deeply sunken. The area over the gluteal musculature (between hooks and pins) is severely sunken. This score is extremely rare in healthy dairy cattle. It is indicative of severe cachexia.

Score 2: Thin Condition. Bony processes are notable, but not sharp. Individual lumbar vertebrae are not distinct, but are visible. The transverse processes of the lumbar are prominent and stand out sharply. They form a notable shelf. The area between the hooks and pins is more filled than with a score of l, but is still conclave. The pararectal area is still concave and depressed, but the bones have fleshy covering.

Score 3: Moderate Condition. This is a smooth covering of flesh over all bony parts. Individual lumbar prominences are not visually discernible. but form a rounded ridge. The transverse processes of the vertebrae no longer form a distinct shelf. Pins and hooks are rounded. There is only a slight concavity between them. The pararectal fossa is smooth, without obvious fat filling.

Score 4: Heavy Condition. All bony parts are well covered. The lumbar area is fat, with no dorsal processes of the spine visible. The hooks and pins are well covered and the area between them is flat. The tail head is surrounded by obvious subcutaneous fat.

Score 5: Obese. Almost no bony structure is visible. There is significant subcutaneous fat. A body score of 5 is rare in dairy cattle.

Changes in body score provide an indication of weight loss and weight gain during lactation. Under normal conditions, cows lose weight in early lactation as milk production exceeds their ability to consume enough dry matter to supply their nutrient needs. Excessive losses of body condition in early lactation are associated with reduced reproductive performance. Cows that lose more than one body score point have significantly reduced first-service conception rates, and increased days to first ovulation and first observed estrus. Cows should calve with body scores of 3.0 to 4 and should lose no more than one point during early lactation. Ideally, the loss should not exceed half of a body score point. Weight is most efficiently gained during the end of lactation, rather than during the dry period, so mid- and late-lactation rations should allow for extra energy to support increasing body condition. Body condition gains during the dry period may lead to "fat cow syndrome" and peripartum disease.

IV. WATER CONSUMPTION DATA

A. The Table beginning on page A-97 and continuing through A-ll5 is a tabular summary of water consumption data from November 16, 1993 to June 30, 1995. Graphs of daily water consumption begin on page A-ll8. A table of water consumption as reported in the 1993 report can be found on page A-ll6. (no page 117)

B. The Table beginning on A-139 shows average gallons of water consumed per day and milk produced per cow per day for the time period from November l6, 1993 through June 30, 1995. Note that milk per

cow per day has an entry only every other day for times when milk was picked up every other day on the farm. The number recorded indicates one-half of the total milk picked up that day. Thus, the same value could be recorded for the previous day. The graphical representation of this starts on page A-158.

C. Water consumption per cow per day from November 16, 1993 through June 30, 1995, varied from a low of 13.4 gallons to a high of 25 gallons. This compares to a range of 13 to 20.8 gallons reported in the December, 1993 report. Values reported for the two inspection periods are fairly similar. I cannot discern any significant trends in the data provided.

D. Normal values for dairy herd water consumption are somewhat difficult to establish because cows can consume varying amount of moisture in their diet. A cow consuming a diet of primarily dry forages will receive little water intake through the forage while a cow consuming fresh grass or wet forages will consume a large amount of water in the feedstuffs. It has been suggested (3.) that milk cows will consume 4.5 to 5.0 pounds of water per pound of milk through feed and drinking daily. Since I do not know the pounds of water consumed through feed in this herd, it is difficult to compare with normal. It has also been suggested (3.) that holstein cows producing 30 pounds of milk per day will drink from 14.5 to 17 gallons of water per day and holstein cows producing 50 pounds of milk per day will drink from 24 to 27 pounds of water per day. Again, remember though that this depends upon the water content of the forage ration.

Milk production per cow per day in the Wolbeck herd from November 16, 1993 through June 30, 1995, typically fell between 30 and 50 pounds of milk per cow per day. Thus one would expect a water consumption between 14.5 and 27.0 gallons of water per cow per day. Water consumption of dairy cattle will vary with body size, level of milk production, ambient temperature, and also with the dry matter intake, intake of protein, salt and other minerals. Factors that may restrict water consumption include handling practices that limit access, poor location of watering devices, inadequate pump and line capacity, and stray electrical voltage on water bowls.

SUMMARY:

This report provides information as requested in Attachment A Scope of Work Herd Assessment Project Wolbeck Farm. Milk production data, blood sample data, body score data, and water consumption data are presented in tabular and graphical summaries as requested. Comments and interpretation are provided based only on information available to me and are provided only as requested by Attachment A.

REFERENCES

1. Wolff, G., personal communication, Wolff Laborities, Inc., Minneapolis, MN, August 29, 1995

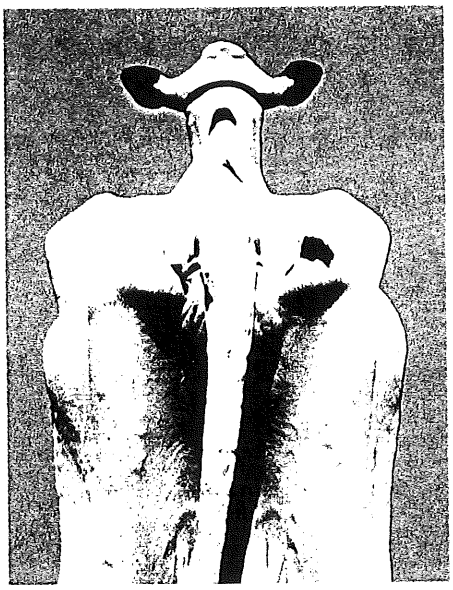
2. Radostitis, O.M., Leslie, K.E., and Fetrow, J., Herd Health, Food Animal Production Medicine, 2nd edition, Philadelphia, PA, W.B. Saunders Co., 1985, p296

3. Ace, D., et. al., The Penn State Dairy Reference Manual, 2nd edition, University Park, PA, 1980, p51

No Matter How You Look At It...

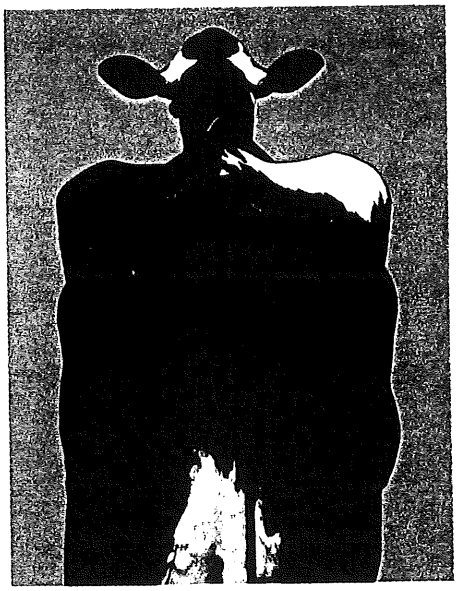
Body Condition Scoring

...Is An Important Part of Modern Dairy Management.



BCS = 1

Deep cavity around tailhead. Bones of pelvis and short ribs sharp and easily felt. No fatty tissue in pelvic or loin area. Deep depression in loin.

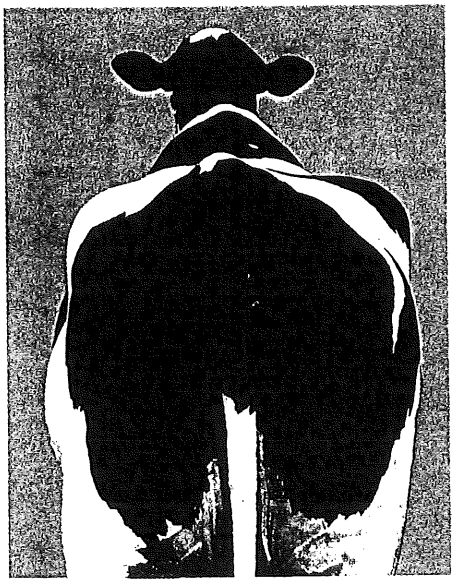


BCS = 2

Shallow cavity around tailhead with some fatty tissue lining it and covering pin bones. Pelvis easily felt. Ends of short ribs feel rounded and upper surfaces can be felt with slight pressure. Depression visible in loin area.

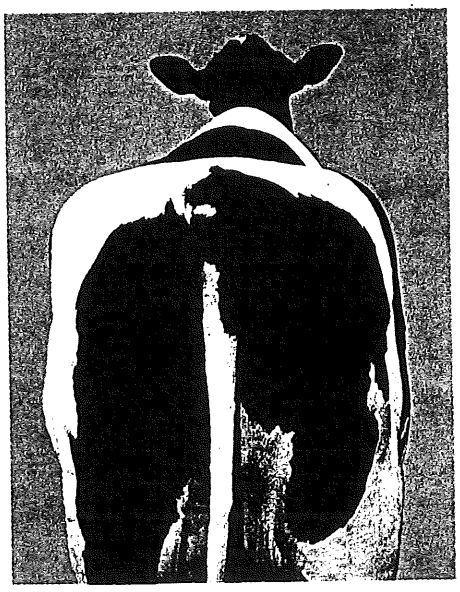
BCS = 3

No cavity around tailhead and fatty tissue easily felt over whole area. Pelvis can be felt with slight pressure. Thick layer of tissue covering top of short ribs which can still be felt with pressure. Slight depression in loin area.



BCS = 4

Folds of fatty tissue are seen around tailhead with patches of fat covering pin bones. Pelvis can be felt with firm pressure. Short ribs can no longer be felt. No depression in loin area.



BCS = 5

Tailhead is buried in thick layer of fatty tissue. Pelvic bones cannot be felt even with firm pressure. Short ribs covered with thick layer of fatty tissue.

Elanco Animal Health
A Division of Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285, U.S.A.

ELANCO
ANIMAL HEALTH ™

AI 7140

Photos by Craig Johnson

No Matter How You Look At It...

Body Condition Scoring

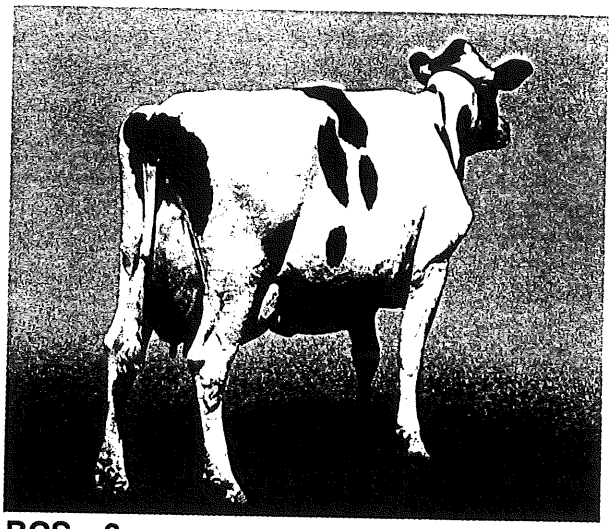
ELANCO ANIMAL HEALTH

Is An Important Part of Modern Dairy Management.

In the dairy cow, body condition is an indicator of the amount of stored energy reserves and changes with different stages of lactation. Fresh cows in peak lactation tend to be in a negative energy balance and therefore lose body condition. Late lactation cows, dry cows and low producers are in a positive energy balance and gain condition. There is no one ideal body condition score. There is a range of desirable scores which change for individual cows over the different stages of each lactation.

Dairy farmers should regularly evaluate the body condition of their cows and heifers so they can fine-tune feeding and management practices. Adequate body reserves are necessary to maintain health, production and reproductive efficiency. Underconditioned cows are prone to reduced milk production and poor persistency of lactation. Overly conditioned cows are predisposed to calving difficulties, fatty liver syndrome, impaired reproduction and metabolic disorders.

Body condition scoring of cattle is an essential management tool for the progressive dairy farmer. It can be mastered with a little training and good observation skills, using both sight and touch to evaluate each cow.



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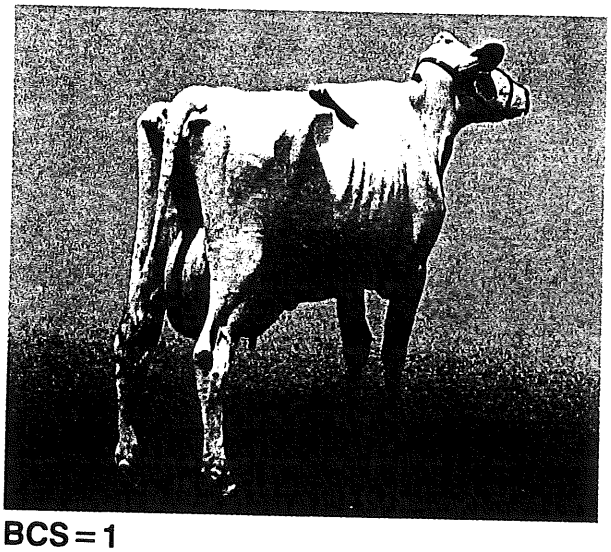

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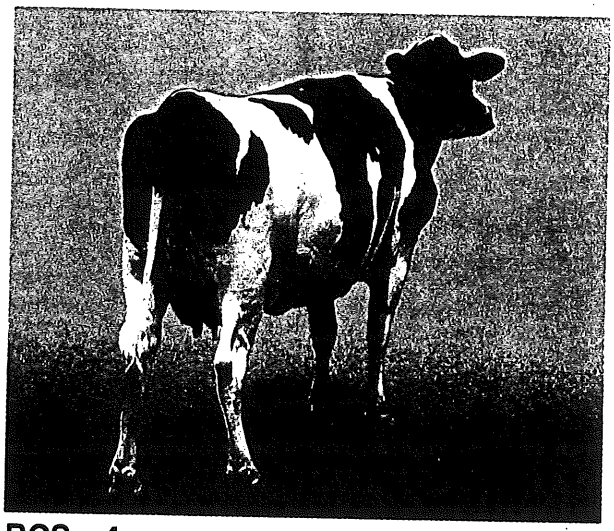

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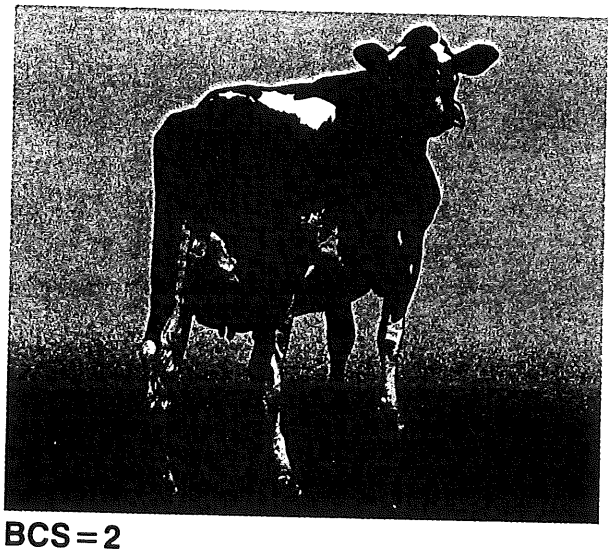
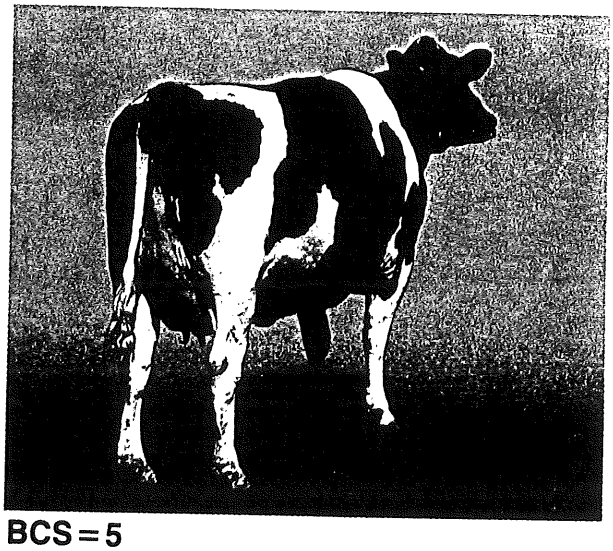


BCS = 2



BCS = 5

Photos by Craig Johnson

APPENDIX A - TABLES AND GRAPHS

TABLE OF CONTENTS FOR APPENDIX A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
S	11/16/93	5120	63	40.6	39	2	402	305	459	270				1	1	A
S	11/18/93	5036	63	40	40	2	398	307	456	300				1	1	A
S	11/20/93	5000	63	40	40	2	404	306	458	230				1	1	A
S	11/22/93	5042	62	41	40	2	399	304	460	210				1	1	A+
S	11/24	5000	62	40.3	39	2	406	296	460	230				1	1	A
S	11/26/93	4950	61	40.6	39	2	396	304	461	200				1	1	A
S	11/28/93	4938	61	40.5	40	2	396	307	460	190				1	1	A
P	11/30/93	4895	60	40.8	39	2	399	305	462	270				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	12/2/93	4938	60	41.2	39	2	390	301	463	200	6	538		1	1	A
P	12/4/93	4833	59	41	39	2	392	302	462	240				1	1	A
P	12/6/93	4747	60	39.6	39	2	397	304	460	240				1	1	A
P	12/8/93	4810	61	39.4	39	2	400	304	461	380				1	1	A
P	12/10/93	4852	60	40.4	39	2	394	302	465	340				1	1	A
P	12/12/93	4852	60	40.4	39	2	389	306	464	300				1	1	A
S	12/14/93	4852	60	40.4	39	2	396	306	465	290				1	1	A
S	12/16/93	4858	61	39.8	39	2	388	311	464	480				1	1	A
S	12/18/93	4827	59	40.9	40	2	389	310	460	500				1	1	A
S	12/20/93	4920	60	41	39	2	396	312	462	460				1	1	A+
S	12/22/93	4975	56	44.4	39	2	394	311	461	380				1	1	A
D	12/23/93														1	
D	12/24/93	5024	58	43.3	39	2	386	316	464	330				1	1	A
S	12/26/93	5204	58	44.9	39	2	390	322	462	300				1	1	A
S	12/28/93	5085	58	43.8	39	2	395	322	465	260				1	1	A
S	12/30/93	5091	58	43.9	42	2	392	315	462	220				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	1/1/94	4944	59	41.9	39	2	391	314	460	260				1	1	A
P	1/3/94	4926	60	41.1	39	2	401	322	460	320	3	541		1	1	A
P	1/5/94	5132	59	43.5	39	2	385	315	462	340				1	1	A
P	1/7/94	5168	59	43.8	39	2	391	319	463	270				1	1	A
P	1/9/94	5240	60	43.7	40	2	399	321	463	240				1	1	A
P	1/11/94	5036	57	44.2	39	2	398	316	461	230				1	1	A
P	1/12/94	2602	58	44.9	39	1	379	318	460	400				1	1	A
P	1/14/94	5144	58	44.3	39	2	396	320	464	380				1	1	A+
S	1/16/94	5198	58	44.8	39	2	400	317	461	260				1	1	A
S	1/18/94	5258	58	45.3	39	2	392	313	463	280				1	1	A
S	1/20/94	5000	57	43.9	39	2	398	311	464	340				1	1	A
S	1/22/94	4969	55	45.1	40	2	394	307	466	340				1	1	A
S	1/24/94	5030	55	45.7	39	2	393	309	471	310				1	1	A
S	1/26/94	5030	55	45.7	39	2	390	309	470	260				1	1	A
S	1/28/94	4926	55	44.8	39	2	392	307	465	420				1	1	A
S	1/30/94	4932	55	44.8	40	2	389	307	469	580				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	2/1/94	4981	55	45.3	39	2	388	308	466	490	22	547		1	1	A
P	2/3/94	4962	56	44.3	39	2	383	309	464	380				1	1	A
P	2/5/94	5085	57	44.6	39	2	392	310	465	390				1	1	A
P	2/7/94	4987	59	42.3	40	2	388	317	457	520				1	1	A
P	2/9/94	5228	59	44.3	39	2	377	317	465	520				1	1	A
P	2/11/94	5073	60	42.3	39	2	389	317	467	490				1	1	A
P	2/13/94	5132	60	42.8	39	2	388	315	463	280				1	1	A
P	2/15/94	5168	60	43.1	40	2	380	317	467	370				1	1	A
S	2/17/94	5264	62	42.5	40	2	388	316	456	270				1	1	A
S	2/19/94	5294	61	43.4	39	2	385	317	458	270				1	1	A
S	2/21/94	5300	61	43.4	39	2	387	314	457	320				1	1	A
S	2/23	5311	62	42.8	39	2	387	311	461	340				1	1	A
S	2/25/94	5359	62	43.2	40	2	381	307	460	320				1	1	A
S	2/27/94	5234	62	42.2	39	2	397	311	459	310				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	3/1/94	5180	61	42.5	39	2	390	309	460	360	1	544		1	1	A
P	3/3/94	5085	62	41	40	2	379	308	461	370				1	1	A
P	3/5/94	5150	63	40.9	40	2	387	306	461	300				1	1	A
P	3/7/94	5228	63	41.5	39	2	382	307	463	300				1	1	A
P	3/9/94	5246	62	42.3	39	2	384	310	463	360				1	1	A
P	3/11/94	5264	62	42.5	40	2	401	308	449	270				1	1	A
P	3/13	5317	61	43.6	40	2	410	313	450	370				1	1	A
P	3/15/94	5353	61	43.9	39	2	385	308	460	390				1	1	A
S	3/17/94	5353	60	44.6	39	2	391	308	461	280				1	1	A
S	3/19/94	5335	60	44.5	39	2	394	307	459	300				1	1	A
S	3/21/94	5413	60	45.1	40	2	386	310	458	380				1	1	A
S	3/23/94	5389	59	45.7	40	2	378	305	466	330				1	1	A
S	3/25/94	5138	57	45.1	40	2	393	308	457	300				1	1	A
S	3/27/94	5228	58	45.1	39	2	390	304	459	390				1	1	A
S	3/29/94	5264	56	47	39	2	375	305	462	310				1	1	A
S	3/31	5407	56	48.3	39	2	372	303	463	370				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	4/2/94	5216	55	47.4	39	2	384	302	461	450				1	1	A
P	4/4/94	5042	55	45.8	39	2	381	303	465	380				1	1	A
P	4/6/94	5132	54	47.5	39	2	376	301	465	320	4	542		1	1	A
P	4/8/94	5156	53	48.6	39	2	378	297	464	340				1	1	A+
P	4/10/94	5102	54	47.2	40	2	375	300	469	300				1	1	A
P	4/12/94	5018	54	46.5	39	2	367	294	467	300				1	1	A
P	4/14/94	5061	56	45.2	39	2	376	299	463	330				1	1	A
S	4/16/94	4944	56	44.1	39	2	375	304	465	340				1	1	A
S	4/18/94	4593	56	41	39	2	385	300	467	430				1	1	A
S	4/20/94	4618	57	40.5	39	2	393	300	462	320				1	1	A
S	4/22/94	4398	57	38.6	39	2	402	306	463	420				1	1	A
S	4/24/94	4480	57	39.3	39	2	397	309	461	550				1	1	A
S	4/26/94	4354	56	38.9	40	2	404	305	457	450				1	1	A
S	4/28/94	4518	56	40.3	39	2	390	311	462	490				1	1	A
S	4/30/94	4711	56	42.1	39	2	377	307	456	700	3	541		1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	5/2/94	4686	56	41.8	39	2	377	307	456	520				1	1	A
P	5/4/94	4692	55	42.7	39	2	366	315	463	440				1	1	A
P	5/5/94	2351	55	42.7	40	2	377	304	460	550				1	1	A+
P	5/7/94	4661	55	42.4	42	2	373	306	461	430				1	1	A
P	5/9/94	4486	55	40.8	40	2	362	304	463	410				1	1	A
P	5/11/94	4354	54	40.3	41	2	381	303	463	570				1	1	A
P	5/13/94	4486	55	40.8	41	2	381	302	457	430				1	1	A
P	5/15/94	4298	54	39.8	41	2	396	306	456	550				1	1	A
S	5/17/94	4361	53	41.1	41	2	395	303	455	570				1	1	A
S	5/19/94	4524	53	42.7	41	2	378	302	459	400				1	1	A
S	5/21/94	4760	53	44.9	42	2	349	295	459	380				1	1	A
S	5/23/94	4938	54	45.7	41	2	345	294	458	320				1	1	A
S	5/25/94	4938	54	45.7	41	2	339	292	468	300				1	1	A
S	5/27/94	4895	54	45.3	41	2	344	297	463	470				1	1	A
S	5/29/94	4889	55	44.4	41	2	360	297	465	420				1	1	A
S	5/31/94	4901	55	44.6	41	2	359	308	461	400				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	6/2/94	4956	54	45.9	41	2	361	311	462	420				1	1	A+
P	6/4/94	4926	55	44.8	41	2	361	311	464	310	6	542		1	1	A
P	6/6/94	5102	55	46.4	41	2	362	304	462	390				1	1	A
P	6/8/94	4723	55	42.9	41	2	358	301	463	340				1	1	A
P	6/10/94	4803	55	43.7	41	2	358	300	469	490				1	1	A
P	6/12/94	5012	56	44.8	41	2	354	302	465	440				1	1	A
P	6/14/94	5132	56	45.8	41	2	369	308	474	370				1	1	A
S	6/16/94	4913	57	43.1	41	2	LOST & NO		AVAILABLE					1	1	A
S	6/18/94	4696	56	44.4	41	2	382	307	468	390				1	1	A
S	6/20	4913	56	43.9	41	2	377	298	463	620				1	1	A
S	6/22/94	4574	57	40.1	41	2	383	300	468	620				1	1	A
S	6/24/94	4840	58	41.7	41	2	368	298	460	540				1	1	A
S	6/26/94	4790	59	40.6	41	2	370	395	451	360				1	1	A
S	6/28/94	4766	59	40.4	41	2	369	303	464	350				1	1	A
S	6/30/94	4778	59	40.5	41	2	382	301	458	440				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	7/2/94	4717	61	38.7	41	2	375	303	468	420				1	1	A
P	7/4	4827	59	40.9	41	2	375	301	460	680	21	541		1	1	A
P	7/6/94	4827	60	40.2	41	2	366	296	463	700				1	1	A
P	7/8/94	4680	55	42.5	41	2	369	295	466	690				1	1	A
P	7/10/94	4612	53	43.5	40	2	370	289	470	580				1	1	A
P	7/12/94	4655	54	43.1	41	2	358	288	466	420				1	1	A
P	7/14/94	4723	54	43.7	41	2	363	297	467	320				1	1	A
S	7/16/94	4901	55	44.6	41	2	360	301	461	600				1	1	A
S	7/18/94	4800	56	43.6	41	2	359	292	461	440				1	1	A
S	7/20/94	4784	56	42.7	41	2	360	292	472	380				1	1	A
S	7/22/94	4809	56	42.9	41	2	357	291	468	520				1	1	A
S	7/24/94	4833	55	43.9	41	2	354	292	460	480				1	1	A
S	7/26/94	4815	54	44.6	41	2	351	297	465	480				1	1	A
S	7/28/94	4833	54	44.8	41	2	353	300	461	620				1	1	A+
S	7/30	4686	53	44.2	41	2	359	296	466	610				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	8/1/94	4741	52	45.6	42	2	336	297	471	570	10	539		1	1	A
P	8/3/94	4606	52	44.3	42	2	344	294	463	450				1	1	A
P	8/5/94	4292	50	42.9	41	2	345	295	466	430				1	1	A
P	8/7/94	4273	51	41.9	41	2	354	295	469	500				1	1	A
P	8/9/94	4191	50	41.9	41	2	355	296	474	670				1	1	A
P	8/11/94	4229	50	42.3	40	2	366	298	475	690				1	1	A
P	8/13/94	4311	49	44	39	2	341	294	474	600				1	1	A
P	8/15/94	4103	50	41	40	2	359	298	469	530				1	1	A
S	8/17/94	4078	50	40.8	40	2	360	296	471	540				1	1	A
S	8/19/94	4116	50	41.2	40	2	354	290	473	690				1	1	A
S	8/21/94	4009	51	39.3	40	2	360	292	469	440				1	1	A
S	8/23/94	4172	51	40.9	40	2	357	295	463	410				1	1	A
S	8/25/94	4172	51	40.9	40	2	356	299	477	540				1	1	A+
S	8/27/94	4103	50	41	40	2	360	297	470	510				1	1	A
S	8/29/94	4020	51	39.4	40	2	369	304	469	470				1	1	A
S	8/31/94	4128	51	40.5	40	2	370	304	465	450				1	1	A

DONALD WOLBECK MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	9/2/94	4172	51	40.9	40	2	379	309	471	420				1	1	A
P	9/4/94	4210	53	39.7	40	2	386	309	460	360				1	1	A
P	9/6/94	4442	53	41.9	40	2	380	315	460	370				1	1	A
P	9/8/94	4655	55	42.3	40	2	387	315	460	370				1	1	A
P	9/10/94	4926	56	44	39	2	381	317	463	330				1	1	A
P	9/12/94	4741	57	41.6	39	2	384	306	468	420	6	541		1	1	A
P	9/14/94	4631	56	41.3	39	2	382	299	463	300				1	1	A
S	9/16/94	4692	57	41.2	40	2	383	289	468	380				1	1	A
S	9/18/94	4919	58	42.4	40	2	369	292	463	380				1	1	A
S	9/20	5005	59	42.4	41	2	377	294	463	370				1	1	A
S	9/22/94	4926	57	43.2	40	2	370	307	460	320				1	1	A+
S	9/24/94	5138	57	45.1	40	2	382	314	459	490				1	1	A
S	9/26/94	4747	57	41.6	40	2	381	307	457	660				1	1	A
S	9/28/94	4987	56	44.5	40	2	382	311	466	510				1	1	A
S	9/30/94	5024	55	45.7	40	2	374	301	457	540				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	10/2/94	4975	54	46.1	40	2	384	306	463	450				1	1	A
P	10/4/94	4913	53	46.3	39	2	393	308	463	680	34	537		1	1	A
P	10/6/94	4711	54	43.6	40	2	386	303	460	490				1	1	A
P	10/8/94	4999	55	45.4	40	2	392	311	473	510				1	1	A
P	10/10/94	4889	55	44.4	40	2	396	307	464	450				1	1	A
P	10/12/94	5180	57	45.4	39	2	392	315	462	510				1	1	A
P	10/14/94	5353	58	46.1	40	2	380	310	455	420				1	1	A
S	10/16/94	5216	60	43.5	40	2	389	318	459	500				1	1	A
S	10/18/94	5294	61	43.4	39	2	395	308	453	430				1	1	A
S	10/20/94	5024	61	41.2	39	2	402	309	456	320				1	1	A+
S	10/22/94	5433	61	44.5	39	2	381	299	459	330				1	1	A
S	10/24/94	5120	60	42.7	39	2	389	302	461	300				1	1	A
S	10/26/94	5108	60	42.6	39	2	399	309	466	530				1	1	A
S	10/28/94	5216	60	43.5	39	2	388	298	458	460				1	1	A
S	10/30/94	5228	59	44.3	39	2	Not	Available						1	1	A

DONALD WOLBECK MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	11/1/94	4790	59	40.6	40	2	394	296	455	340				1	1	A
P	11/3/94	4981	58	42.9	39	2	393	305	462	360	2	535		1	1	A
P	11/5/94	4778	58	41.2	40	2	398	305	457	300				1	1	A
P	11/7/94	4926	58	42.5	39	2	386	302	459	320				1	1	A
P	11/9/94	4166	57	36.5	39	2	384	302	457	290				1	1	A
P	11/11/94	4711	57	41.3	39	2	392	304	459	440				1	1	A
P	11/13/94	4815	58	41.5	40	2	391	306	458	370				1	1	A
P	11/15/94	4827	59	40.9	40	2	393	306	458	440				1	1	A
S	11/17/94	4704	58	40.6	39	2	402	308	461	540				1	1	A+
S	11/19/94	4606	58	39.7	39	2	394	309	462	310				1	1	A
S	11/21/94	4606	57	40.4	39	2	385	306	461	290				1	1	A
S	11/23/94	4480	58	38.6	39	2	400	309	457	300				1	1	A
S	11/25/94	4668	58	40.2	39	2	391	307	455	410				1	1	A
S	11/27/94	4661	58	40.2	39	2	386	310	458	350				1	1	A
S	11/29/94	4612	58	39.8	39	2	396	311	453	280				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	12/1/94	4600	59	39	39	2	397	306	453	260				1	1	A
P	12/3/94	4643	59	39.3	40	2	406	305	454	350				1	1	A
P	12/5/94	4692	58	40.4	39	2	389	306	459	320	7	541		1	1	A
P	12/7/94	4680	60	39	39	2	394	312	457	430				1	1	A
P	12/9/94	4661	60	38.8	39	2	400	309	458	360				1	1	A
P	12/11/94	4686	59	39.7	39	2	414	307	459	340				1	1	A
P	12/13/94	4518	58	38.9	39	2	402	308	463	450				1	1	A
P	12/15/94	4267	58	36.8	39	2	405	301	454	370				1	1	A
S	12/17/94	4323	59	36.6	40	2	395	304	461	490				1	1	A
S	12/19/94	4442	59	37.6	39	2	399	301	460	410				1	1	A
S	12/21/94	4562	59	38.7	39	2	395	301	462	490				1	1	A
S	12/23/94	4580	59	38.8	39	2	393	301	456	500				1	1	A
S	12/25/94	4741	59	40.2	39	2	378	300	457	370				1	1	A
S	12/27/94	4486	59	38	39	2	391	300	460	420				1	1	A+
S	12/29/94	4624	58	39.9	40	2	381	298	463	440				1	1	A
S	12/31/94	4480	58	38.6	39	2	371	301	466	390				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	1/2/95	4417	58	38.1	39	2	382	301	461	330				1	1	A
P	1/4/95	4530	58	39.1	39	2	386	302	460	390				1	1	A
P	1/6/95	4474	57	39.2	39	2	376	305	468	380				1	1	A
P	1/8/95	4530	57	39.7	39	2	378	305	461	290				1	1	A
P	1/10/95	4417	57	38.7	39	2	392	305	461	290	2	539		1	1	A
P	1/12/95	4555	55	41.4	40	2	387	305	455	360				1	1	A
	1/14/95	4593	55	41.7	39	2	387	306	457	340				1	1	A
S	1/16/95	4649	56	41.5	39	2	387	309	460	370				1	1	A
S	1/18/95	4661	57	40.9	40	2	395	311	458	370				1	1	A
S	1/20/95	4790	57	42	39	2	391	308	459	320				1	1	A
S	1/22/95	4717	57	41.4	39	2	380	307	462	280				1	1	A
S	1/24/95	4631	57	40.6	39	2	385	310	467	300				1	1	A
S	1/26/95	4568	56	40.8	39	2	394	306	457	360				1	1	A
S	1/28/95	4530	56	40.4	39	2	390	305	456	240				1	1	A+
S	1/30/95	4493	55	41.2	39	2	388	306	458	250				1	1	A

DONALD WOLBECK MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	2/1/95	2524	56	40.4	39	2	378	308	363	310				1	1	A
P	2/3/95	4827	58	41.6	40	2	385	310	456	200				1	1	A
P	2/5/95	4631	58	39.9	39	2	394	312	461	200				1	1	A
P	2/7/95	4717	59	40	39	2	392	311	463	240	4	546		1	1	A
P	2/9/95	4580	59	38.8	38	2	393	308	460	260				1	1	A
P	2/11/95	4668	60	38.9	39	2	397	309	462	270				1	1	A
P	2/13/95	4692	60	39.1	39	2	389	307	461	250				1	1	A
P	2/15/95	4618	61	37.8	40	2	409	306	461	260				1	1	A
	2/17/95	4723	62	38.1	39	2	401	308	460	220				1	1	A
	2/19/95	4846	62	39.1	40	2	404	307	460	230				1	1	A
	2/21/95	4729	62	38.1	39	2	397	305	465	320				1	1	A
	2/23/95	4809	60	40.1	39	2	390	303	464	270				1	1	A
	2/25/95	4800	61	39.3	39	2	391	305	463	300				1	1	A
	2/27/95	4760	61	39	40	2	392	300	460	380				1	1	A+

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
	3/1/95	4704	61	38.6	40	2	392	298	461	300				1	1	A
	3/3/95	4574	61	37.4	39	2	401	304	459	300				1	1	A
	3/5/95	4827	61	39.6	39	2	394	299	458	290				1	1	A
	3/7/95	4631	61	38	39	2	394	301	462	430	10	541		1	1	A
	3/9/95	4686	61	38.4	40	2	394	300	457	390				1	1	A
	3/11/95	4717	63	37.4	40	2	391	302	456	300				1	1	A
	3/13/95	4606	62	37.1	40	2	391	301	457	370				1	1	A
	3/15/95	4518	62	36.4	39	2	391	299	459	390				1	1	A
	3/17/95	4430	63	35.2	39	2	388	302	461	400				1	1	A
	3/19/95	4618	63	36.7	39	2	389	295	467	490				1	1	A
	3/20/95		63			2								1	1	A
	3/21/95	4606	63	36.6	39	2	394	294	468	370				1	1	A
	3/23/95	4889	64	38.2	39	2	376	302	461	440				1	1	A
	3/25/95	4729	63	37.5	39	2	386	301	461	500				1	1	A
	3/27/95	4698	63	37.3	39	2	383	299	465	430				1	1	A
	3/29/95	4827	62	38.9	39	2	379	299	463	300				1	1	A
	3/31/95	4766	61	39.1	39	2	387	298	460	360				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	4/2/95	4631	61	38	40	2	391	300	461	360				1	1	A
P	4/4/95	4815	61	39.5	39	2	381	305	464	410	8	537		1	1	A
P	4/6/95	4680	61	38.4	39	2	380	306	465	450				1	1	A
P	4/8/95	4876	60	40.6	39	2	377	300	455	390				1	1	A
P	4/10/95	4864	61	39.9	40	2								1	1	A
P	4/12/95	4803	61	39.4	39	2	383	309	457	470				1	1	A
P	4/14/95	4711	60	39.3	39	2	374	304	471	400				1	1	A
S	4/16/95	4729	59	40.1	39	2	384	305	466	370				1	1	A
S	4/18/95	4735	57	41.5	39	2	380	306	465	340				1	1	A
S	4/20/95	4600	57	40.4	40	2	373	304	470	300				1	1	A
S	4/22/95	4686	56	41.8	39	2	377	302	464	300				1	1	A
S	4/24/95	4587	56	41	39	2	374	301	466	290				1	1	A
S	4/26/95	4505	55	41	39	2	380	302	466	300				1	1	A
S	4/28/95	4530	57	39.7	39	2	387	308	464	550				1	1	A+
S	4/30/95	4606	58	39.7	39	2	382	306	468	300				1	1	A

DONALD WOLBECK

MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	5/2/95	4618	59	39.1	39	2	377	304	469	370	11	540		1	1	A
P	5/4/95	4876	59	41.3	39	2	382	306	471	350				1	1	A
P	5/6/95	4711	59	39.9	40	2	381	312	469	400				1	1	A
******	5/7/95	2471	60	41.2	40	1	394	312	470	510 **				1	1	A
P	5/8/95	4364	60	39.4	40	1	392	313	469	410				1	1	A
P	5/9/95	2553	63	40.5	40	1	396	317	469	450				1	1	A
P	5/10/95	2325	63	36.9	40	1	407	317	476	560				1	1	A
P	5/11/95	2423	62	39.1	40	1	388	310	475	590				1	1	A
P	5/12/95	2552	62	41.2	39	1	379	309	477	480				1	1	A
P	5/13/95	2603	63	41.3	41	1	381	308	467	440				1	1	A
P	5/14/95	2435	63	38.7	39	1	384	306	466	480				1	1	A
P	5/15/95	2539	63	40.3	40	1	385	302	461	500				1	1	A
P	5/16/95	2586	63	41	39	1	384	304	467	470				1	1	A+
S	5/17/95	2531	63	40.2	39	1	376	304	471	480				1	1	A
S	5/18/95	2572	61	42.2	39	1	375	297	459	540				1	1	A
S	5/19/95	2518	61	41.3	40	1	359	300	470	450				1	1	A
S	5/20/95	2582	61	42.3	40	1	367		470	490				1	1	A
S	5/22/95	2691	60	44.9	39	1	371	299	466	420				1	1	A
S	5/23/95	2492	59	42.2	40	1	362	301	476	360				1	1	A
S	5/24/95	2617	59	44.4	39	1	359	298	468	410				1	1	A
S	5/25	2677	59	45.4	39	1	367	300	465	430				1	1	A
S	5/26/95	2579	60	43	39	1	360	299	464	340				1	1	A
S	5/27/95	2592	60	43.2	41	1	371	303	468	400				1	1	A
S	5/28/95	2716	60	45.3	40	1	366	301	464	420				1	1	A
S	5/29/95	2589	60	43.2	39	1	372	300	468	440				1	1	A
S	5/30/95	2571	59	43.6	39	1	361	302	467	350				1	1	A+
S	5/31/95	2700	58	40.6	40	1	354	398	467	340				1	1	A

**Sam' herd will be included in the Samatic cell count - 5-7-95 to 6-30-95

DONALD WOLBECK

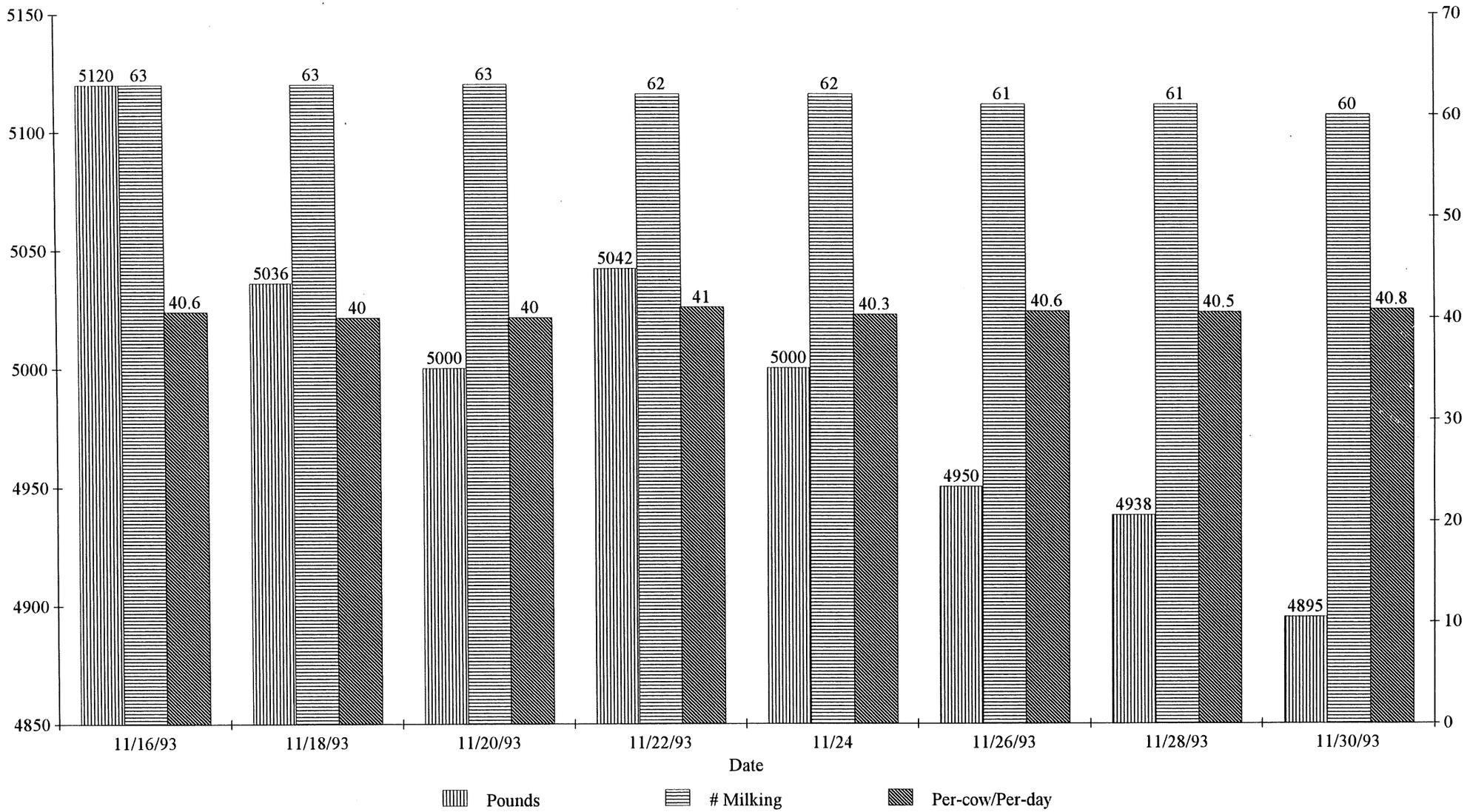
MILK PRODUCTION DATA

Act	Date	Pounds	# Milking	Milk Per-cow/Per-	Tmp	Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gda
P	6/1/95	2586	58	44.6	39	1	365	301	463	390				1	1	A
P	6/2/95	2587	58	44.6	39	1	355	305	468	400				1	1	A
P	6/3/95	2600	58	44.8	39	1	358	306	466	390				1	1	A
P	6/4/95	2647	58	45.6	39	1	360	304	471	440				1	1	A
P	6/5/95	2710	58	46.7	39	1	357	303	471	360	6	546		1	1	A
P	6/6/95	2685	56	47.9	39	1	362	301	470	350				1	1	A
P	6/7/95	2477	56	44.2	39	1	349	302	477	380				1	1	A
P	6/8	2564	56	45.8	39	1	359	306	470	430				1	1	A
P	6/9/95	2592	58	44.7	39	1	370	309	471	490				1	1	A
	6/10/95	2647	58	45.6	39	1	367	311	476	470				1	1	A
P	6/11/95	2696	58	46.5	39	1	366	306	471	440				1	1	A
P	6/12/95	2603	59	44.1	39	1	360	302	473	460				1	1	A
P	6/13/95	2539	59	43	39	1	367	307	476	470				1	1	A+
P	6/14/95	2580	58	44.5	40	1	365	306	476	440				1	1	A
P	6/15/95	2603	57	45.7	40	1	356	303	474	400				1	1	A
S	6/16/95	2543	57	44.6	40	1	364	304	476	450				1	1	A
S	6/17/95	2663	56	47.6	40	1	349	298	473	360				1	1	A
S	6/18/95	2488	56	44.4	39	1	349	299	471	420				1	1	A
S	6/19/95	2419	56	43.2	40	1	350	296	468	410				1	1	A
S	6/20	2371	56	42.3	40	1	342	295	471	340				1	1	A
S	6/21/95	2380	56	42.5	40	1	349	291	468	400				1	1	A
S	6/22/95	2300	56	41.1	40	1	343	293	473	450				1	1	A
S	6/23/95	2307	56	41.2	40	1	345	295	478	470				1	1	A
S	6/24/95	2327	56	41.2	40	1	342	292	478	420				1	1	A
S	6/25/95	2290	56	40.9	40	1	343	292	473	410				1	1	A
S	6/26/95	2265	56	40.4	40	1	331	288	475	440				1	1	A
S	6/27/95	2247	55	40.9	40	1	346	291	469	450				1	1	A+
S	6/28/95	2224	56	39.7	40	1	339	290	468	490				1	1	A
S	6/29/95	2129	56	38	40	1	342	285	466	410				1	1	A
S	6/30/95	2171	56	38.8	40	1	347	287	467	380				1	1	A

**Sam' herd will be included in the Samatic cell count - 5-7-95 to 6-30-95

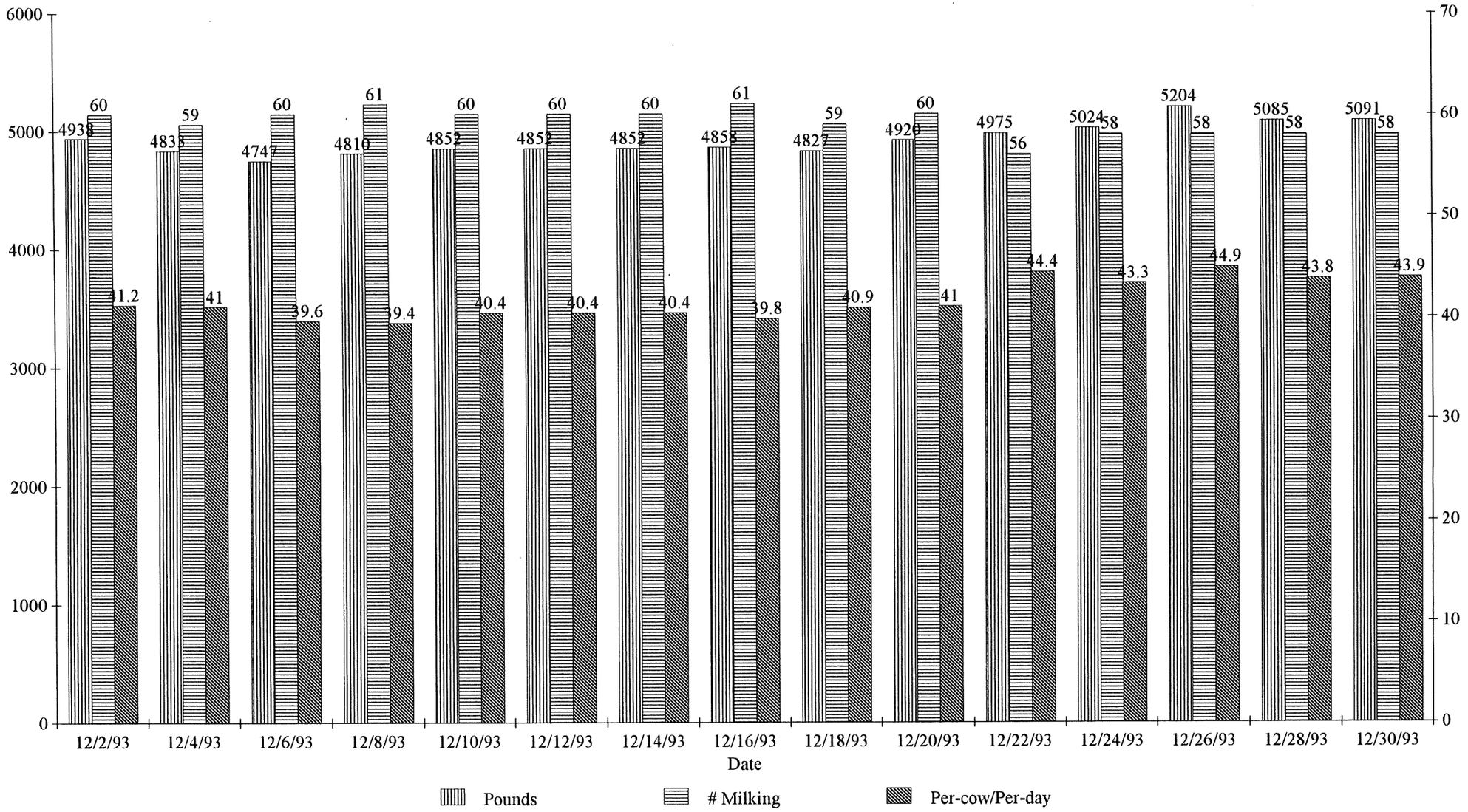
MILK PRODUCTION DATA GRAPH

11 - 16 to 11 - 30 93'

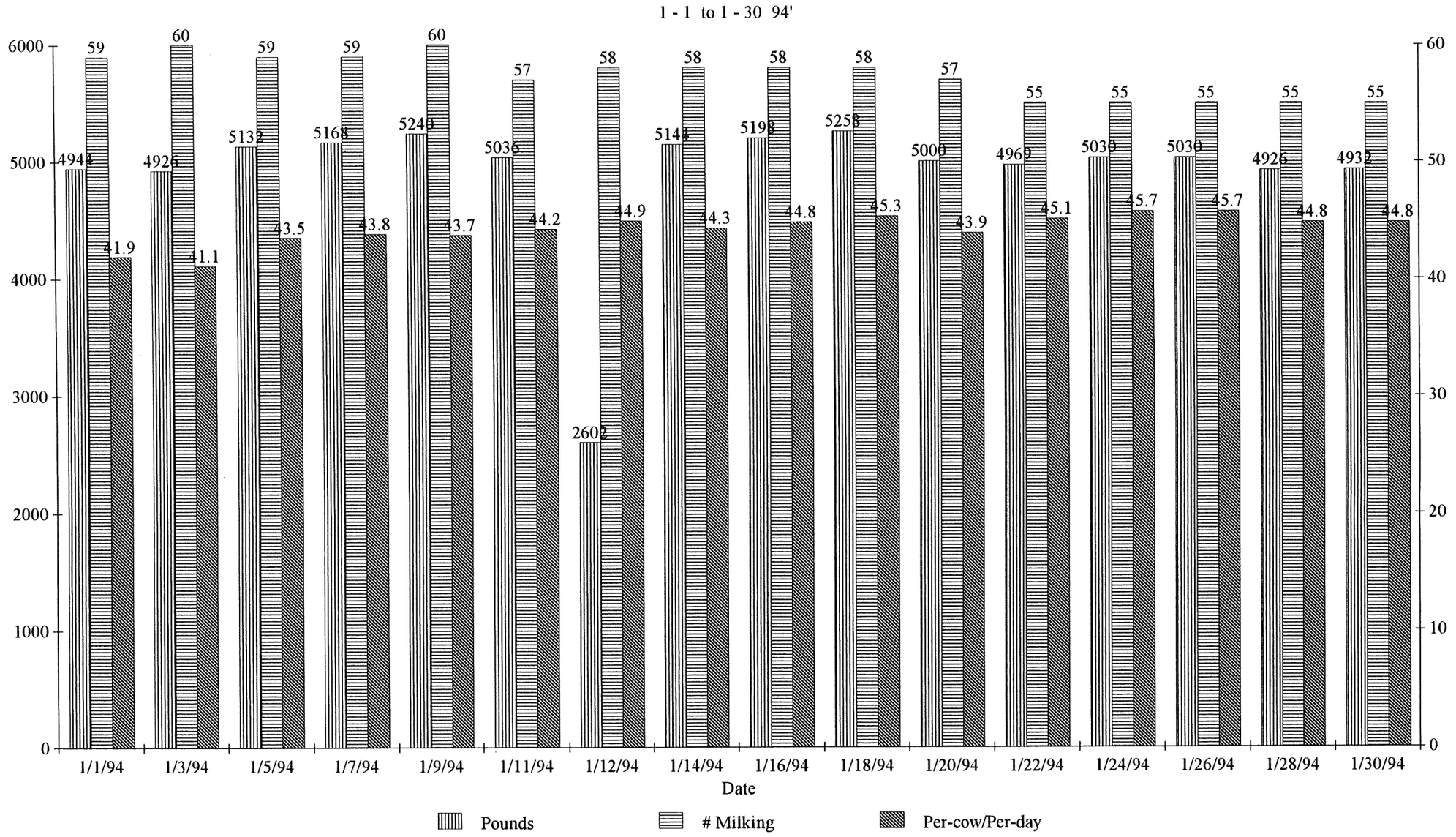


MILK PRODUCTION DATA GRAPH

12 - 2 to 12 - 30 93'

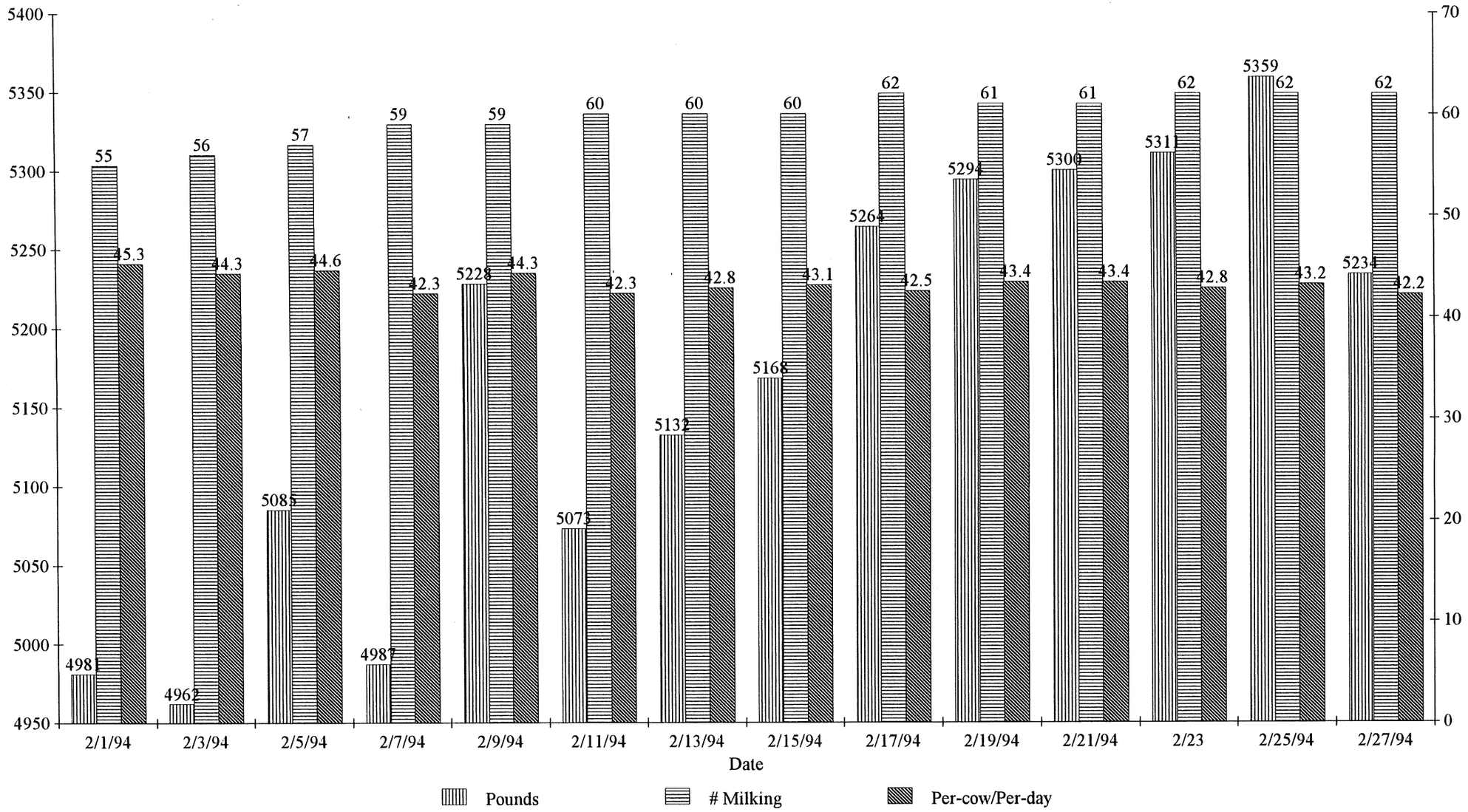


MILK PRODUCTION DATA GRAPH



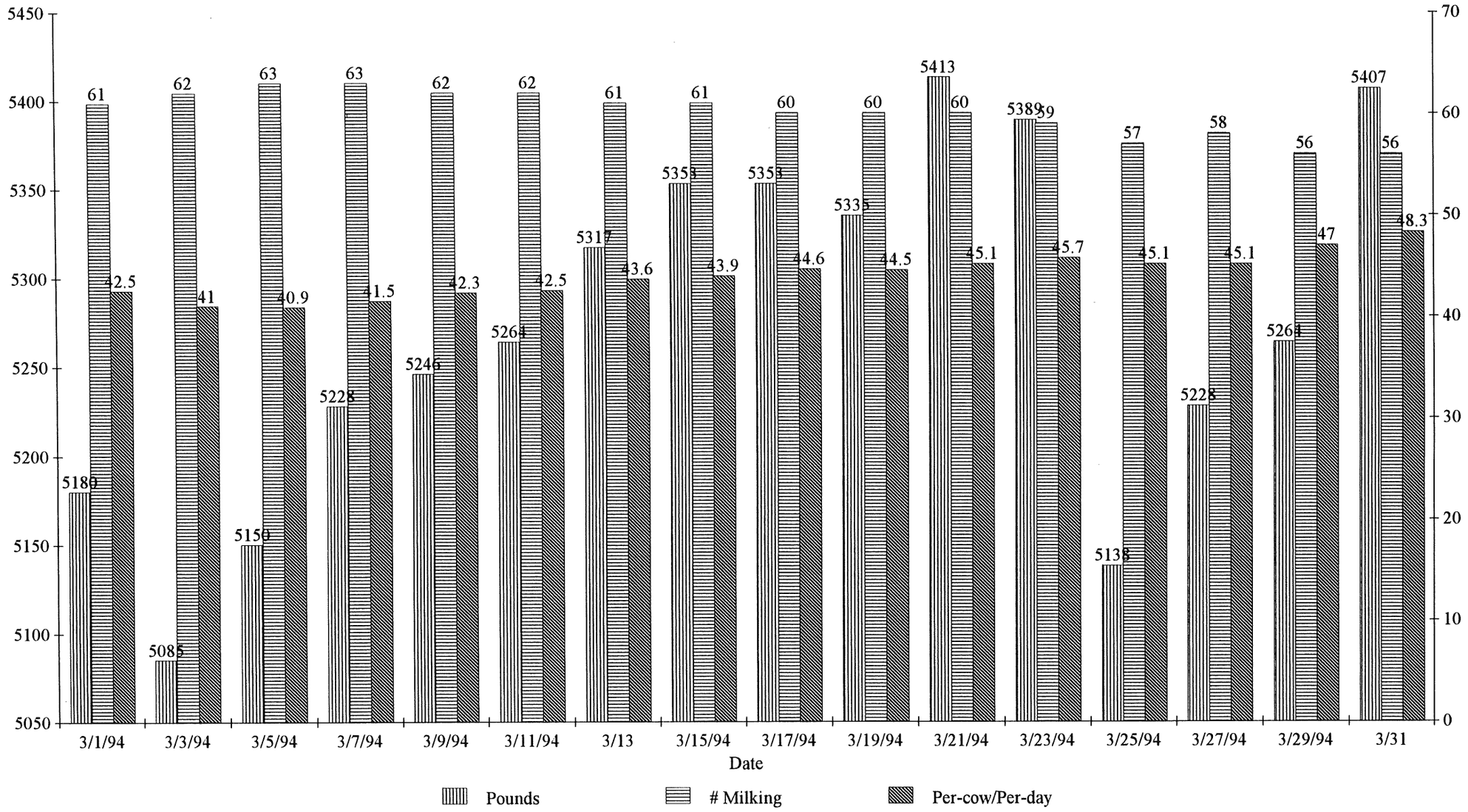
MILK PRODUCTION DATA GRAPH

2 - 1 to 1-27 94'



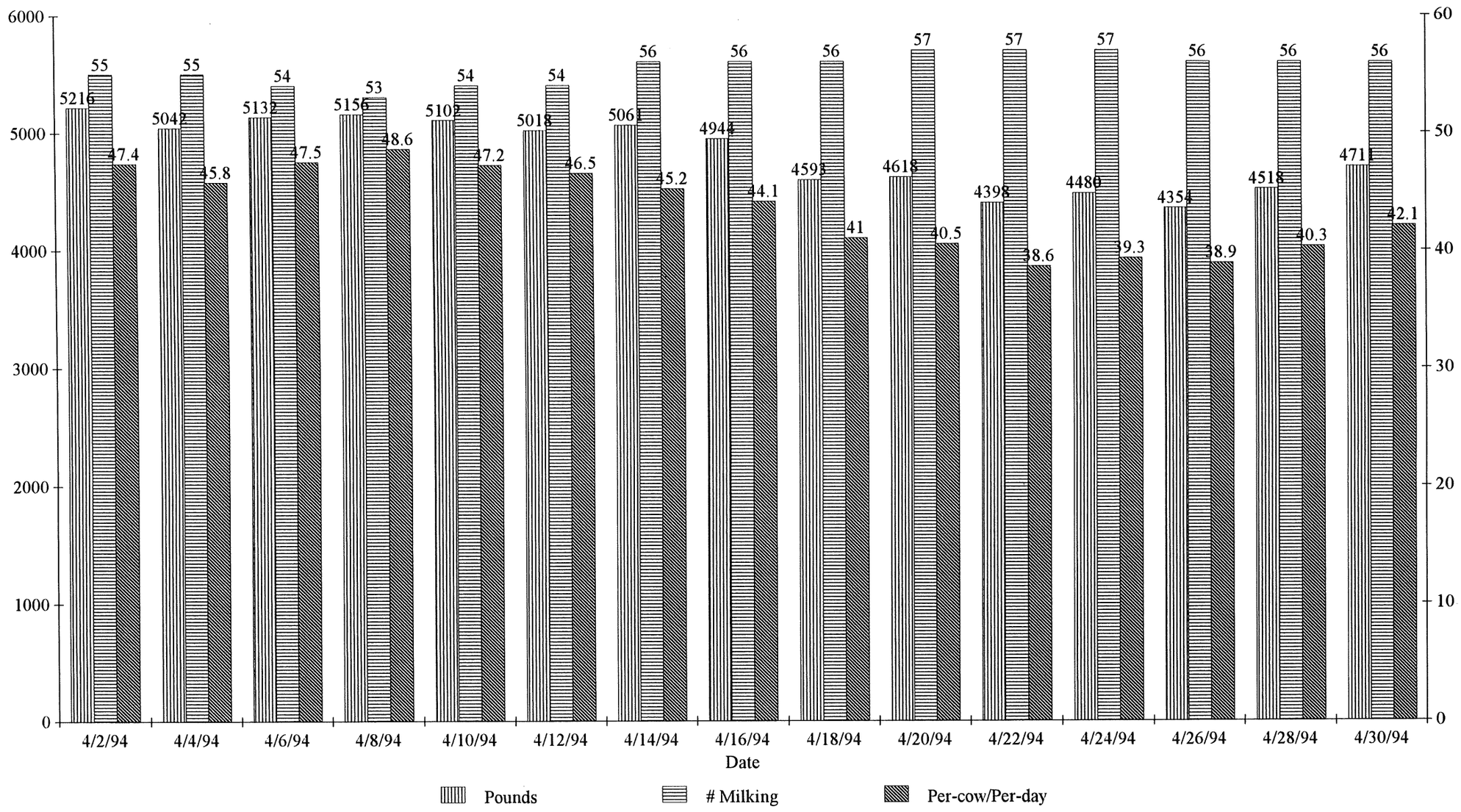
MILK PRODUCTION DATA GRAPH

3 - 1 to 3-31 94'



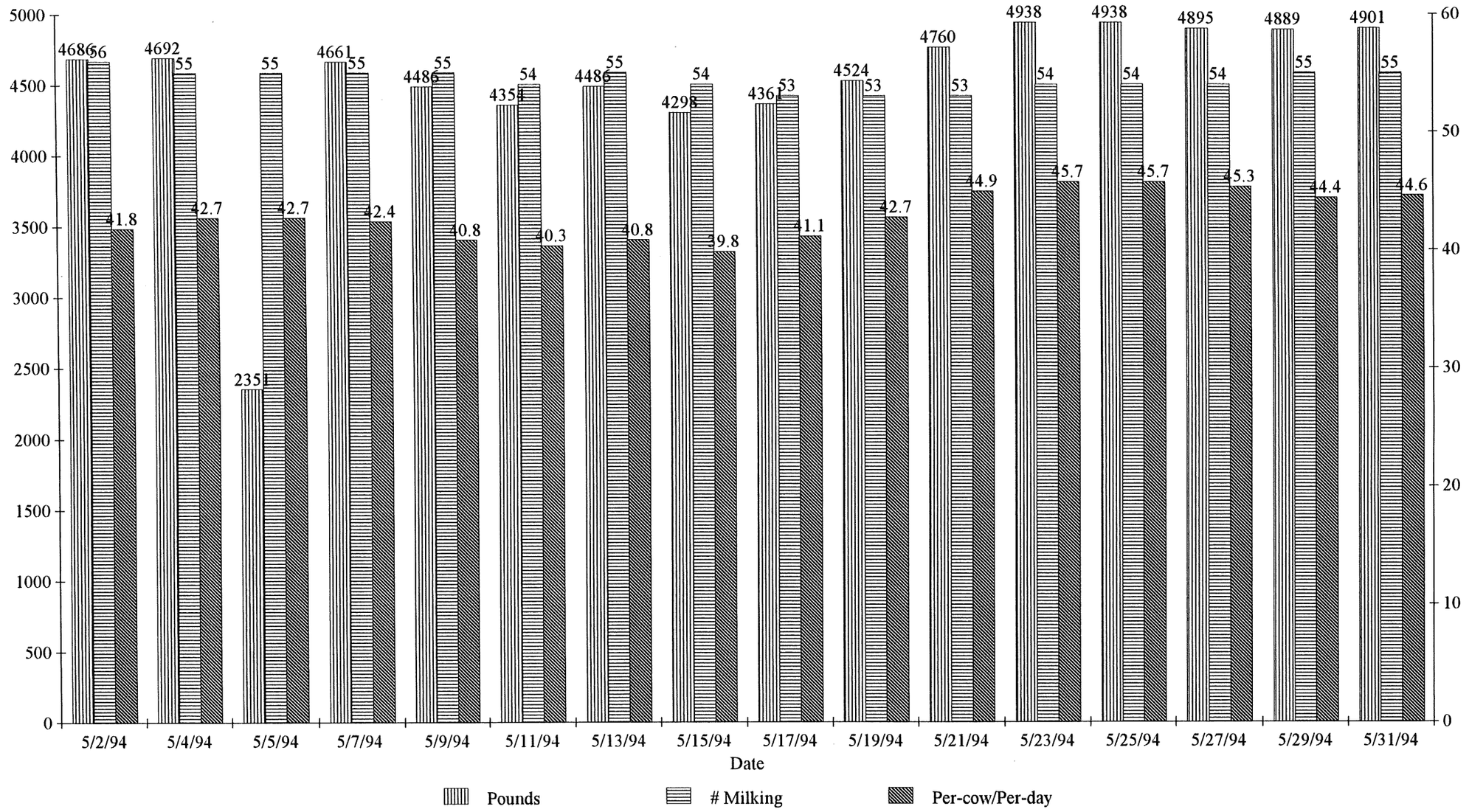
MILK PRODUCTION DATA GRAPH

4 - 2 to 4 - 30 94'



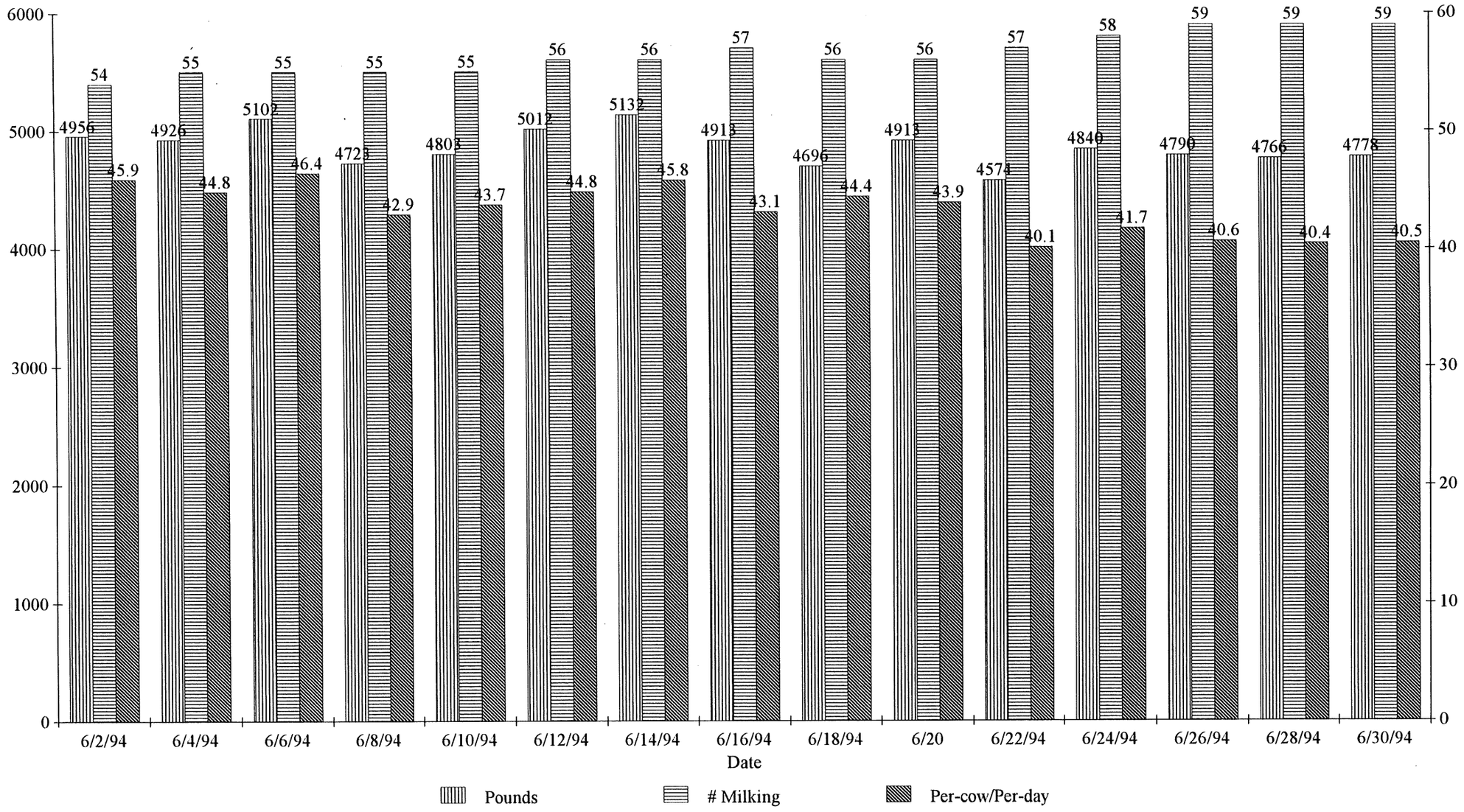
MILK PRODUCTION DATA GRAPH

5 - 2 to 5 - 31 94'



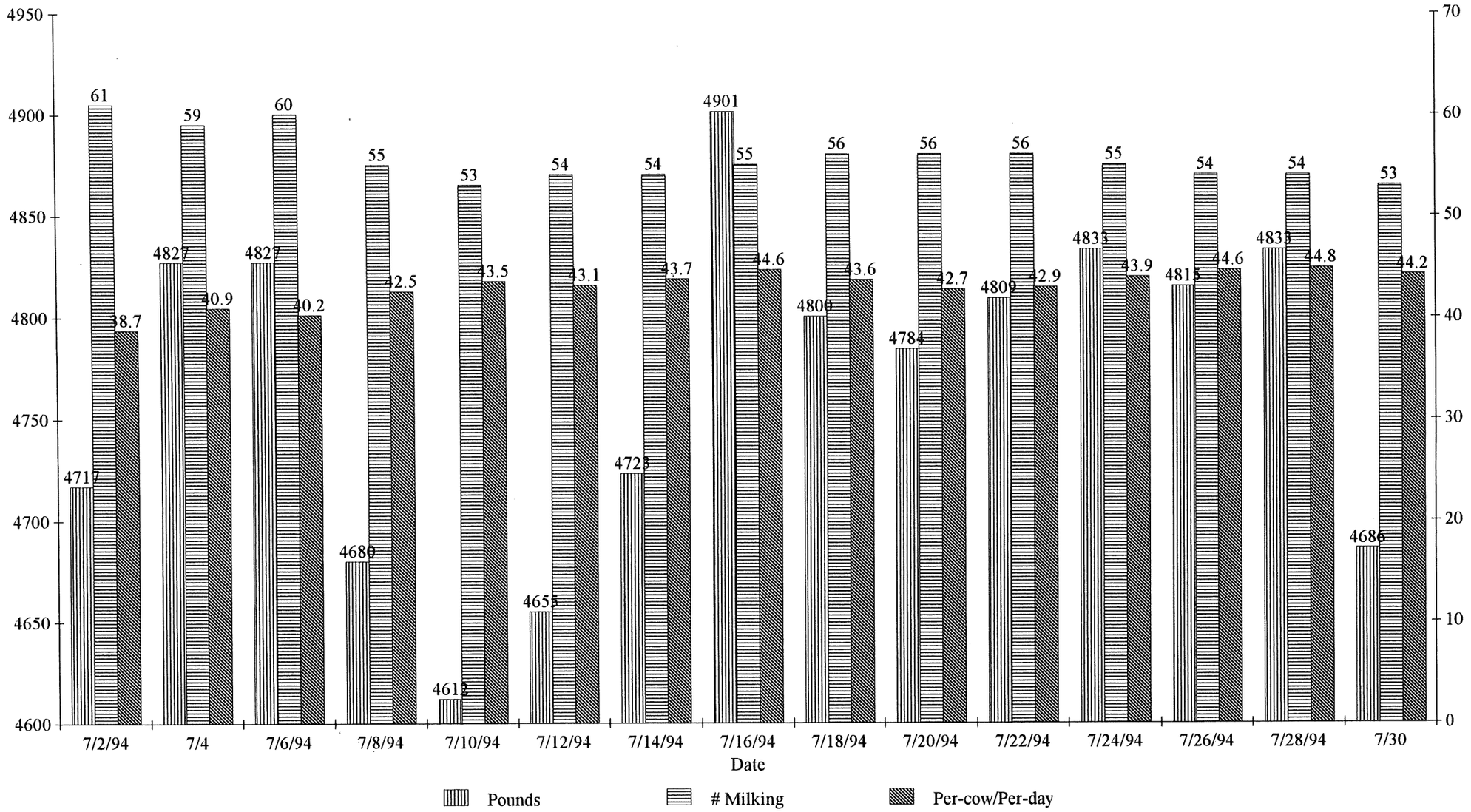
MILK PRODUCTION DATA GRAPH

6 - 2 to 6 - 30 94'



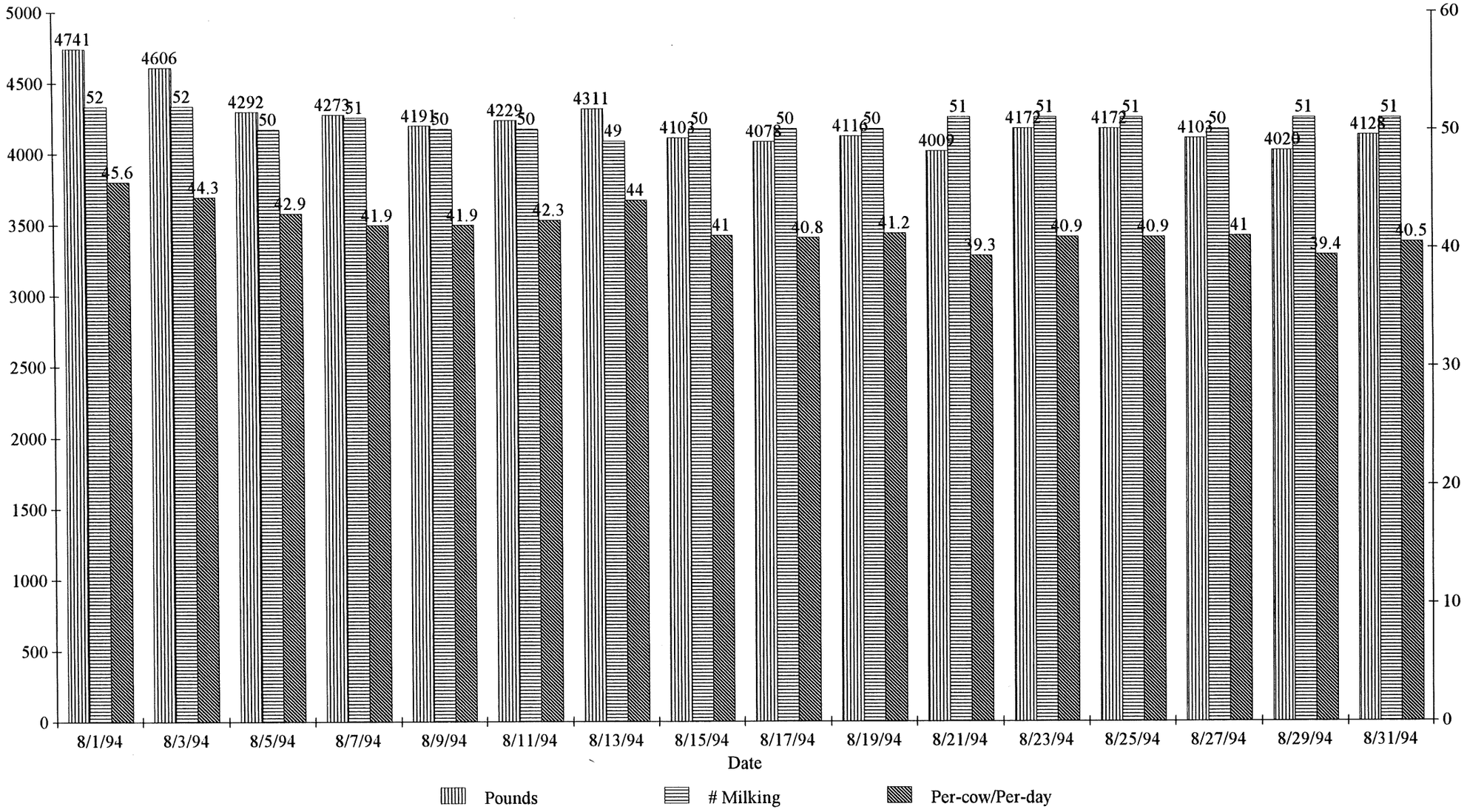
MILK PRODUCTION DATA GRAPH

7 - 2 to 7 - 30 94'



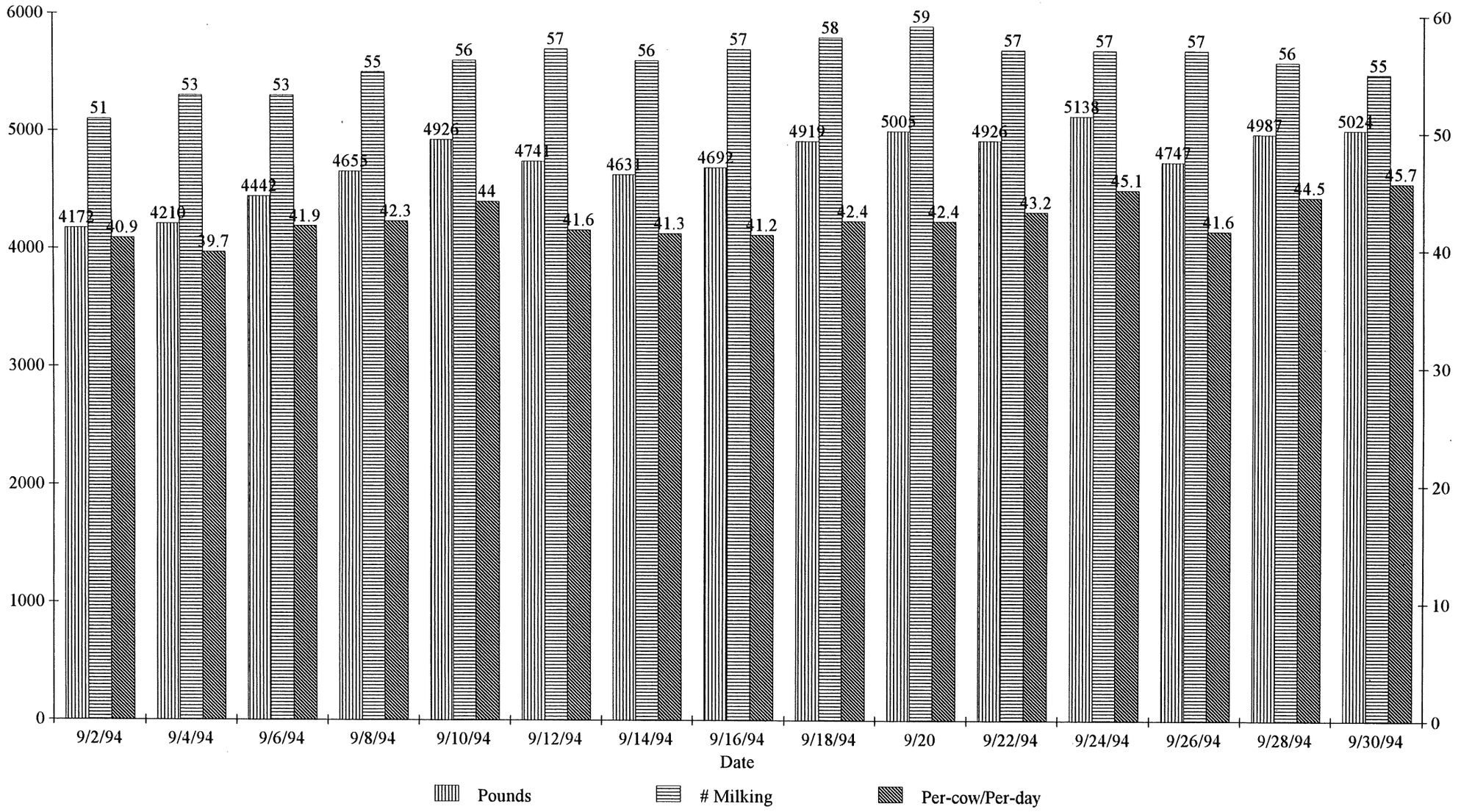
MILK PRODUCTION DATA GRAPH

8 - 1 to 8 - 31 94'



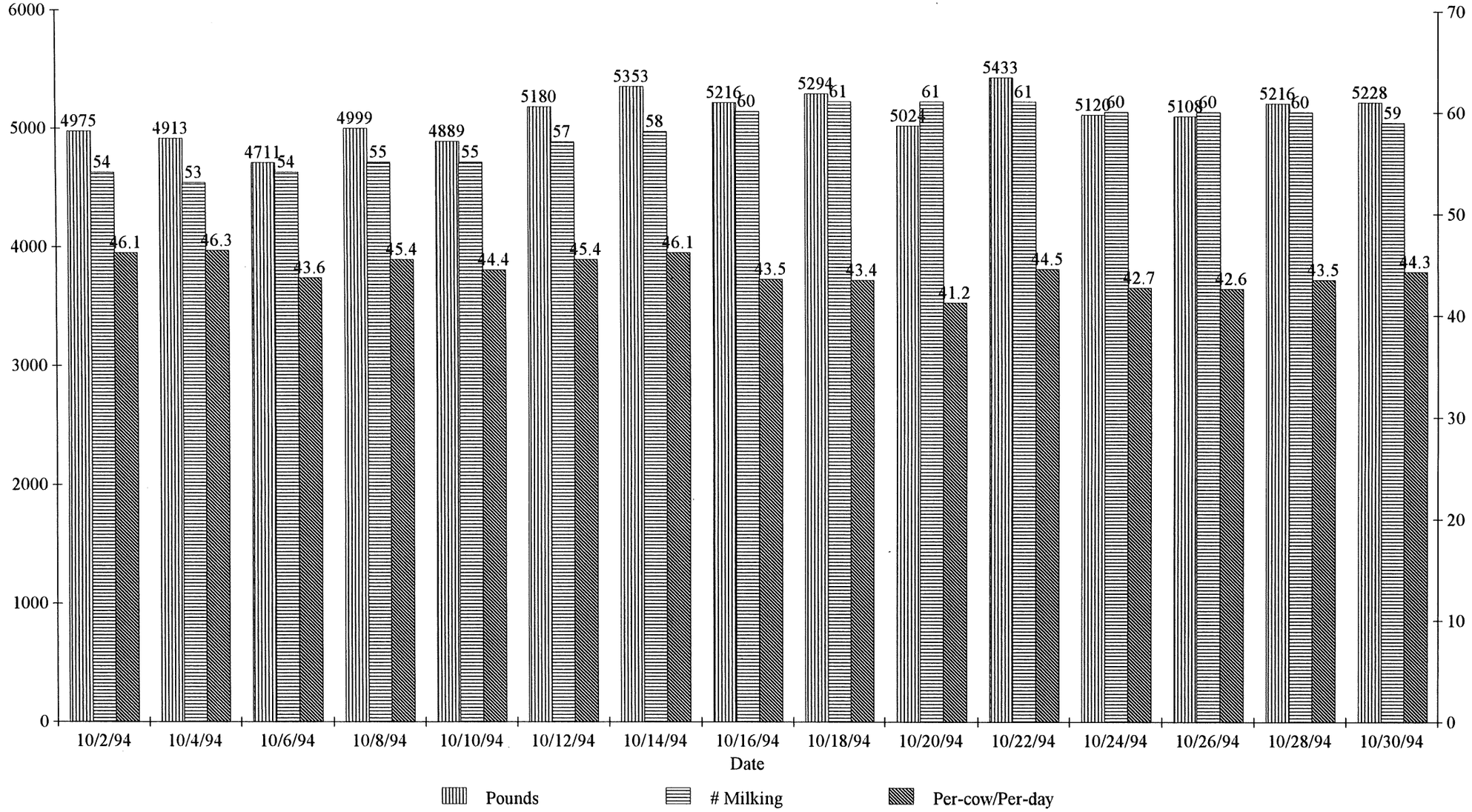
MILK PRODUCTION DATA

9 - 2 to 9 - 30 94'

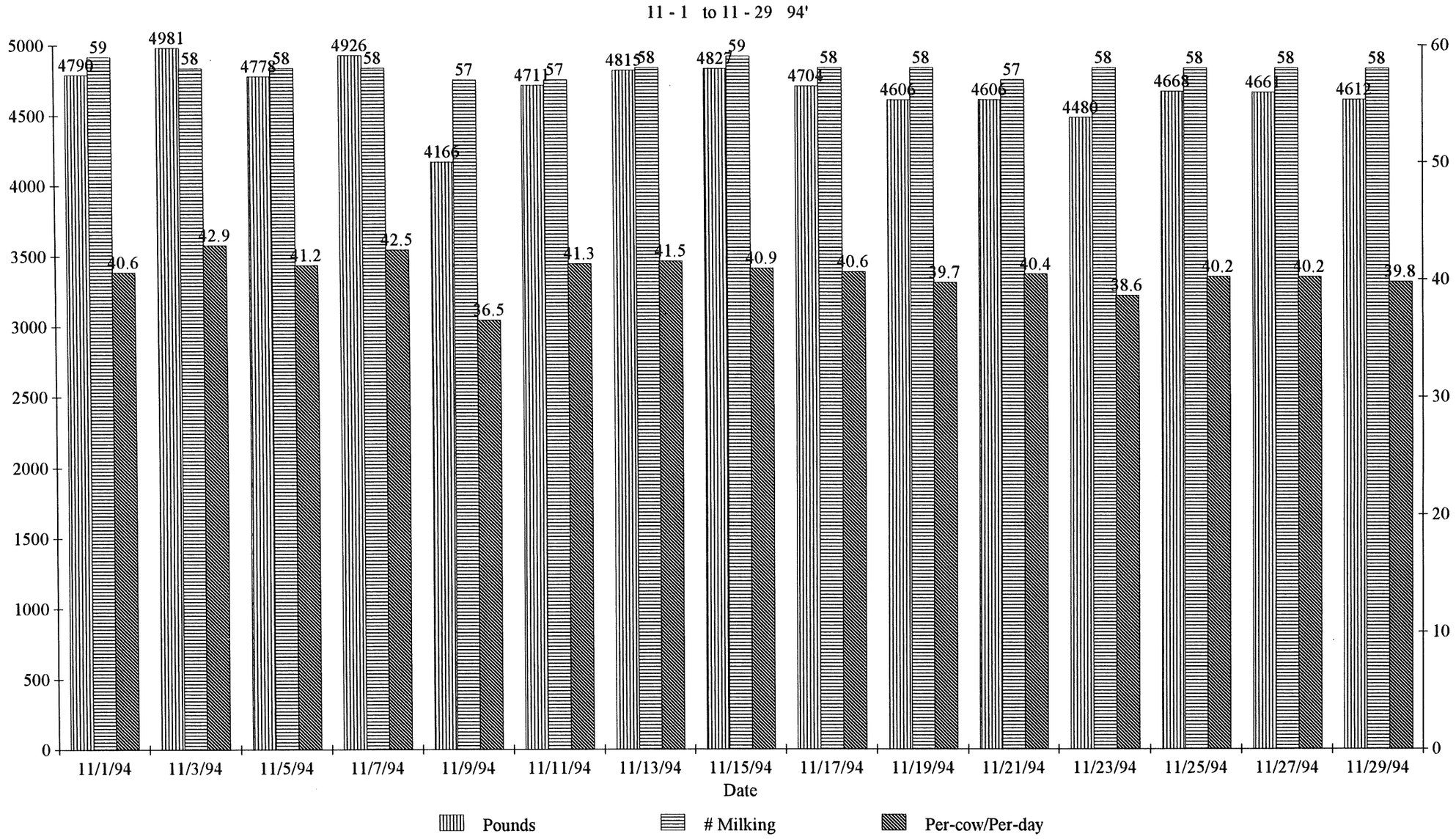


MILK PRODUCTION DATA GRAPH

10 - 2 to 10 - 30 94'

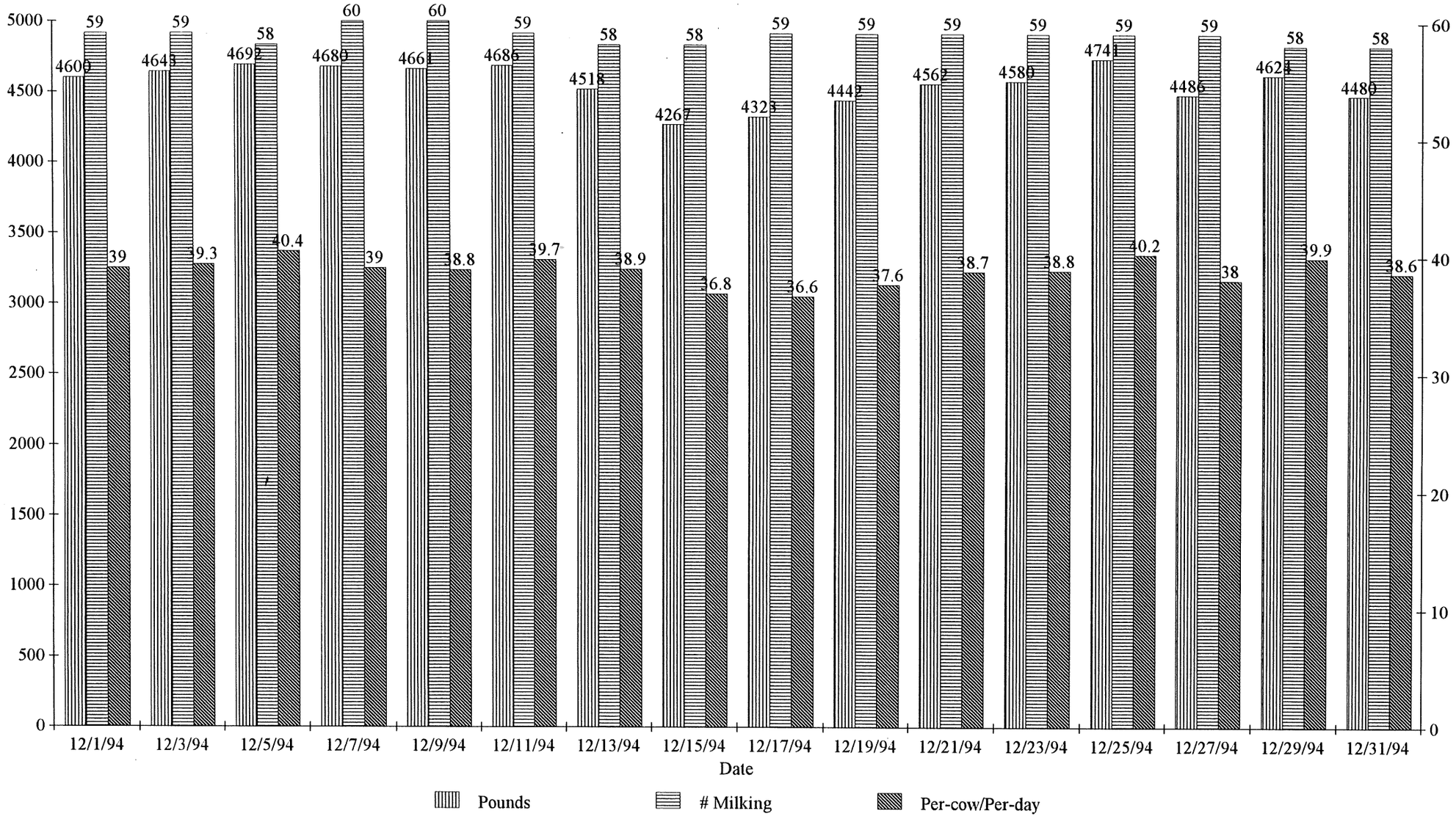


MILK PRODUCTION DATA GRAPH



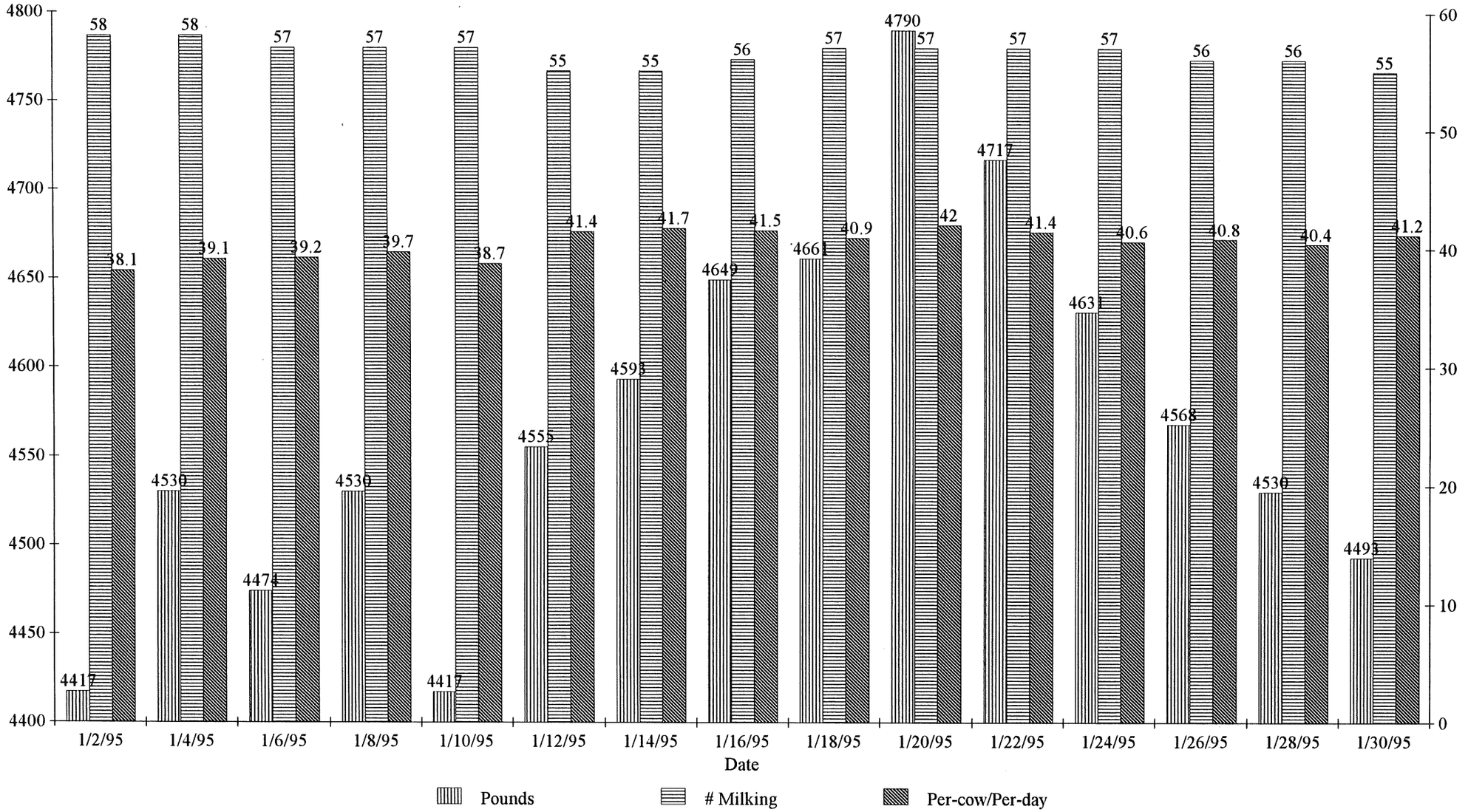
MILK PRODUCTION DATA GRAPH

12 - 1 to 12 - 31 94'



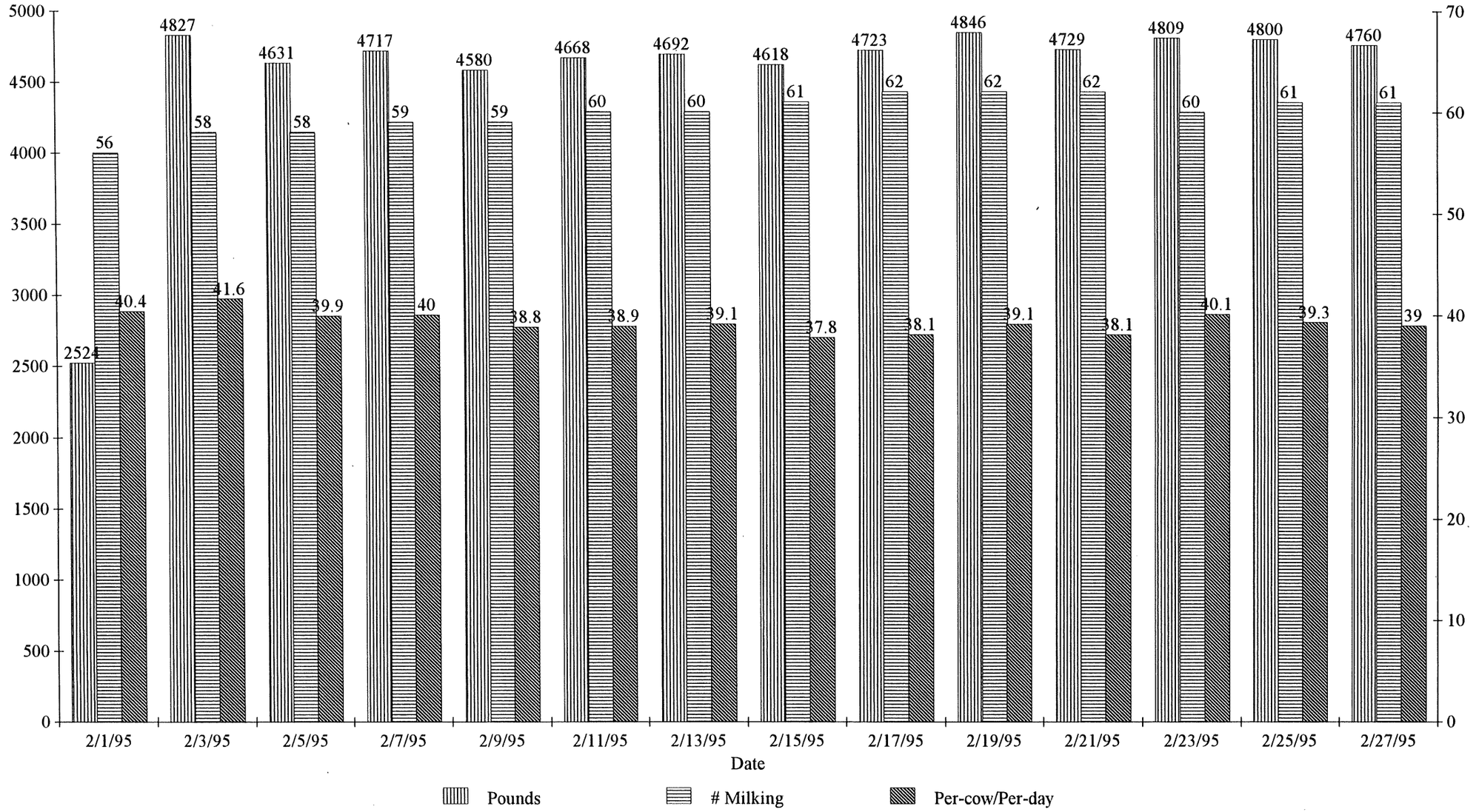
MILK PRODUCTION DATA GRAPH

1 - 2 to 1 - 30 95'



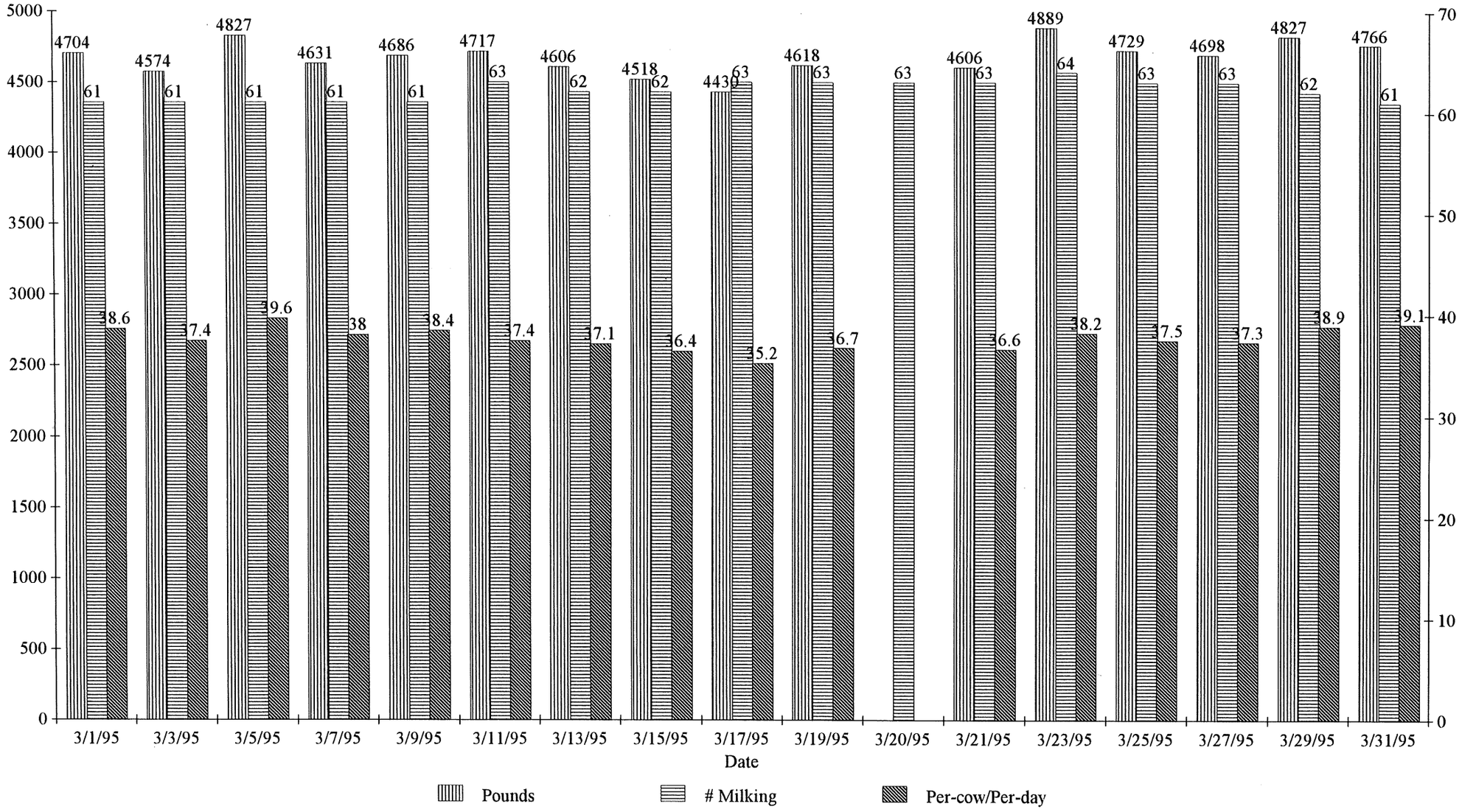
MILK PRODUCTION DATA GRAPH

2 - 1 to 2 - 27 95'



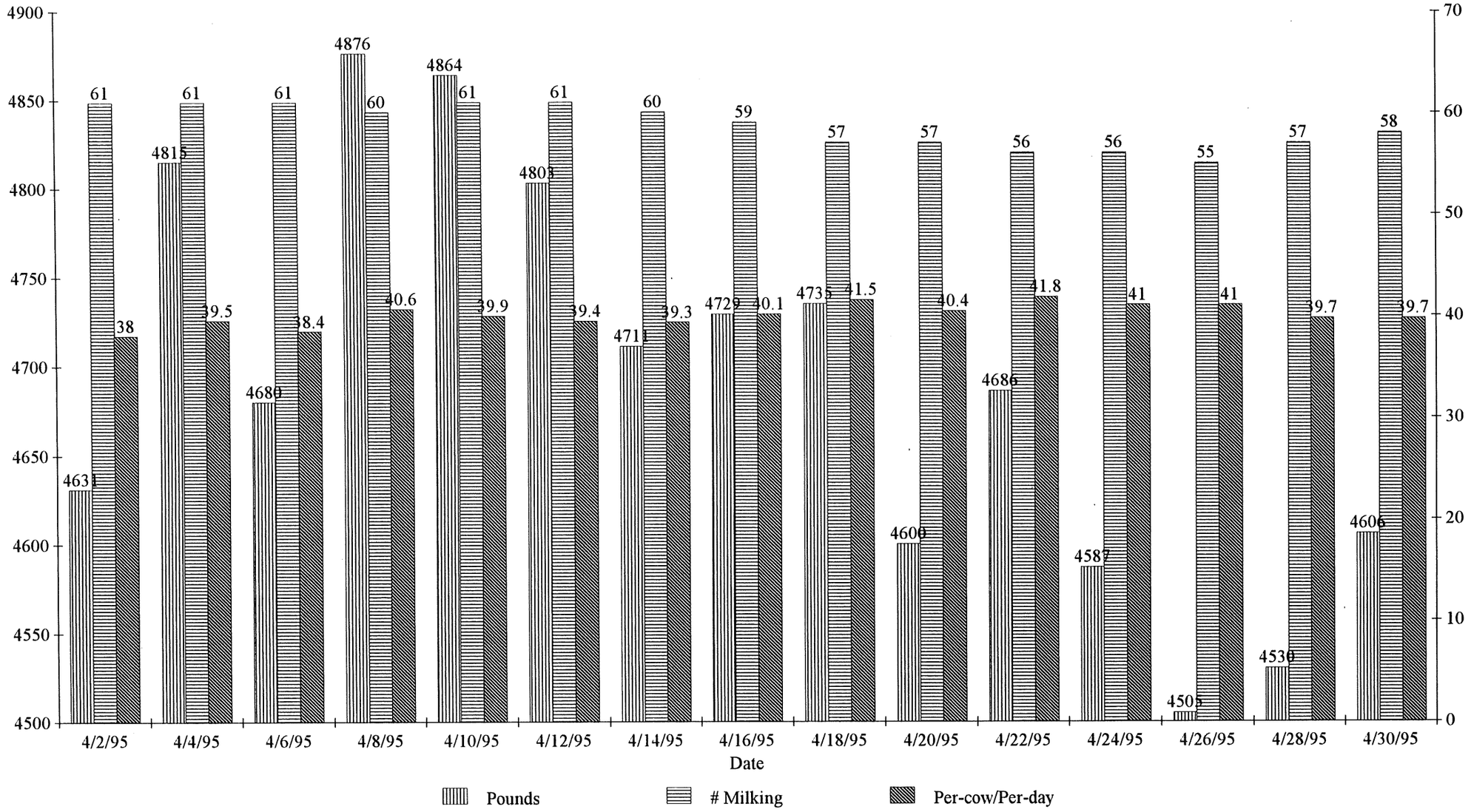
MILK PRODUCTION DATA GRAPH

3 - 1 to 3 - 31 95'



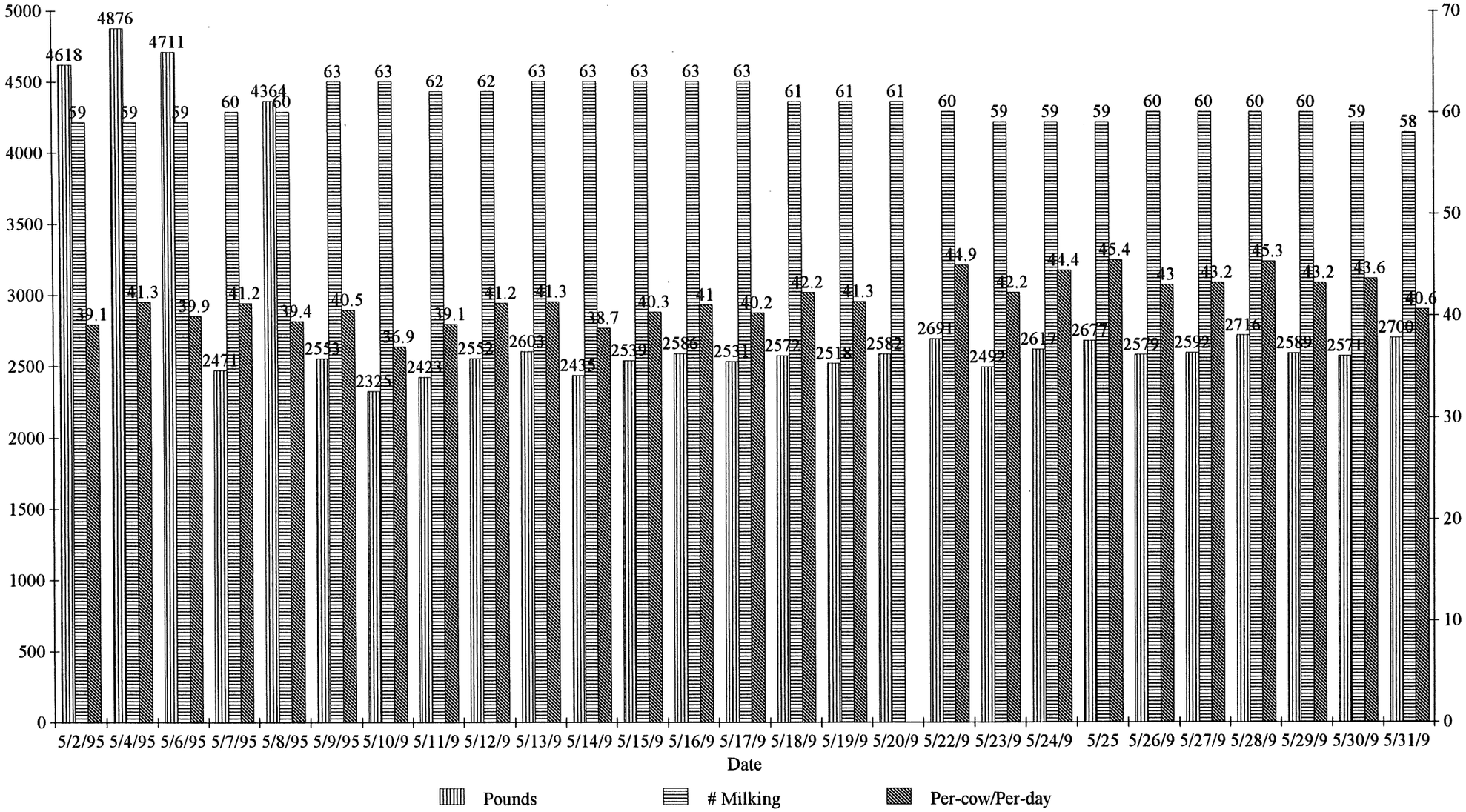
MILK PRODCUTION DATA GRAPH

4 - 2 to 4 - 30 95'



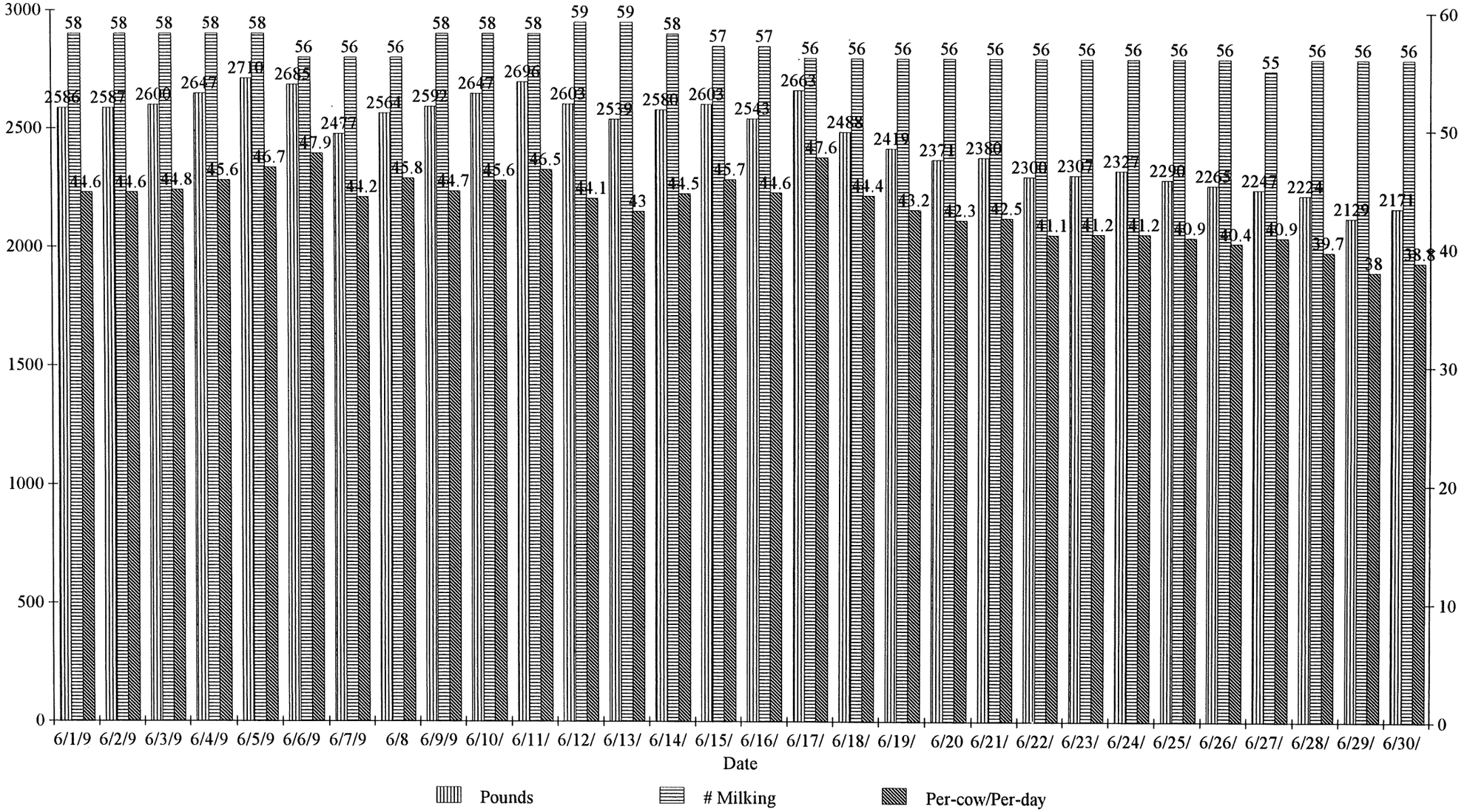
MILK PRODUCTION DATA GRAPH

5 - 2 to 5 - 31 95'



MILK PRODUCTION DATA GRAPH

6 - 1 to 6 - 30 95'



Cow Number Normal Value		ALB 3.0 - 3.5	GLOB 3.0 - 3.5	BUN 20 - 30	TP 6.7 - 7.5	MAG 1.8 - 2.3	GLU 50 - 90	CAL 8.2 - 10	PHOS 4.0 - 7.4
155	11/17/92	3.3	3.7	16.1	7	2.4	55	9.6	6.4
187	11/3/93	3.1	3.7	13.9	6.8	2.3	45	9.7	6
207	5/17/92	3.7	3.1	18.5	6.8	2.8	54	10.4	4.5 4.5
215	DRY	3.2	4.3	20	7.5	2.5	55	9.8	4.8
235	11/7/93	3.3	3.6	16.4	6.9	2.7	42	10.1	4.1
241	4/23/93	3.2	3.3	20.2	6.5	2.8	47	9.8	5.6
247	DRY	3	3.7	21.9	6.7	2.6	60	9.3	5.6
257	8/26/93	3.2	3.9	18	7.1	2.5	46	9.2	5.9
267	10/27/93	3.2	4	16.4	7.2	2.8	52	9.7	5.6
274	4/28/93	2.9	4.1	15.2	7	2.7	44	9.7	5
288	7/28/93	3.3	3.9	16.9	7.2	2.6	52	9.7	5.6
299	5/2/93	2.7	4.9	13.3	7.6	2.6	55	10.9	3.1
308	6/4/93	3.2	3.6	14.5	7.8	2.4	47	10.5	5.1
309	10/13/93	3	3.7	17.6	6.7	2.7	49	10	5
311	11/13/93	2.6	6.7	9.6	9.3	2.6	52	10.5	3.8
313	11/13/93	3.1	3.1	9.8	6.2	2.7	47	9.9	2.5
317	11/7/93	3.1	3.8	11.9	6.9	2.5	57	10.2	4.6
318	9/15/93	2.9	4.1	22.8	7	2.7	42	9.7	6.1

Blood Sample 8/95

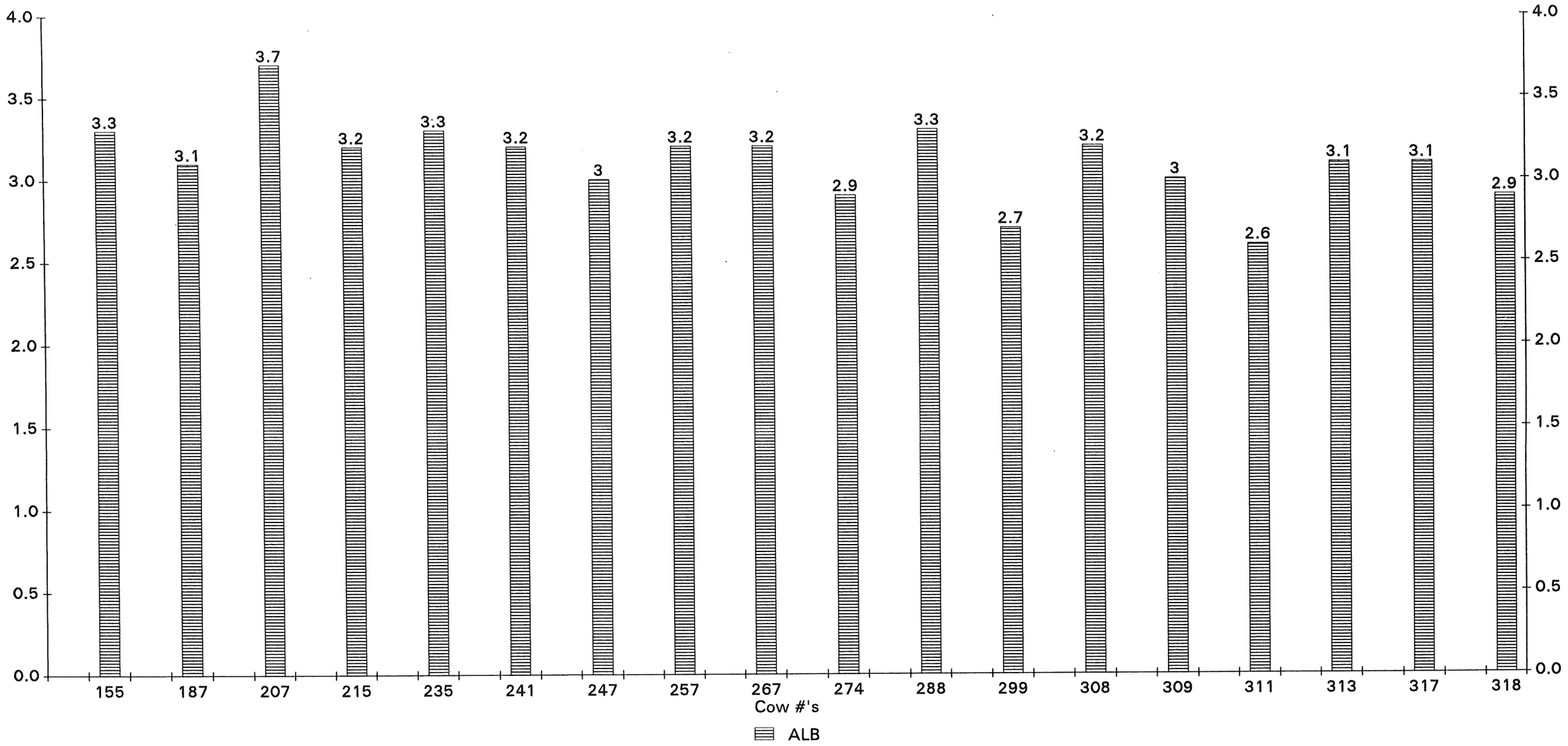
COW NUMBER		ALB 3.0 - 3.5	GLOB 3.0 - 3.5	BUN 15 - 30	TP 6.7 - 7.5	MAG 1.8 - 2.3	GLU 50 - 90	CAL 8.2 - 10	PHOS 4 - 7.4
215	7/24/95	3.7	4.4	15	8.1	2.9	51	10.4	3.9
235	DRY	3.3	4.9	17.2	8.2	2.4	73	10.3	4.9
241	8/23/95	3.3	3.8	27.7	7.1	3.4	58	9.8	3
247	8/27/95	3.2	4.8	14.5	8	2.5	67	10.3	5.1
257	8/12/95	3.4	5.3	12.3	8.7	2.5	55	10.1	2.3
267	DRY	3.4	4.9	18.1	8.3	2.9	58	10.6	5.5
300	6/8/95	3.6	4.9	14.6	8.5	2.8	60	10.2	4.3
308	DRY	3.2	4.9	13.9	8.1	2.3	62	9.7	3.8
316	2/26/95	3.7	4.9	12	8.6	2.6	58	10.4	4.2
317	12/3/95	3.4	4	16.8	7.4	2.7	60	10	4.5
335	DRY	3.6	4	19.8	7.5	2.7	57	10.1	5.6
342	2/8/95	3.4	4.7	17.5	8.1	2.3	50	9.7	5
351	10/13/94	3.3	4	11.5	7.3	2.4	60	10.1	5.4
374	4/22/95	3.3	4.1	13.3	7.4	2.6	59	10.4	5.1
380	5/8/95	3.5	4.3	16.1	7.8	3.1	63	10.9	4.4
389	4/26/94	3.3	3.9	17.4	7.2	2.7	64	10.2	5.3
362	11/29/94	2.9	3.9	16.7	6.8	2.4	56	10.2	4.5
403	DRY	3	4.3	15.1	7.3	Err	58	Err	3.2

Blood Sample Comparisons 11/93 to 8/95

11/93 / 8/95	Cow #		ALB	GLOB	BUN	TP	MAG	GLU	CAL	PHOS
		Normal Value	3.0 - 3.5	3.0 - 3.5	20 - 30	6.7 - 7.5	1.8 - 2.3	50 - 90	8.2 - 10	4.0 - 7.4
		Normal Value	3.0 - 3.5	3.0 - 3.5	15 - 30	6.7 - 7.5	1.8 - 2.3	50 - 90	8.2 - 10	4 - 7.5
11/93	215	DRY	3.2	4.3	20	7.5	2.5	55	9.8	4.8
8/95	215	7/24/95	3.7	4.4	15	8.1	2.9	51	10.4	3.9
11/93	235	11/7/93	3.3	3.6	16.4	6.9	2.7	42	10.1	4.1
8/95	235	DRY	3.3	4.9	17.2	8.2	2.4	73	10.3	4.9
11/93	241	4/23/93	3.2	3.3	20.2	6.5	2.8	47	9.8	5.6
8/95	241	8/23/95	3.3	3.8	27.7	7.1	3.4	58	9.8	3
11/93	247	DRY	3	3.7	21.9	6.7	2.6	60	9.3	5.6
8/95	247	3/27/95	3.2	4.8	14.5	8	2.5	67	10.3	5.1
11/93	257	8/26/93	3.2	3.9	18	7.1	2.5	46	9.2	5.9
8/95	257	10/27/93	3.4	5.3	12.3	8.7	2.5	55	10.1	2.3
11/93	267	6/4/93	3.2	4	16.4	7.2	2.8	52	9.7	5.6
8/95	267	DRY	3.4	4.9	18.1	8.3	2.9	58	10.6	5.5
11/93	308	6/4/93	3.2	3.6	14.5	7.8	2.4	47	10.5	5.1
8/95	308	DRY	3.2	4.9	13.9	8.1	2.3	62	9.7	3.8
11/93	317	11/7/93	3.1	3.8	11.9	6.9	2.5	57	10.2	4.6
8/95	317	12/3/94	3.4	4	16.8	7.4	2.7	60	10	4.5

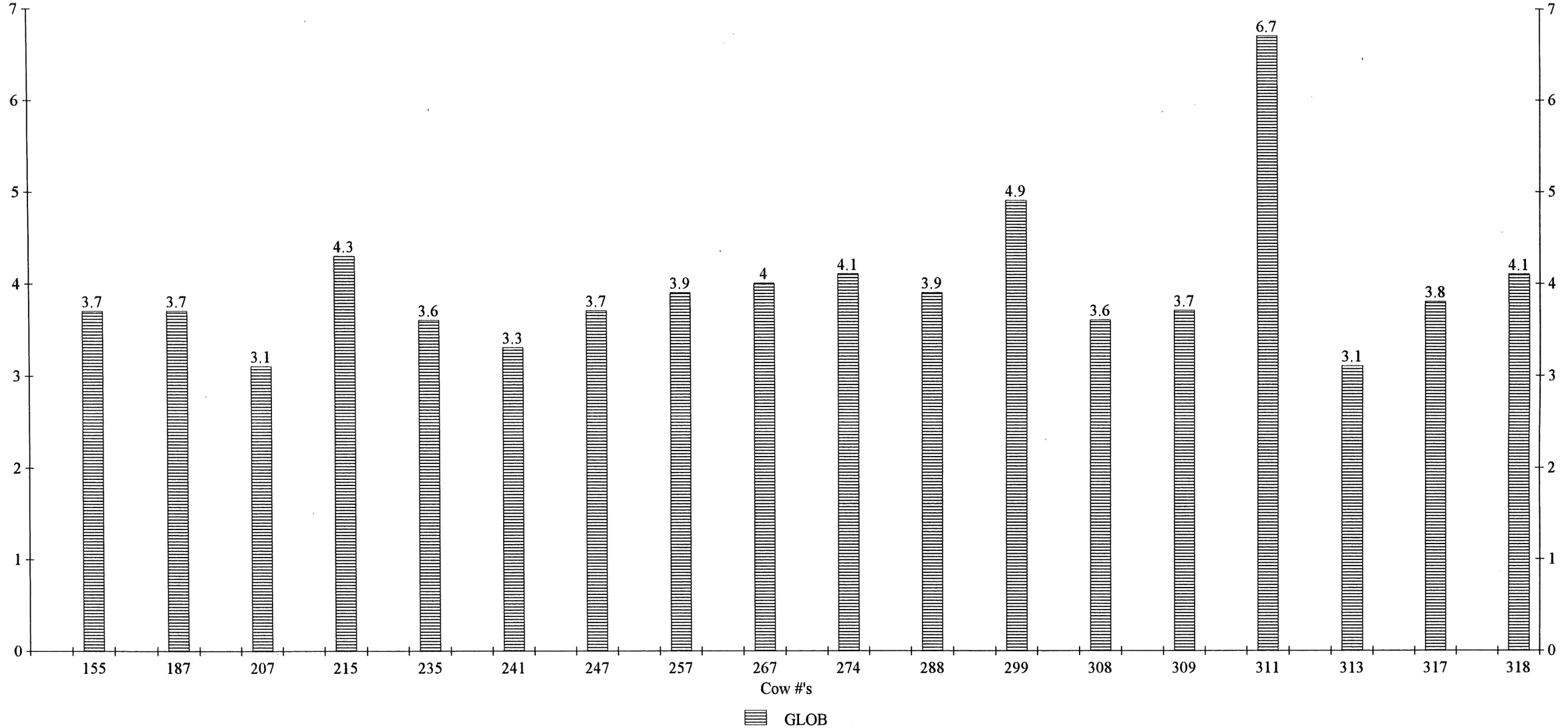
Blood Sample Data Graph

ALB 11/93 NV = 3.0 - 3.5



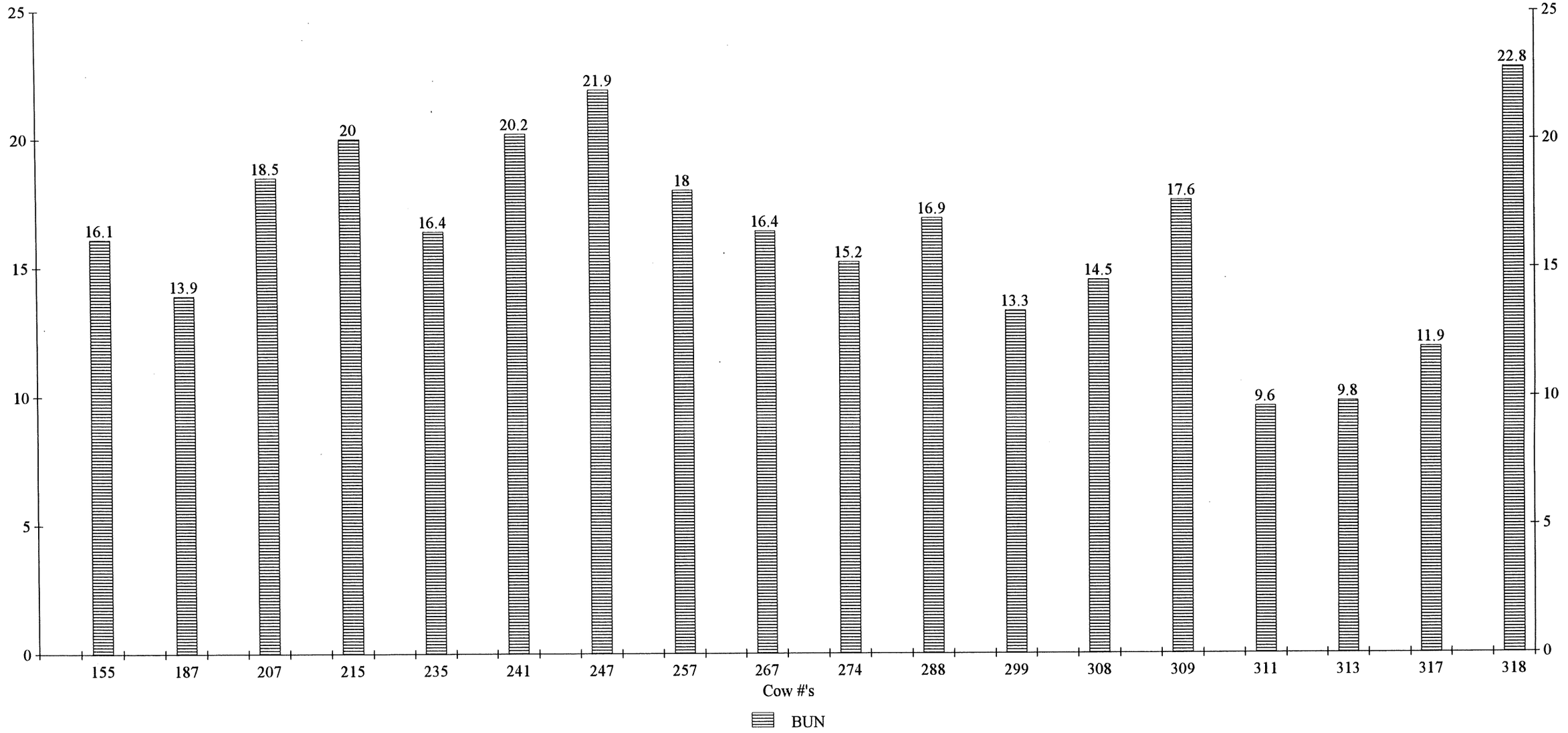
Blood Sample Data Graph

GLOB 11/93 NV= 3.0 - 3.5



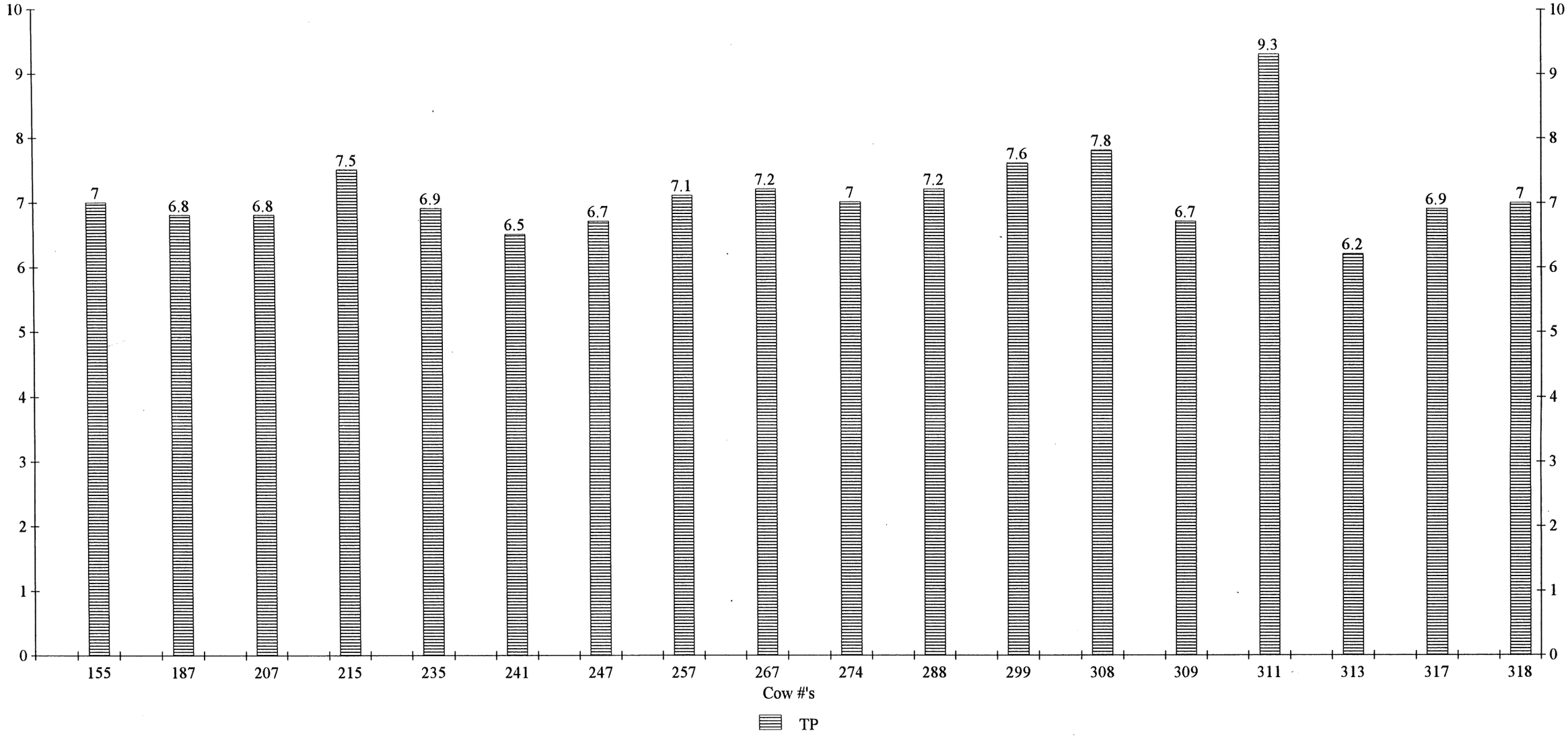
Blood Sample Data Graph

BUN 11/93 NV = 20 - 30



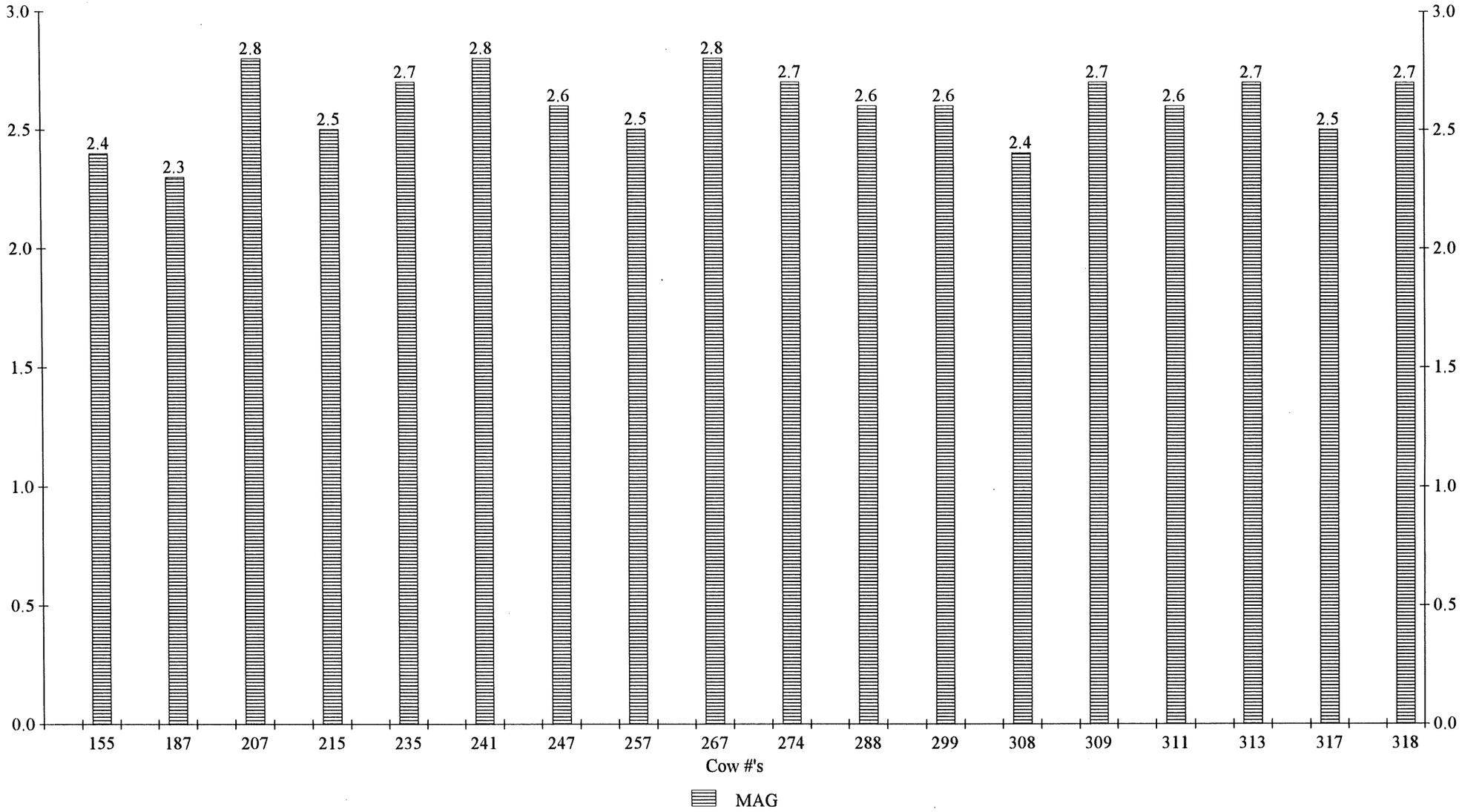
Blood Sample Data Graph

TP 11/93 NV = 6.7 - 7.5



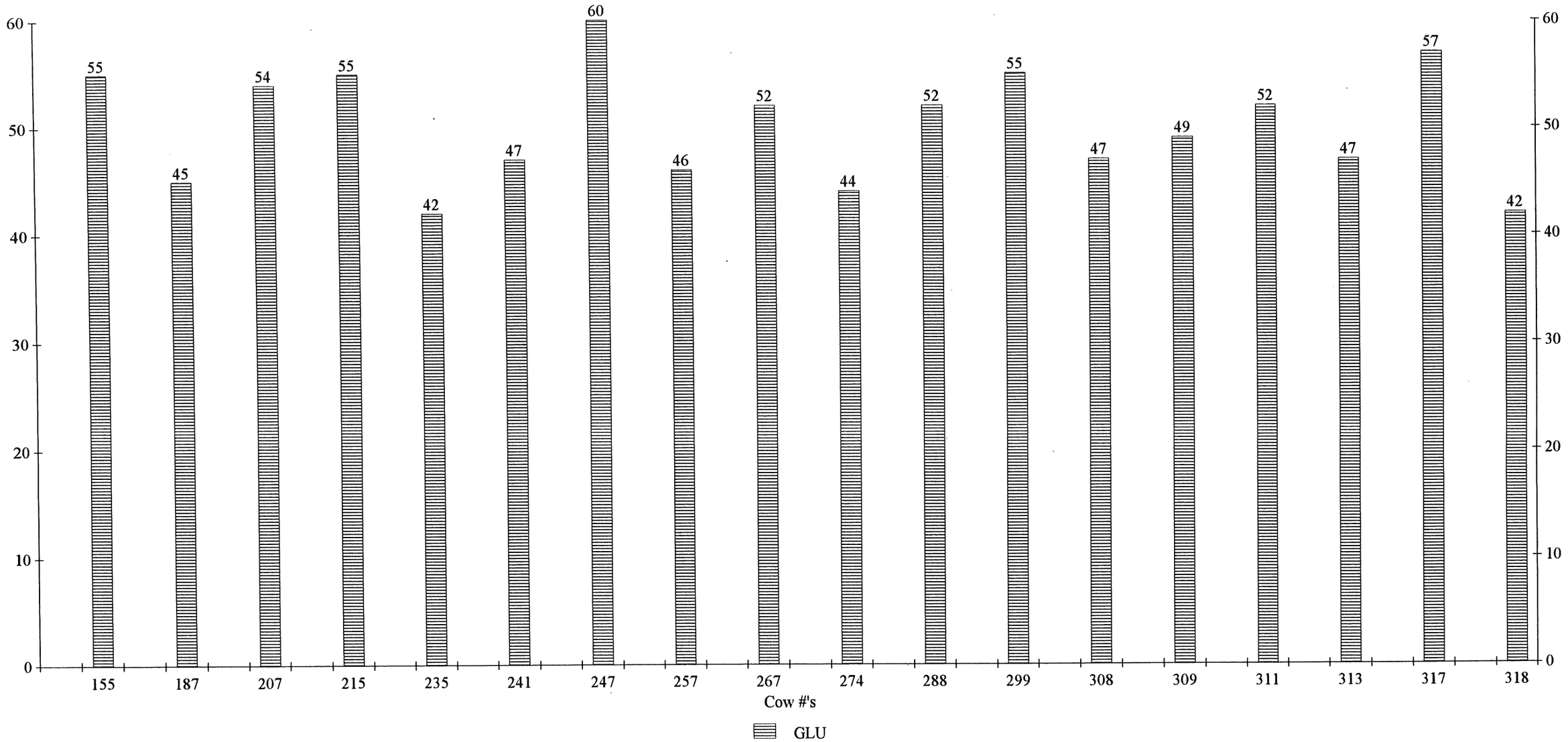
Blood Sample Data Graph

MAG 11/39 NV = 1.8 - 2.3



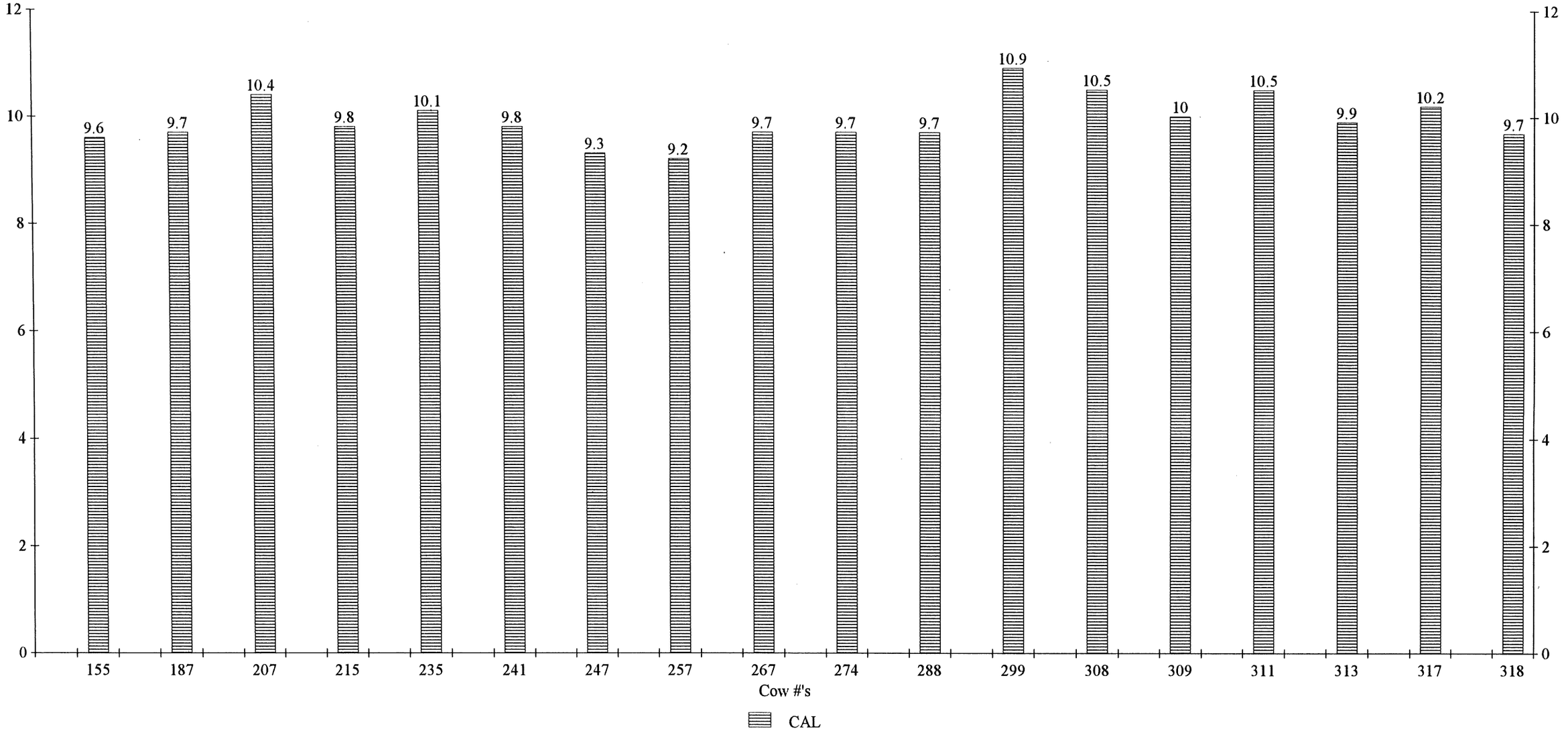
Blood Sample Data Graph

GLU 11/39 NV = 50 - 90



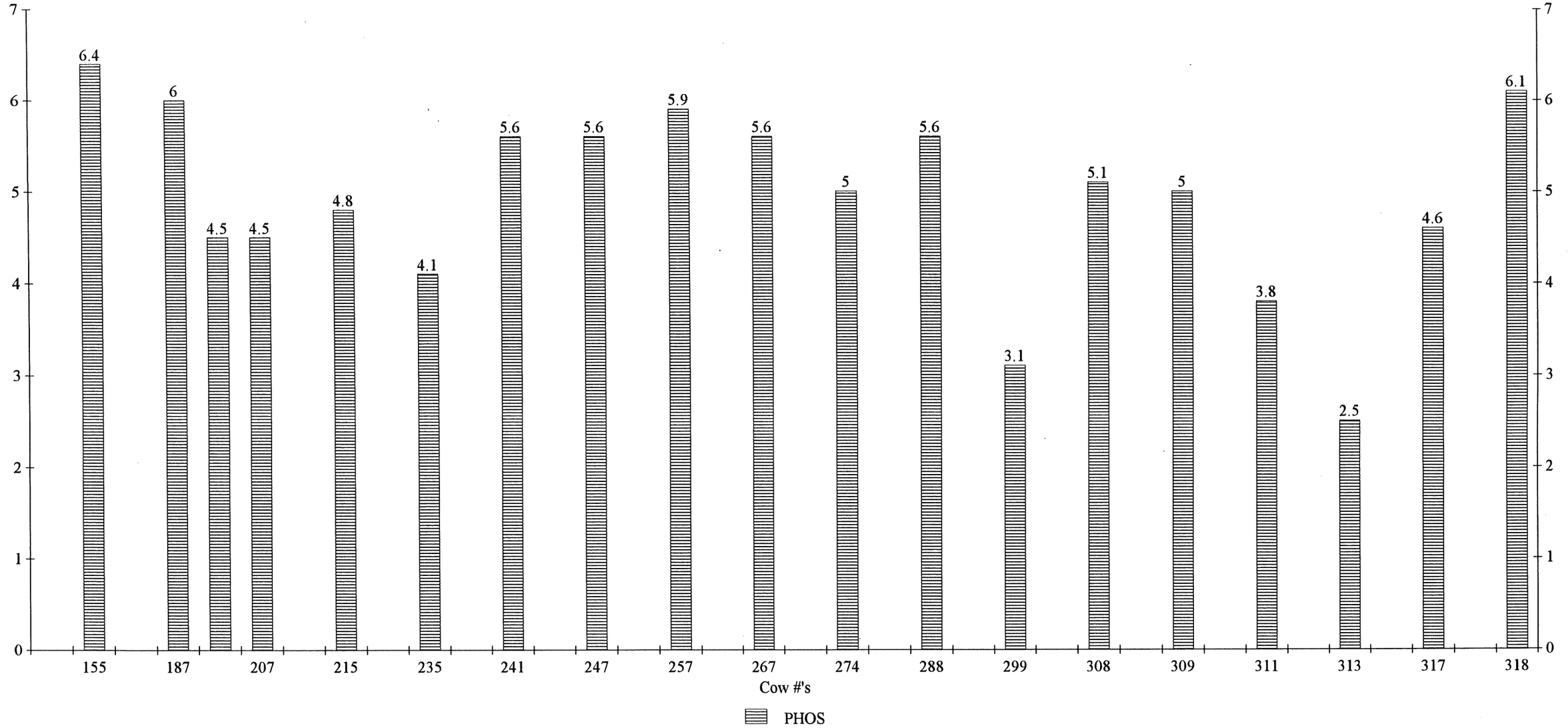
Blood Sample Data Graph

CAL 11/93 NV = 8.2 - 10

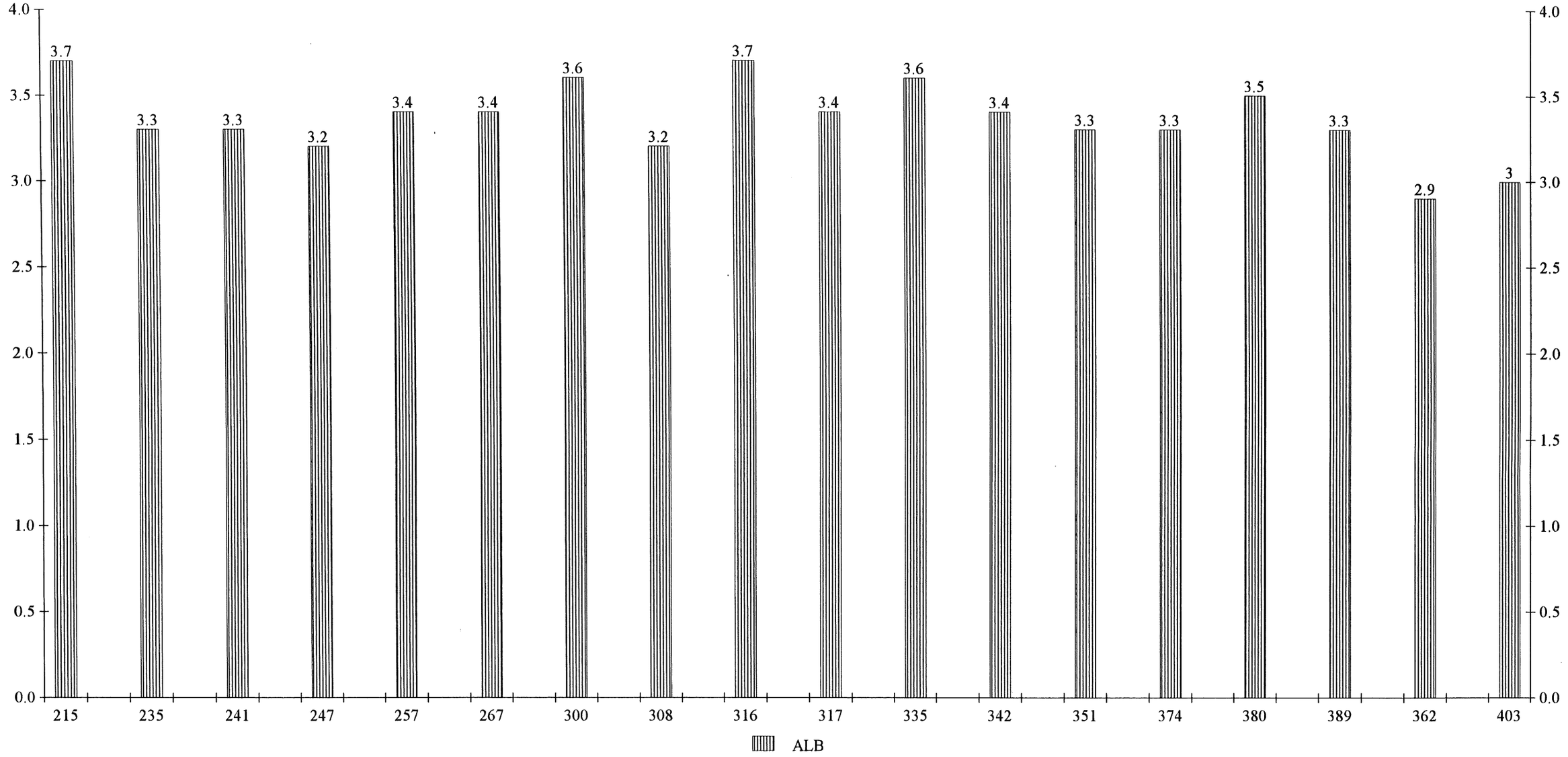


Blood Sample Data Graph

PHOS 11/93 NV = 4.0 - 7.4

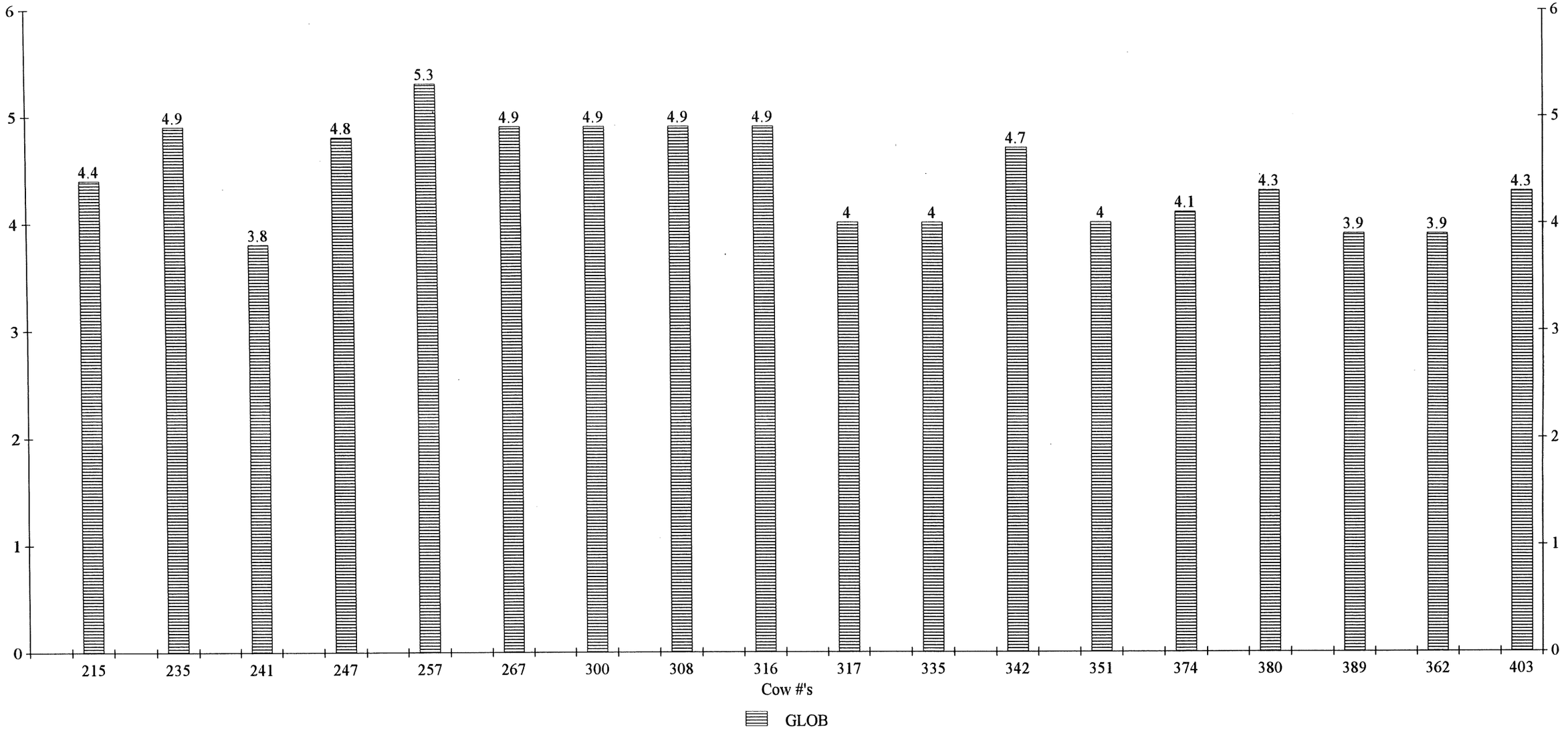


ALB NV =,3.0 - 3.5 8/95



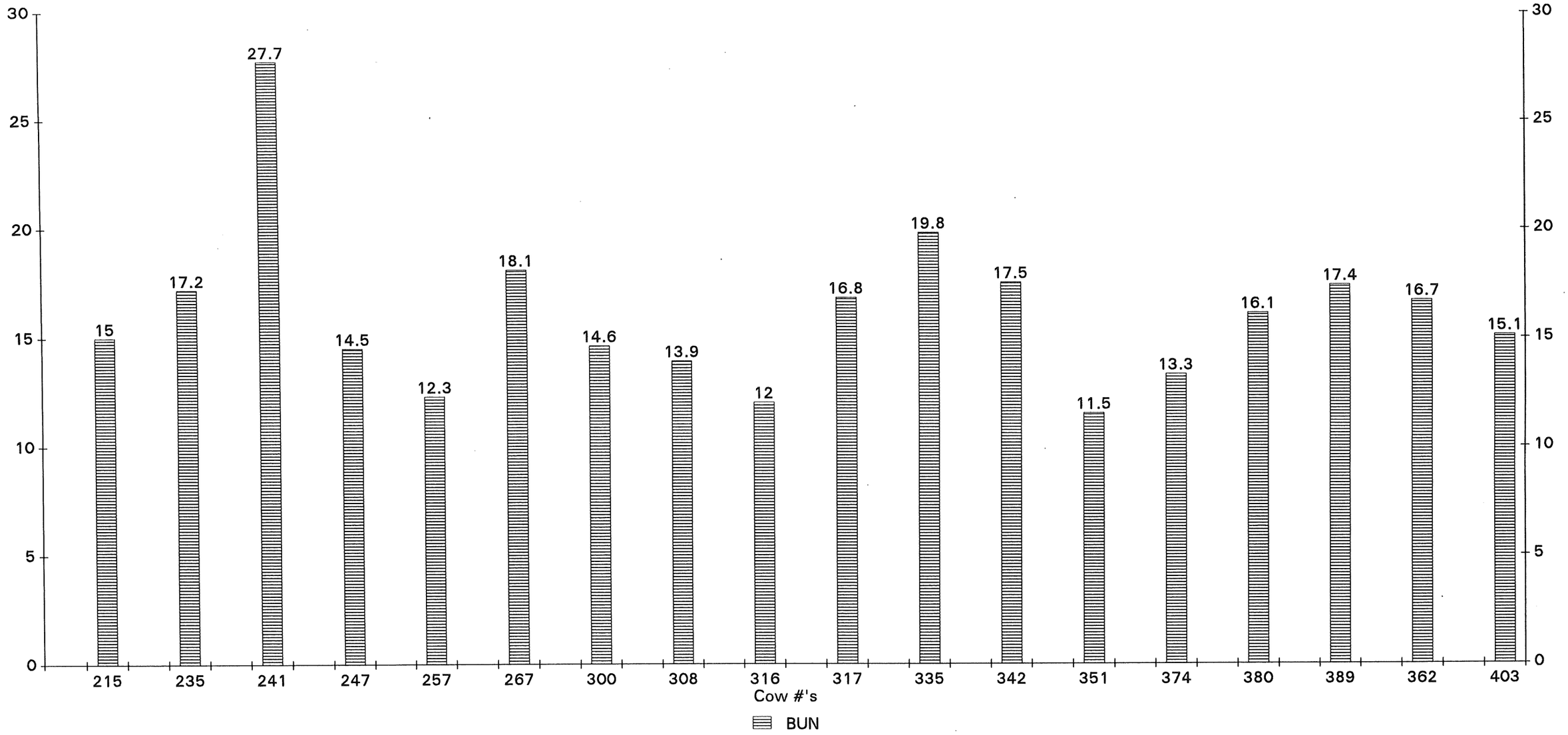
Blood Sample Data Graph

GLOB 8/95 NV 3.0 - 3.5



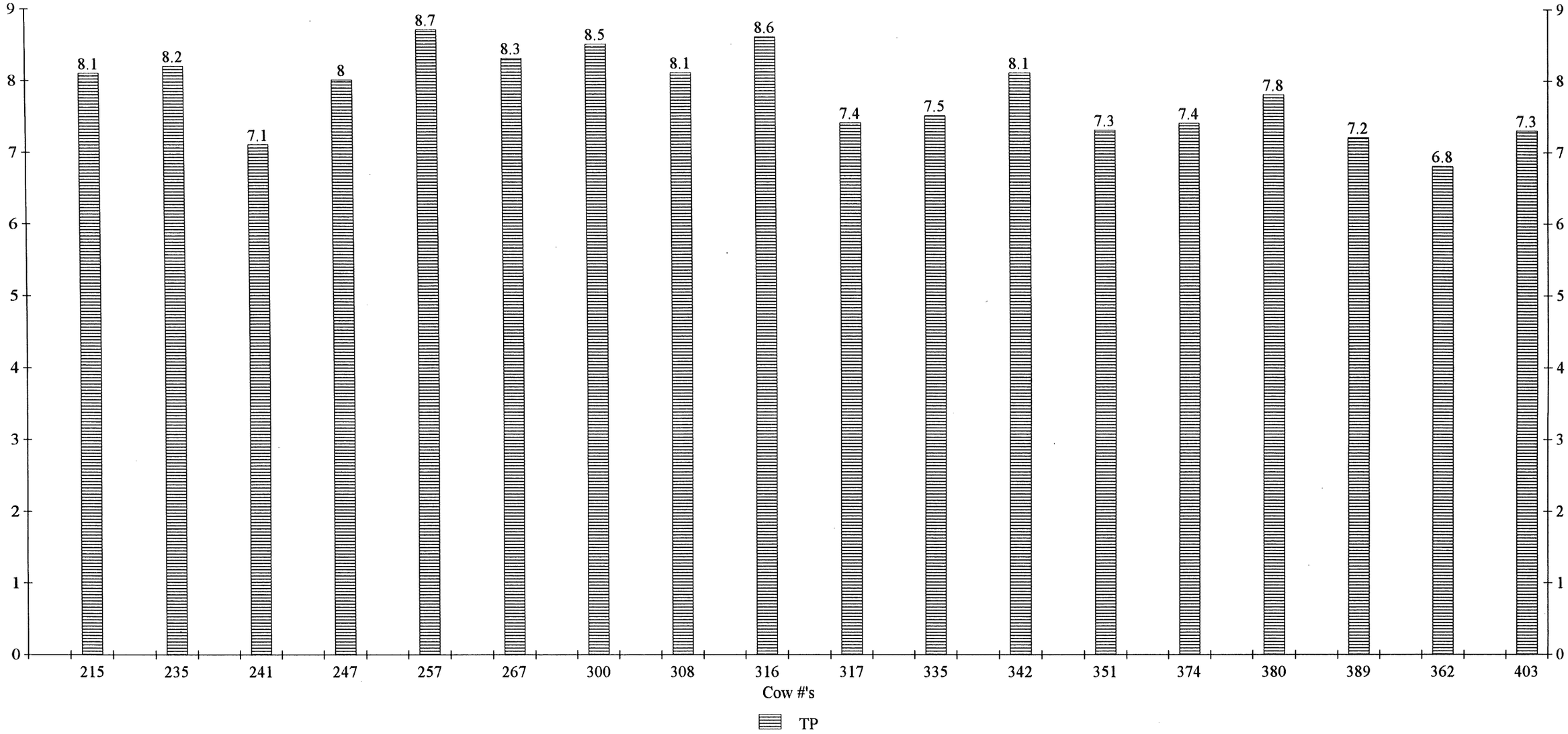
Blood Sample Data Graph

BUN 8/95 NV 15 - 30



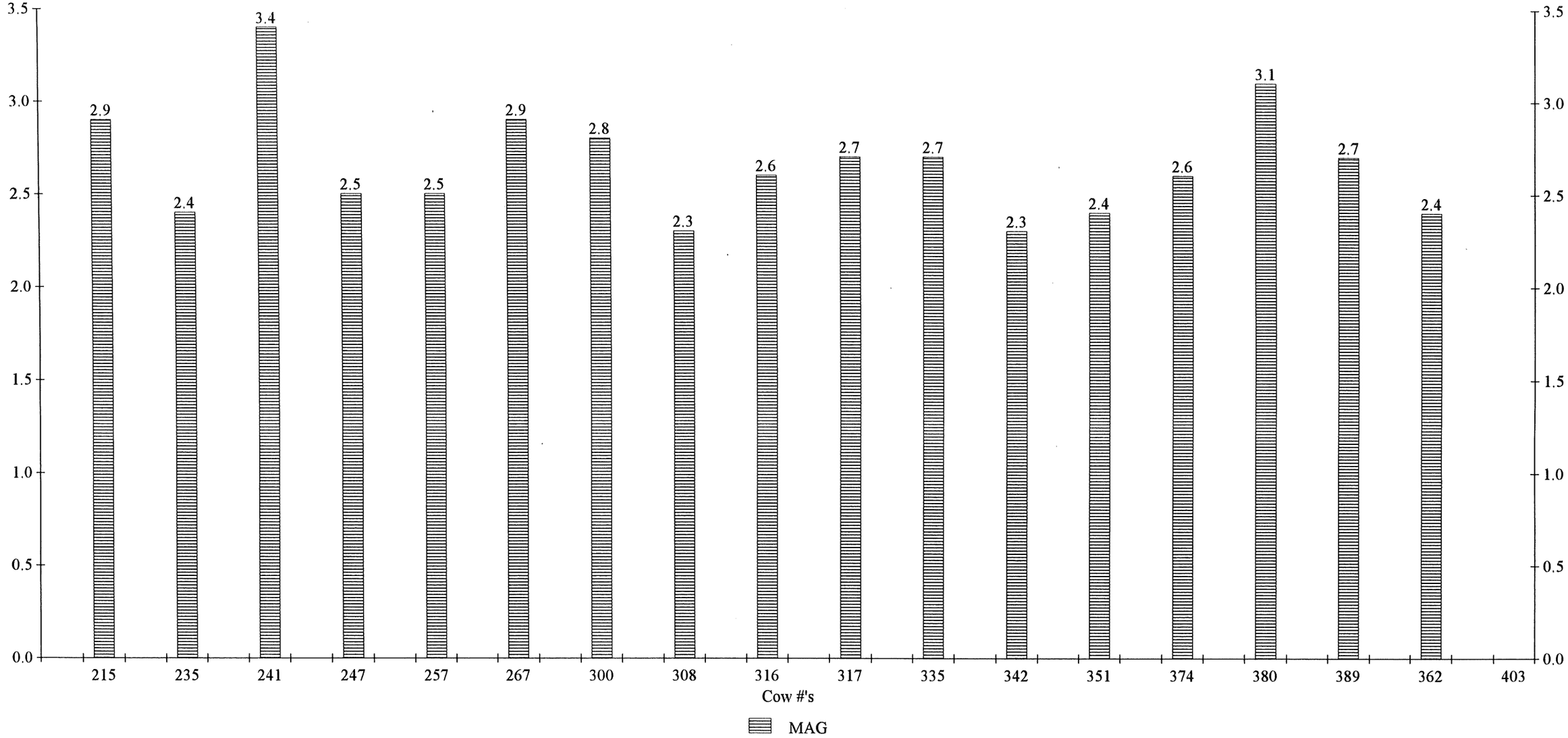
Blood Sample Data Graph

TP 8/95 NV 6.7 - 7.5



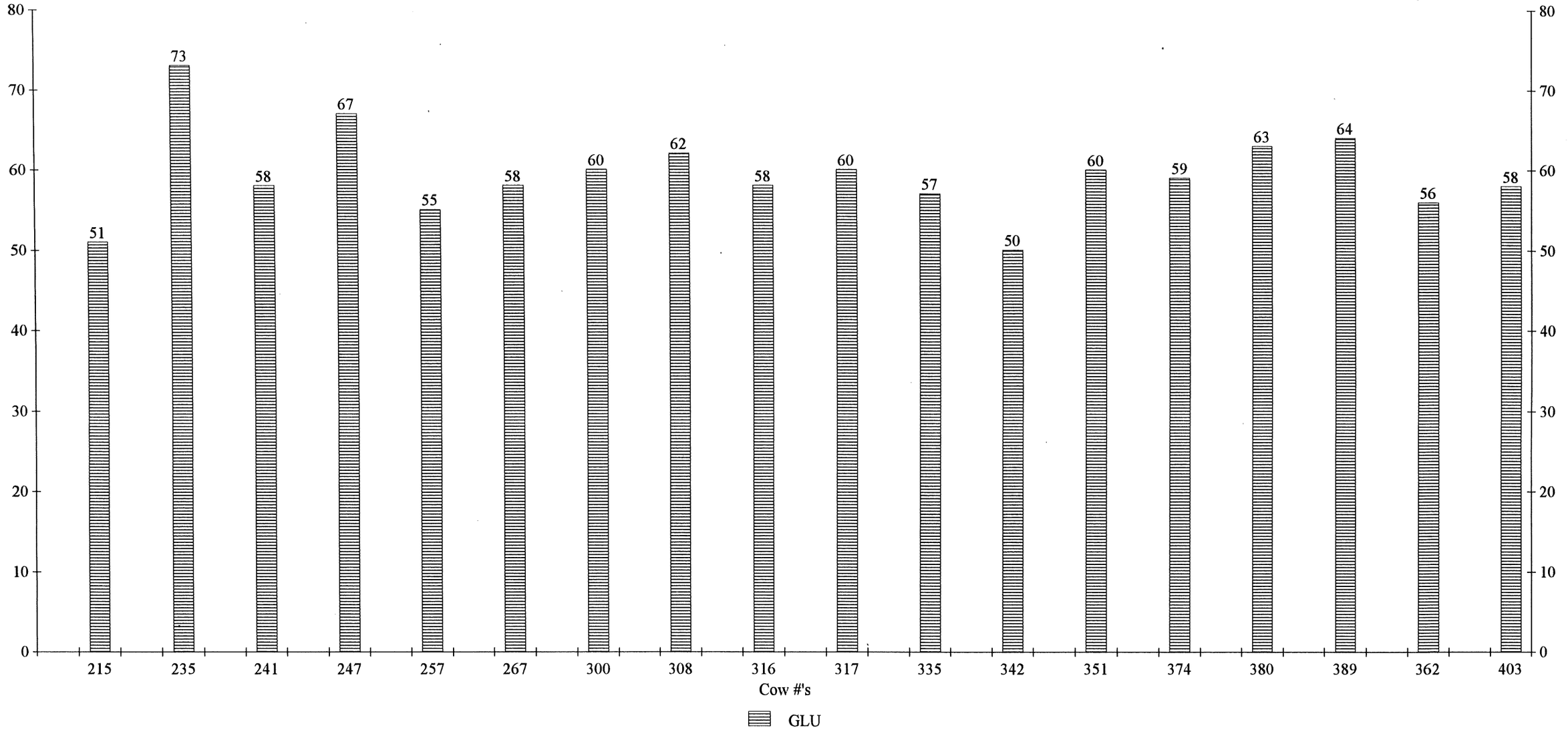
Blood Sample Data Graph

MAG 8/95 NV 1.8 - 2.3



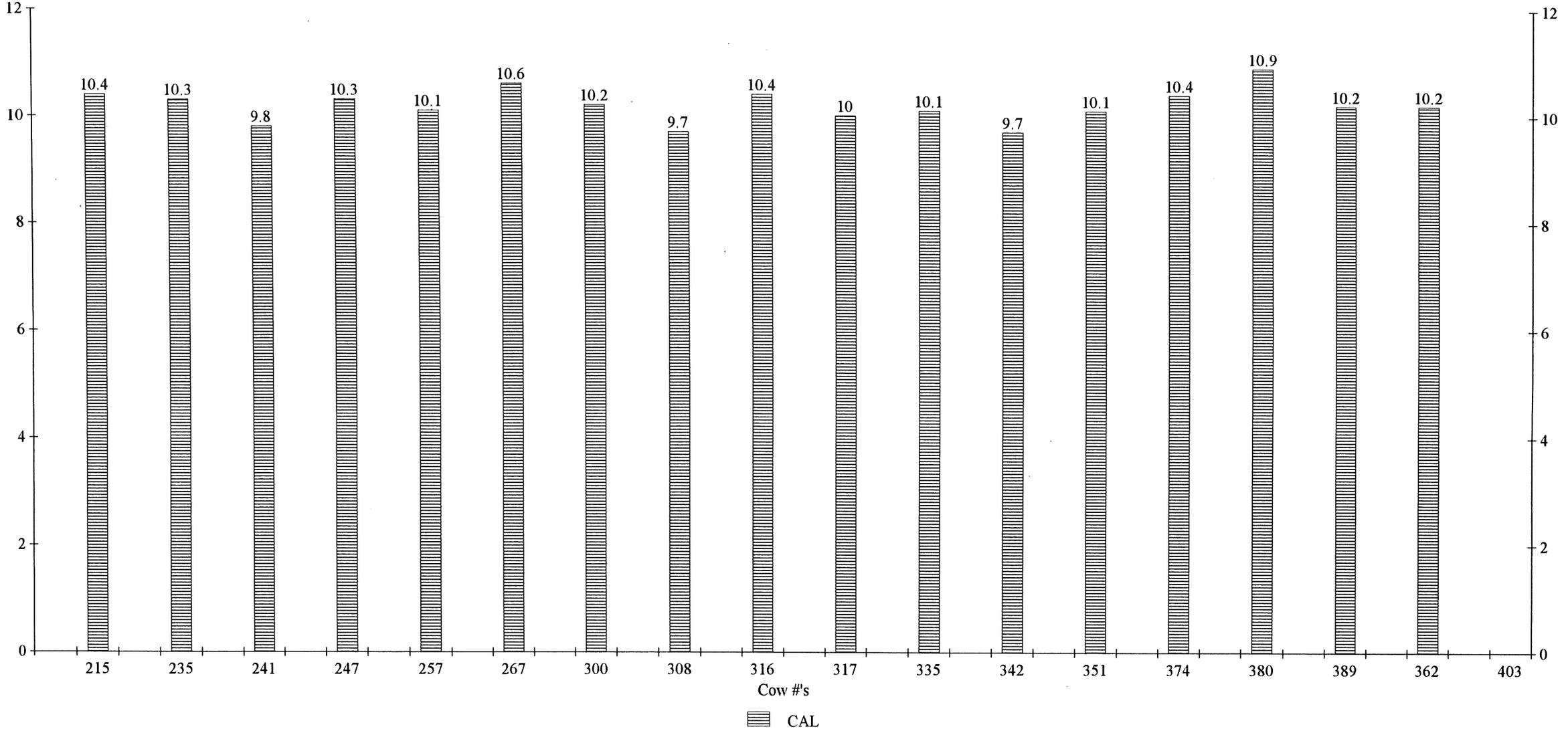
Blood Sample Data Graph

GLU 8/95 NV 50 -90



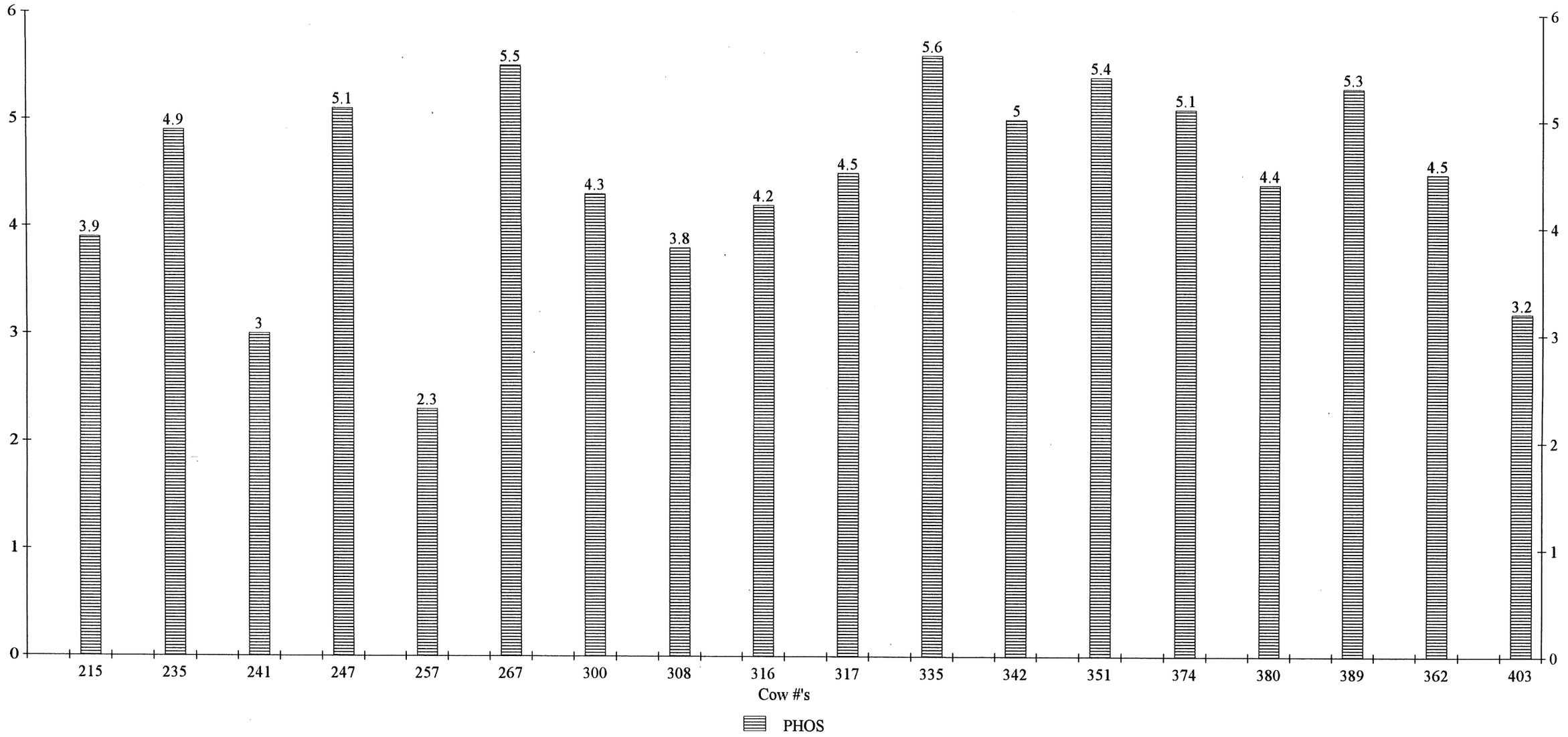
Blood Sample Data Graph

CAL 8/95 NV 8.2 - 10

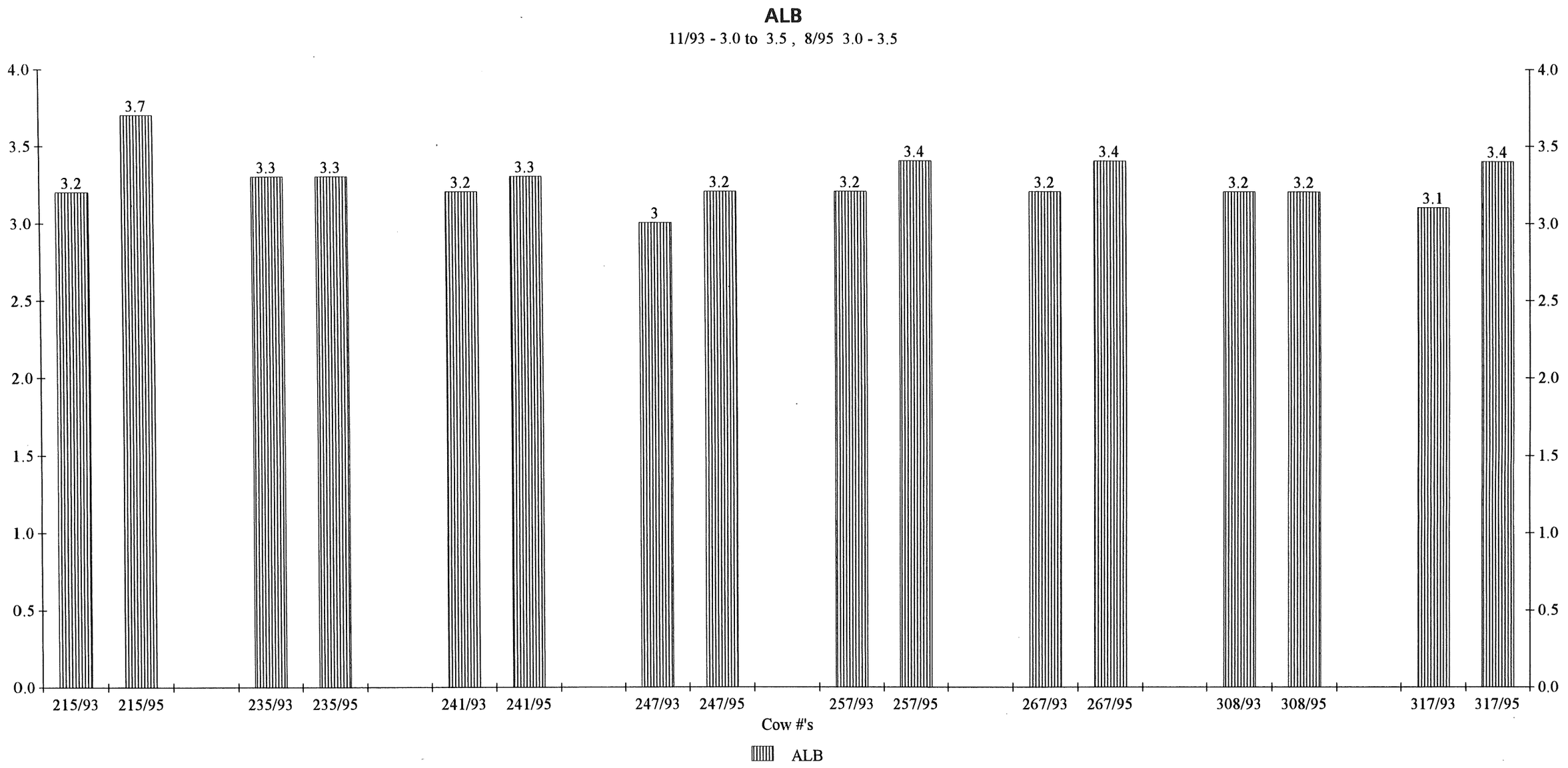


Blood Sample Graph

PHOS 8/95 NV 4 - 7.4

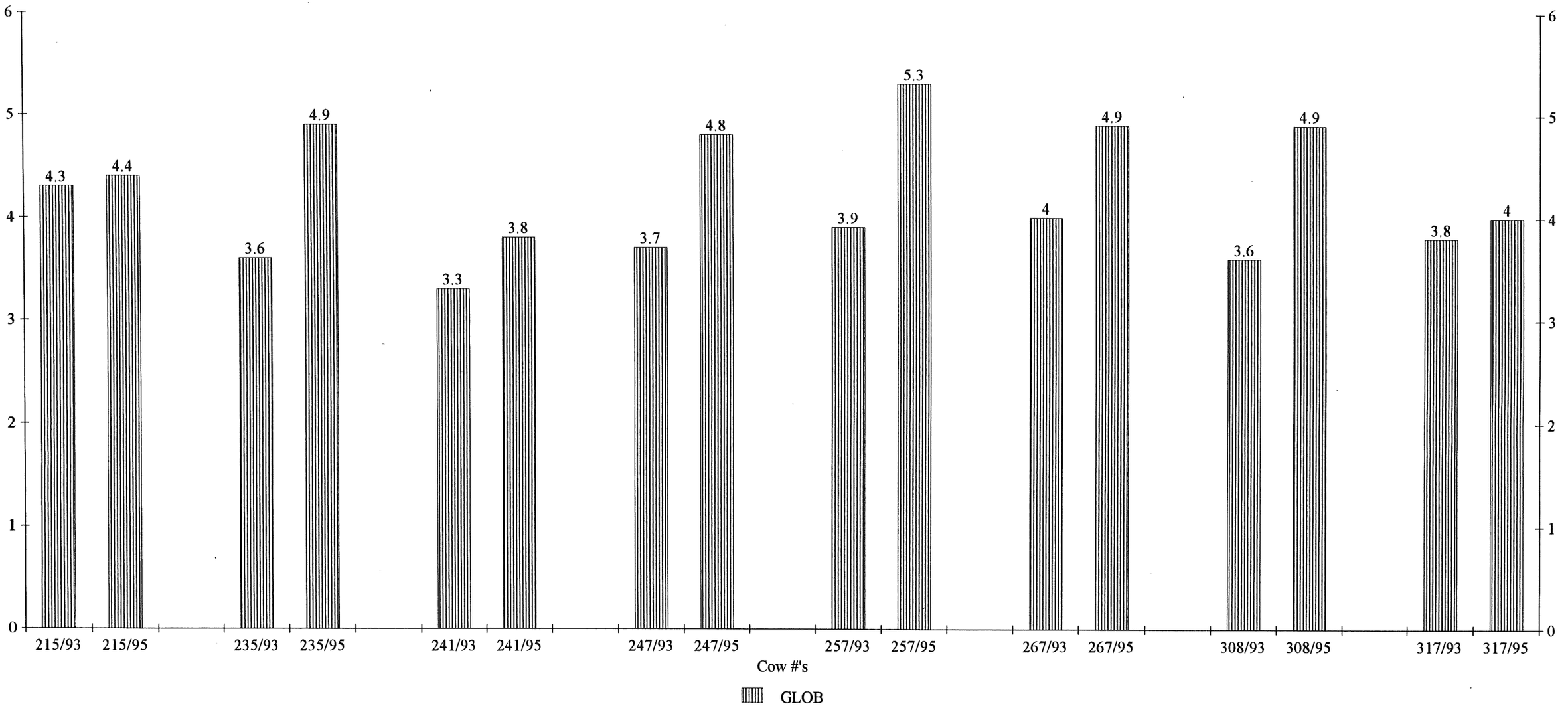


Blood Sample Comparison Graph

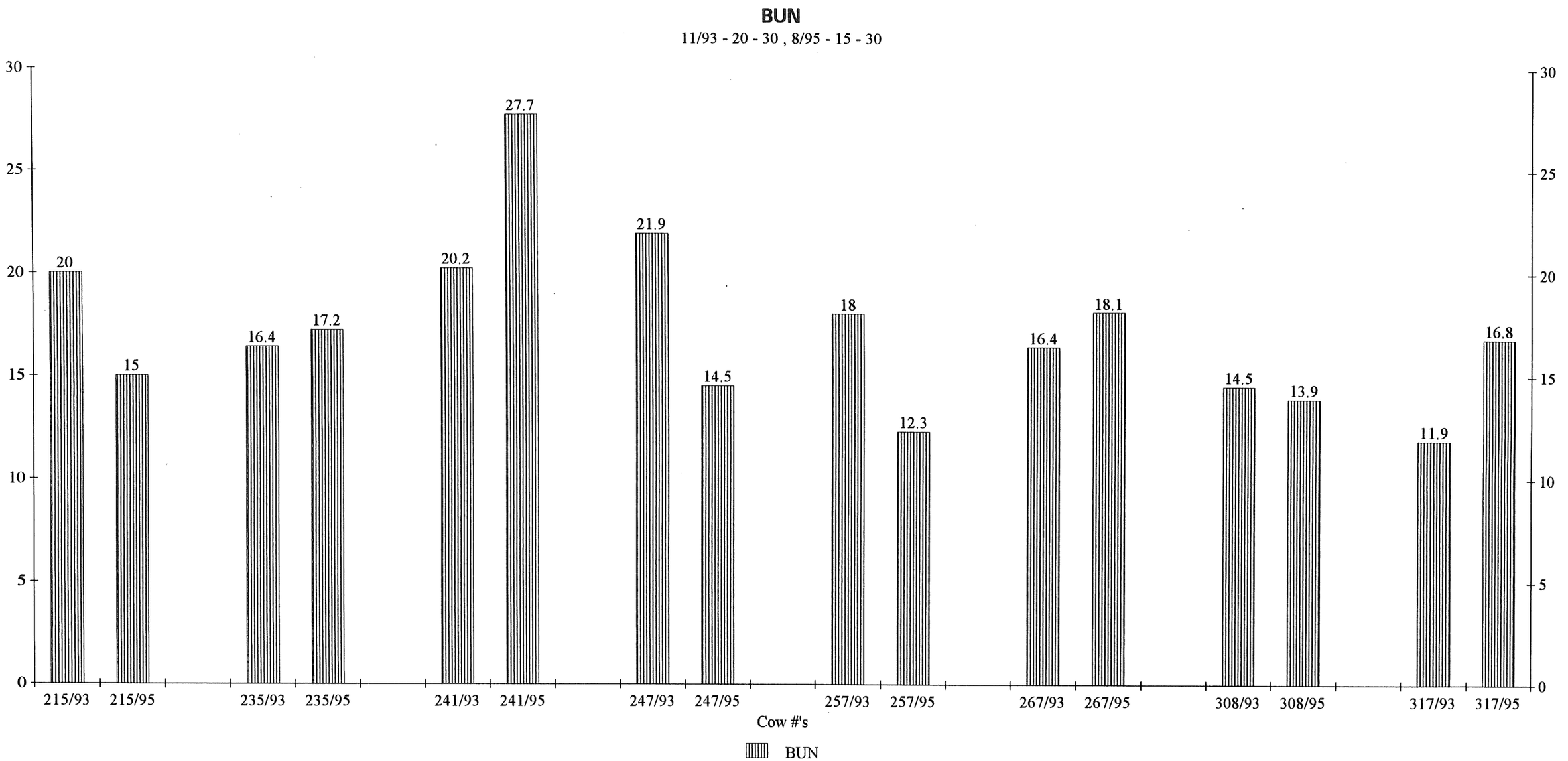


GLOB

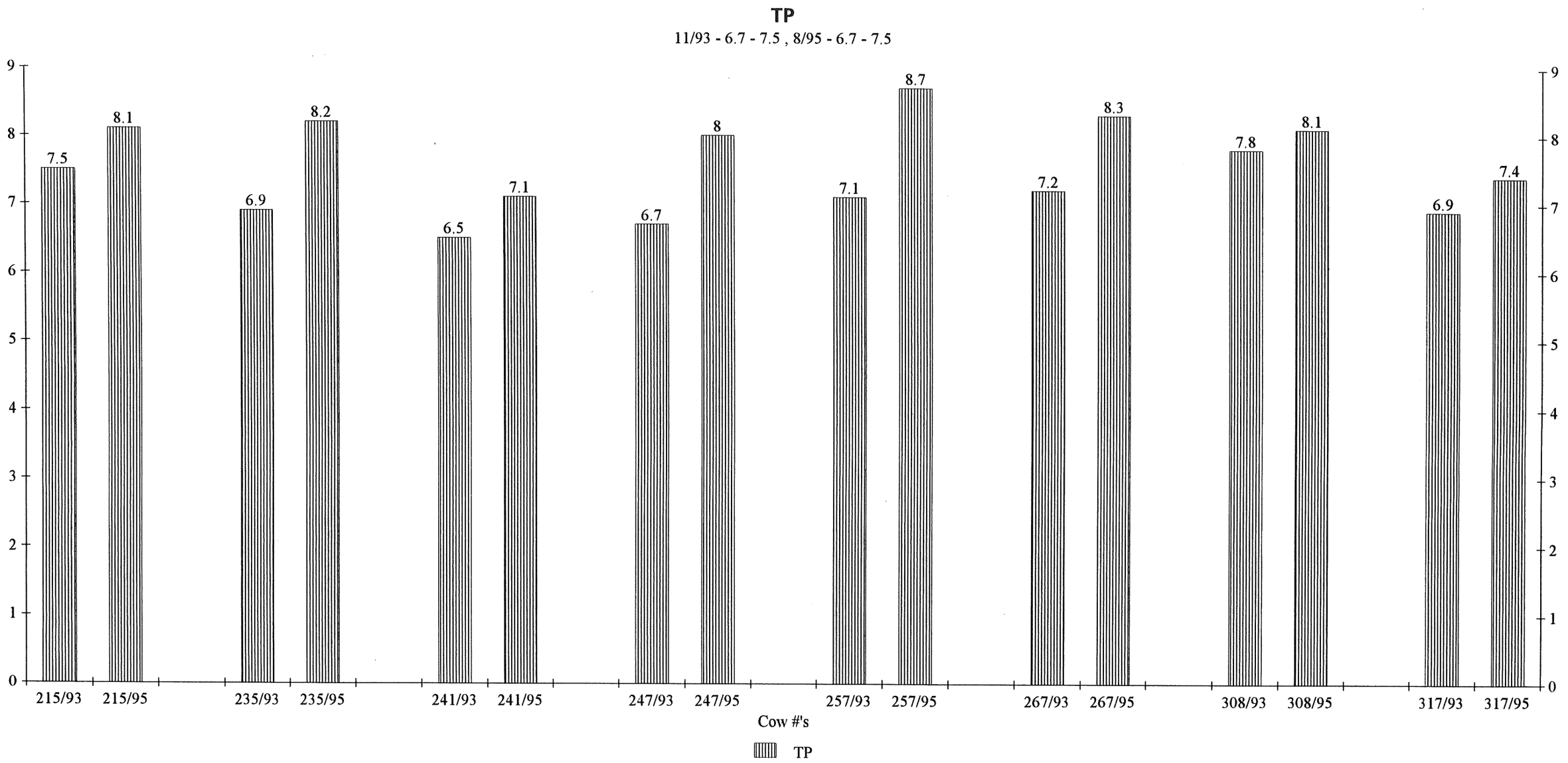
11/93 - 3.0 - 3.5 , 8/95 - 3.0 - 3.5



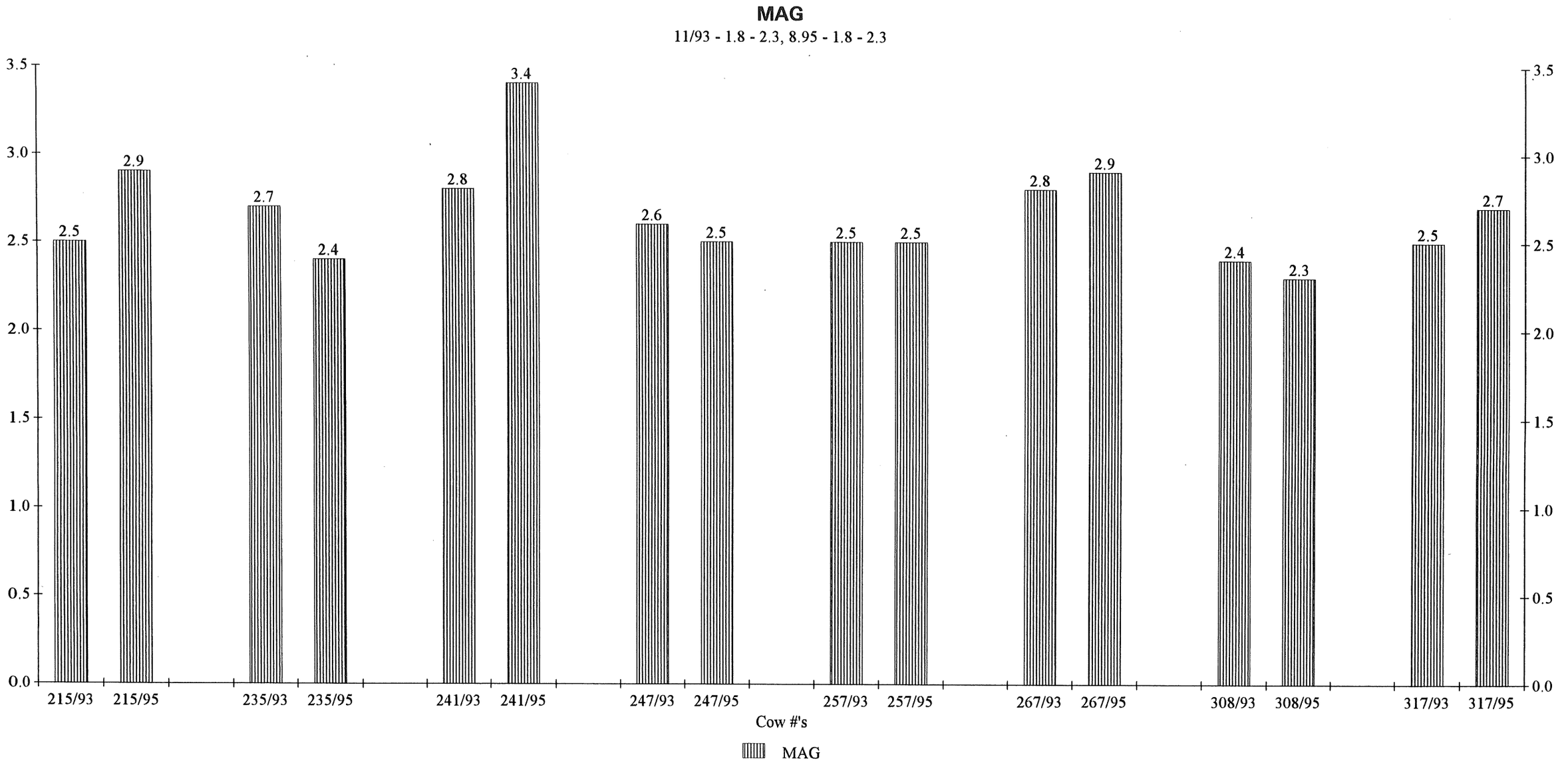
Blood Sample Comparison Graph



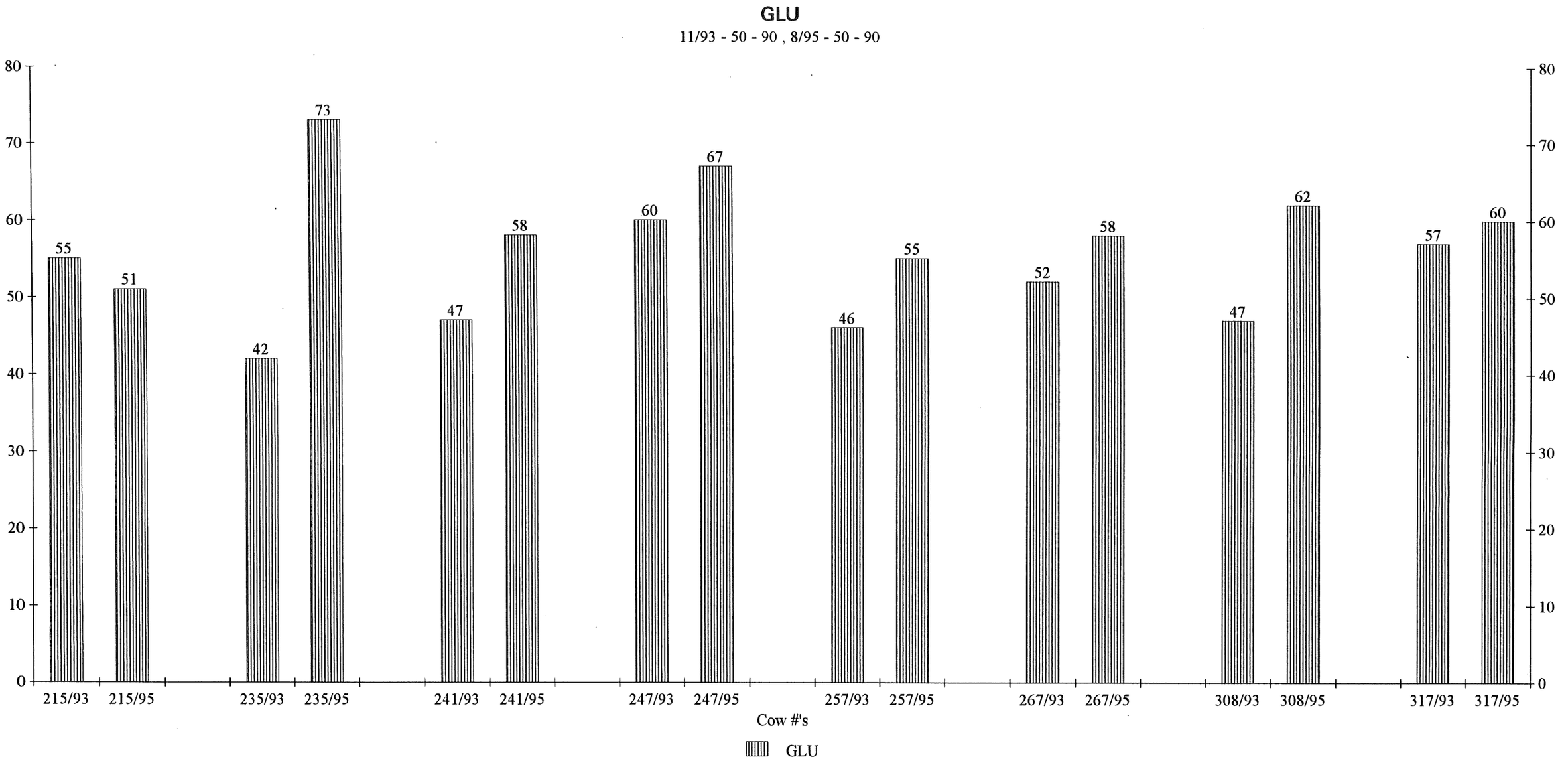
Blood Sample Comparison Graph



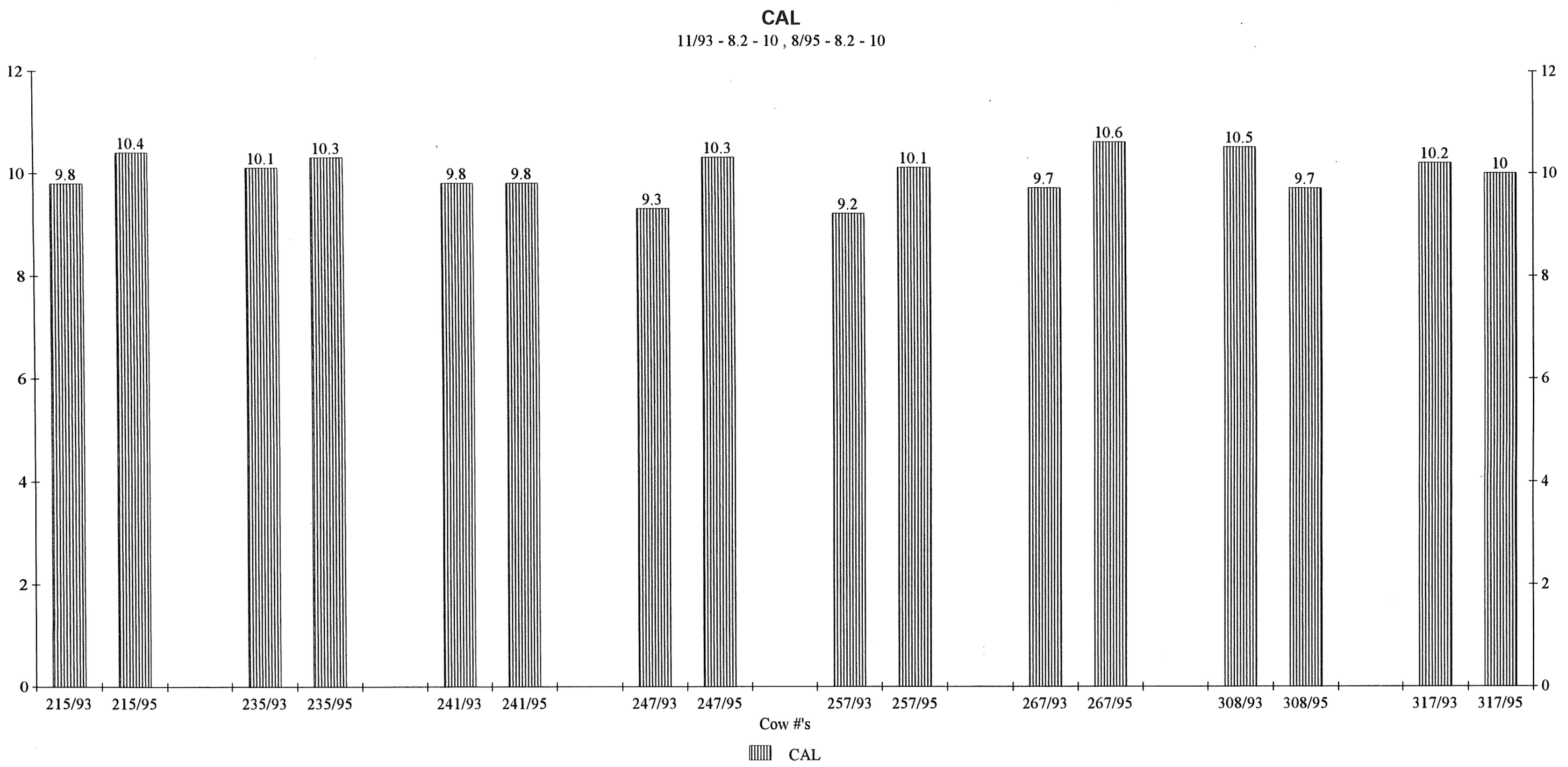
Blood Sample Comparison Graph



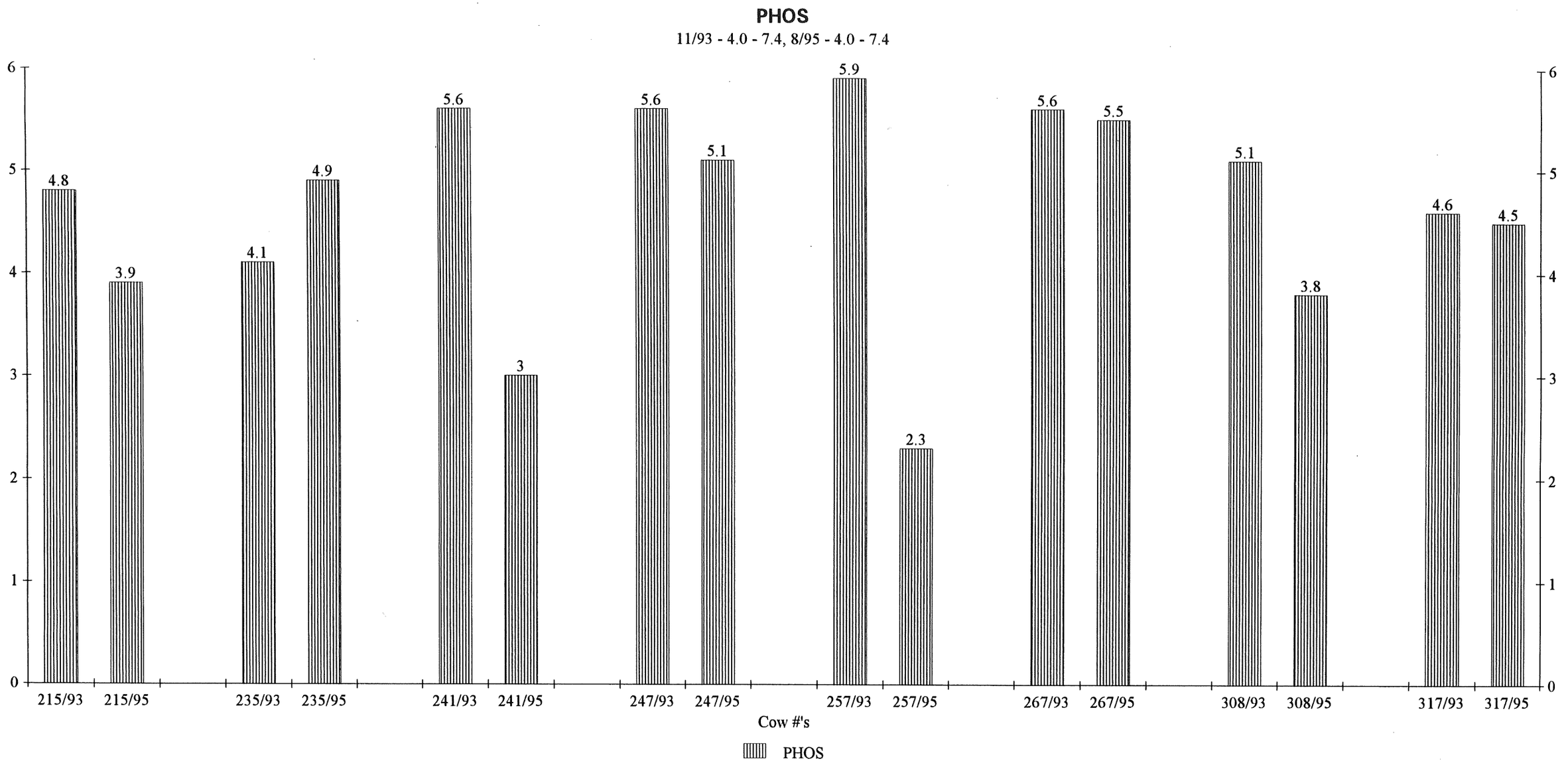
Blood Sample Comparison Graph



Blood Sample Comparison Graph



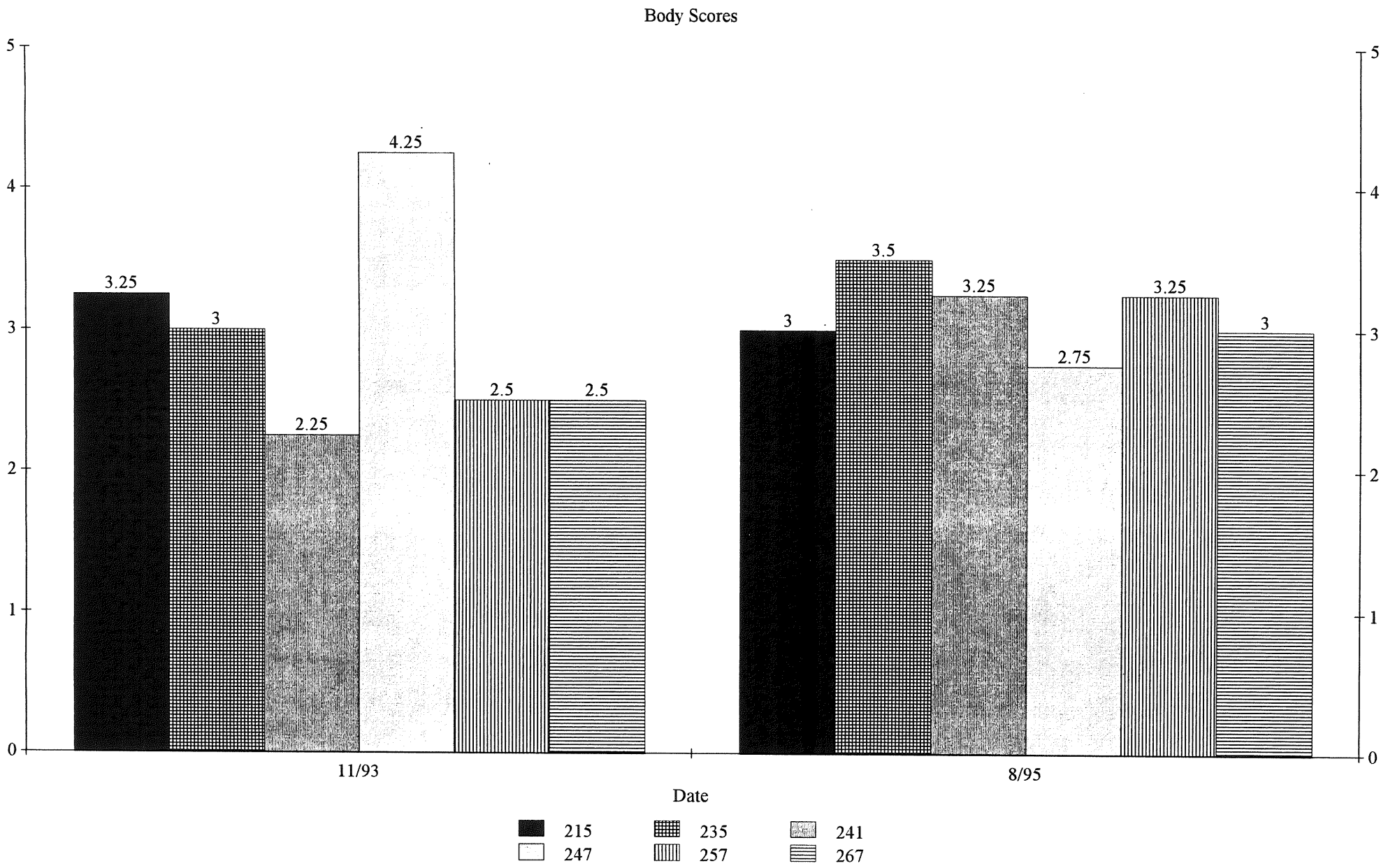
Blood Sample Comparison Graph

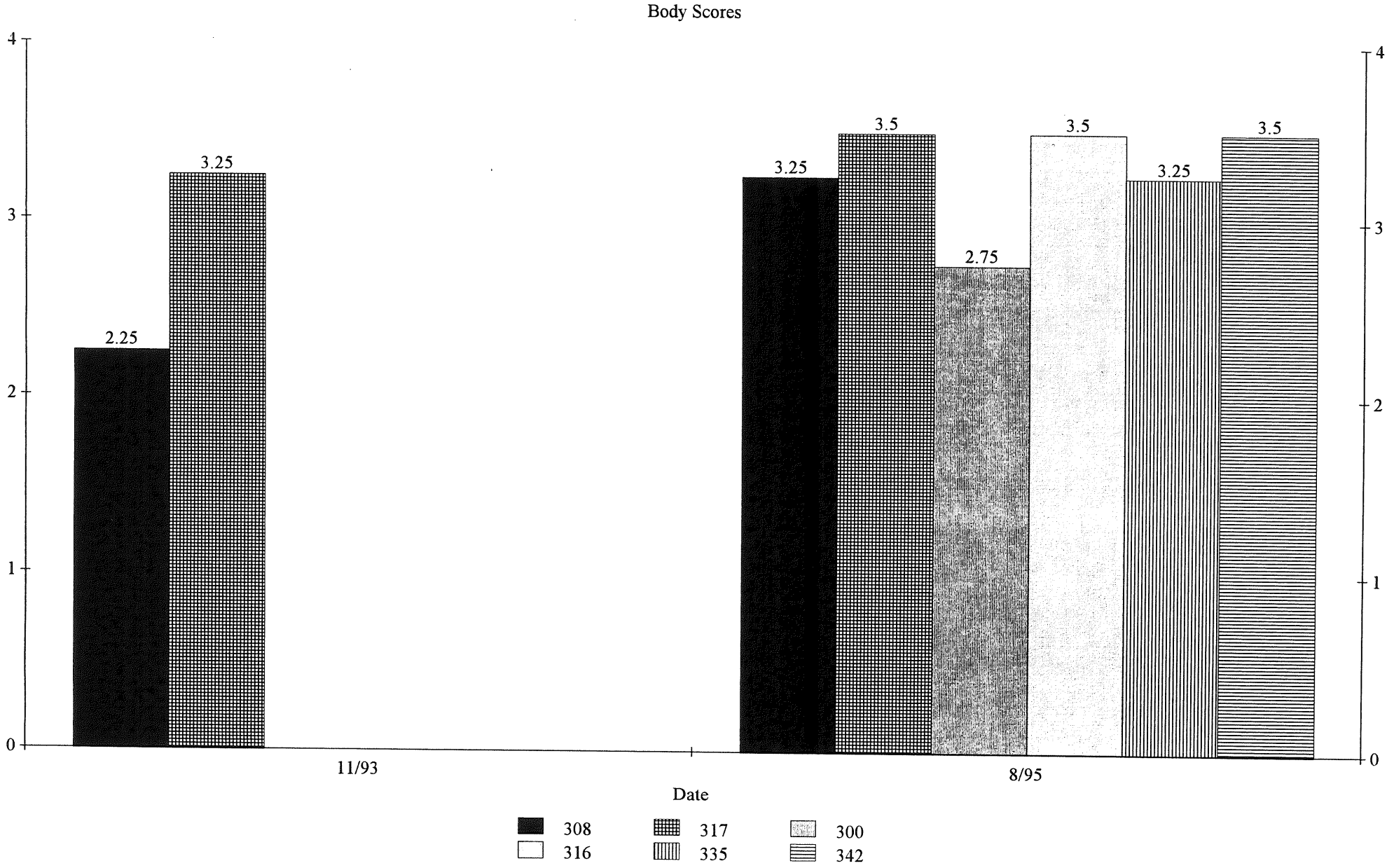


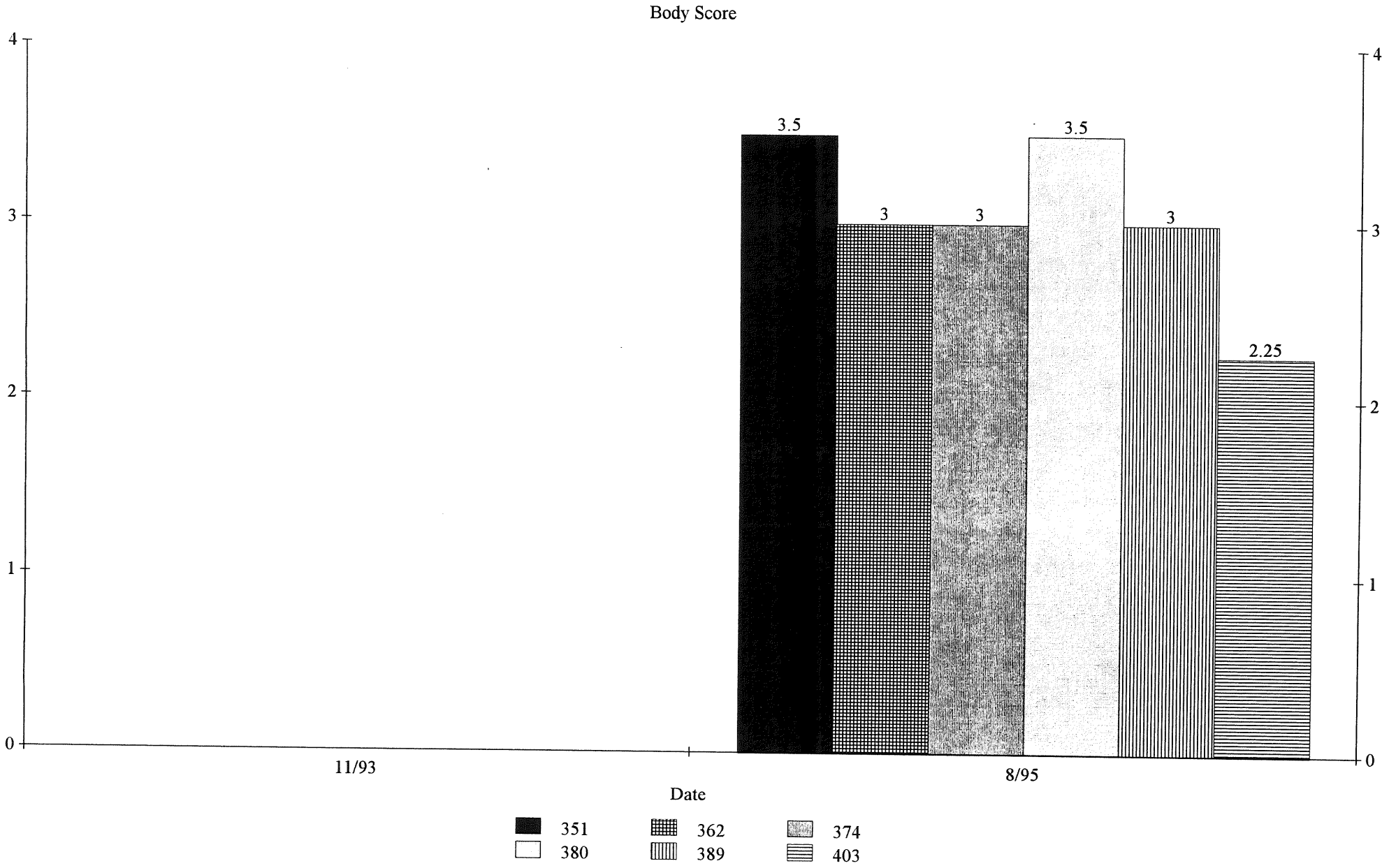
Body Scores 11/93 to 8/95

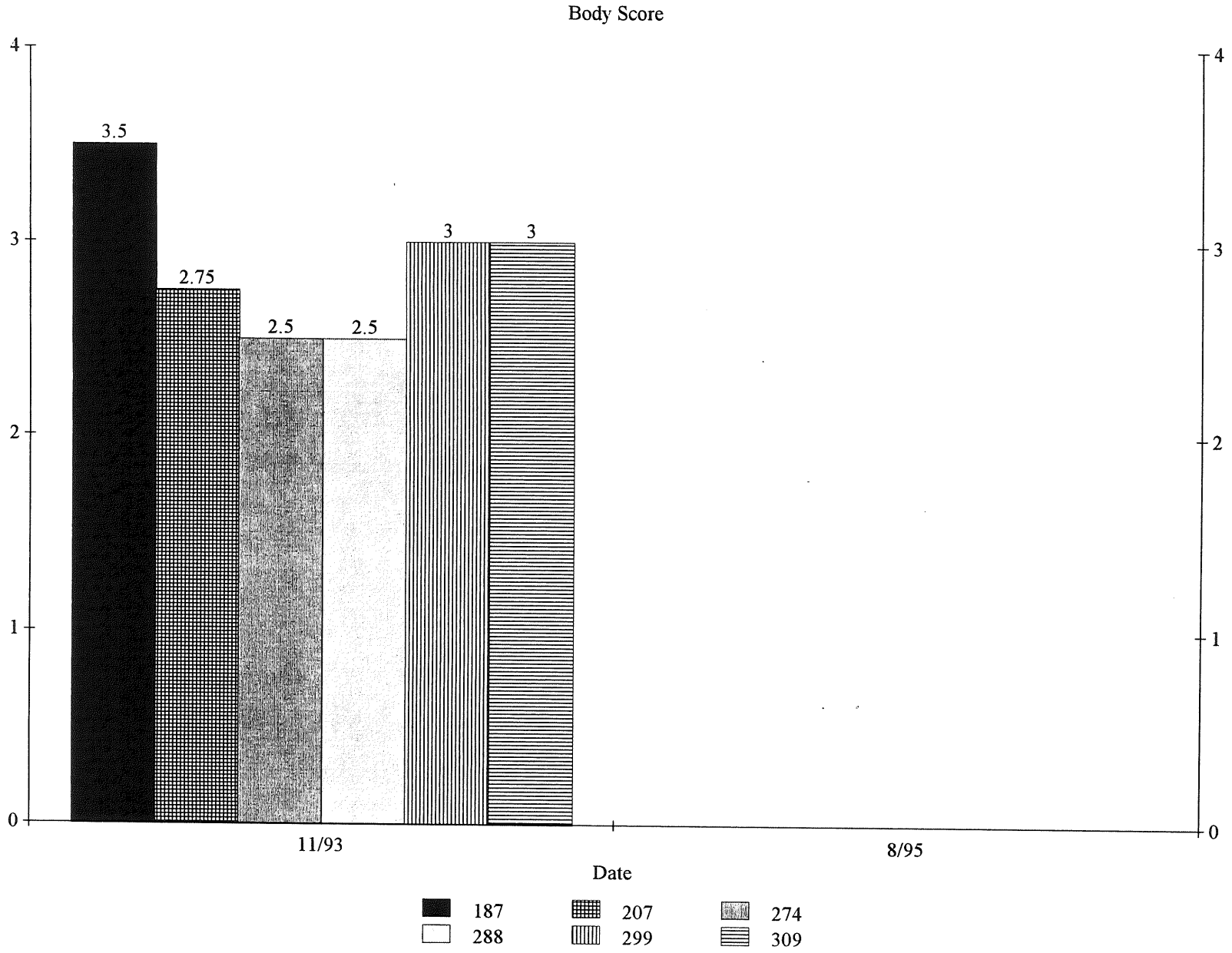
	Score 11/93	Score 8/95
215	3.25	3
235	3	3.5
241	2.25	3.25
247	4.25	2.75
257	2.5	3.25
267	2.5	3
308	2.25	3.25
317	3.25	3.5
300		2.75
316		3.5
335		3.25
342		3.5
351		3.5

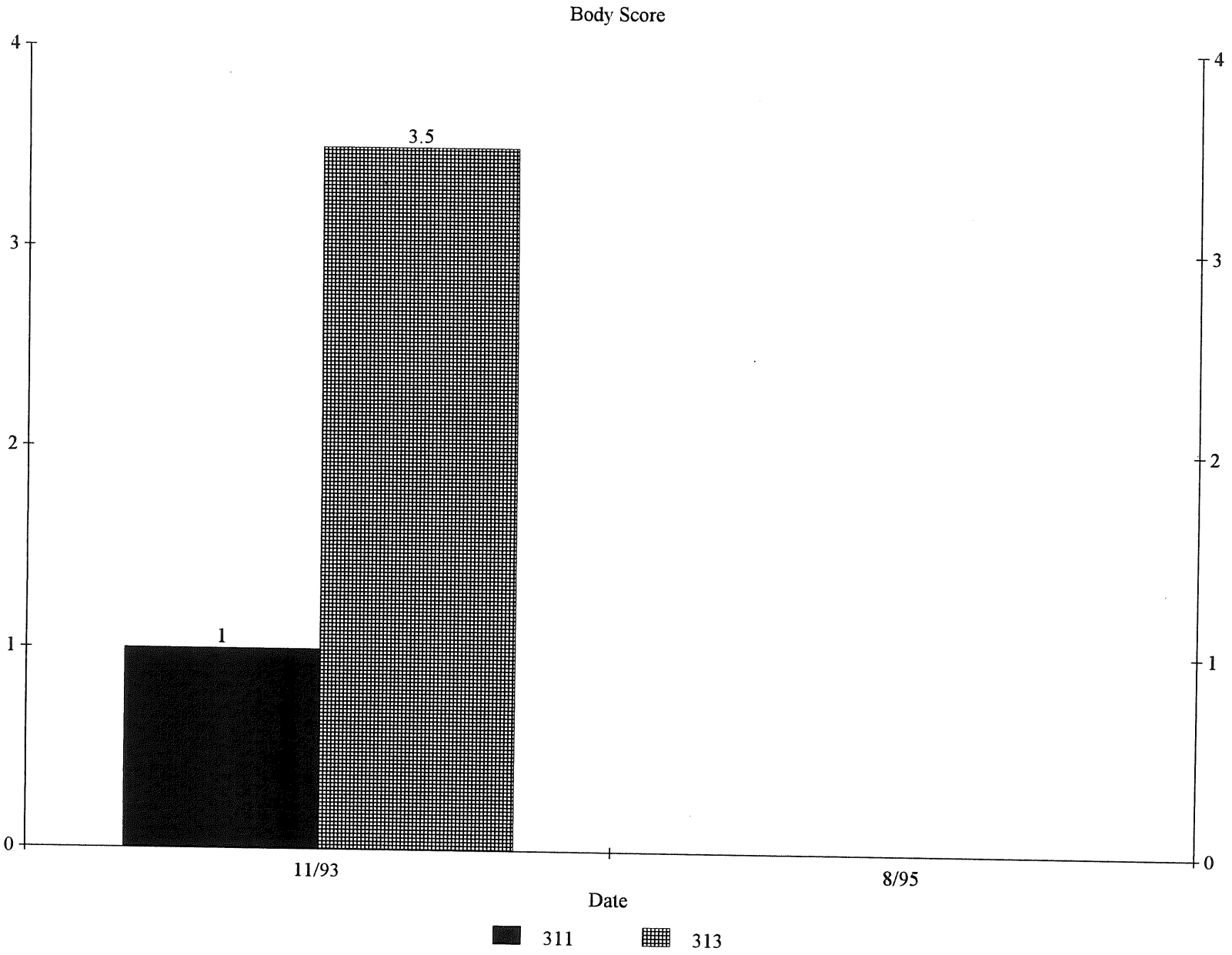
	Score 11/93	Score 8/95
362		3
374		3
380		3.5
389		3
403		2.25
187	3.5	
207	2.75	
274	2.5	
288	2.5	
299	3	
309	3	
311	1	
313	3.5	


Body Scores
5
4
3
2
1
0
3.25
3
2.25
4.25
2.5
2.5
3
3.5
3.25
2.75
3.25
3
11/93
8/95
Date
215
247
235
257
241
267


Body Scores
4
3
2
1
0
2.25
3.25
3.25
3.5
2.75
3.5
3.25
3.5
11/93
8/95
Date
308
316
317
335
300
342


Body Score
4
3
2
1
0
3.5
3
3
3.5
3
2.25
11/93
8/95
Date
351
380
362
389
374
403


Body Score
4
3
2
1
0
3.5
2.75
2.5
2.5
3
3
11/93
8/95
Date
187
288
207
299
274
309


Body Score
4
3
2
1
0
3.5
1
11/93
8/95
Date
311
313

WATER CONSUMPTION RECORDS

November **1993**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
11/1	65	19.2	60	71
11/2	65	16.7	60	71
11/3	65	20.1	60	71
11/4	64	19.2	61	71
11/5	64	17.6	61	71
11/6	66	15.6	61	71
11/7	66	15.6	62	71
11/8	66	16.3	64	72
11/9	66	16.8	64	72
11/10	66	18	64	72
11/11	66	18.6	64	72
11/12	66	18.4	64	72
11/13	66	18.3	64	72
11/14	66	19.2	65	73
11/15	66	19.6	64	73
11/16	66	17.5	63	72
11/17	66	18.4	63	72
11/18	66	20.7	63	72
11/19	66	16.9	63	72
11/20	66	18.1	63	72
11/21	66	18.9	63	72
11/22	65	19	62	72
11/23	65	18.3	62	72
11/24	66	17.5	62	72
11/25	66	17.7	61	72
11/26	66	17.3	61	72
11/27	66	19.8	61	72
11/28	66	17.8	61	72
11/29	66	16.5	61	72
11/30	66	16.9	60	71

WATER CONSUMPTION COMPARISON DATA SHEET

December **1993**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
12/1	66	16.6	60	71
12/2	66	16.8	60	71
12/3	66	16.4	60	71
12/4	66	16.9	59	71
12/5	66	15.5	59	71
12/6	66	16.8	60	72
12/7	66	16.6	60	72
12/8	66	16.6	61	73
12/9	64	16.4	60	72
12/10	66	16.2	60	72
12/11	66	16	60	72
12/12	66	16	60	72
12/13	66	17.9	60	72
12/14	67	17.9	60	72
12/15	68	15.4	61	72
12/16	68	16.9	61	72
12/17	68	16.7	61	72
12/18	68	15.6	59	72
12/19	68	16.3	59	72
12/20	68	15.9	60	72
12/21	66	16.2	56	70
12/22	66	16.9	56	70
12/23	66	16.8	57	70
12/24	66	18	58	70
12/25	66	17.4	58	70
12/26	66	17.3	58	70
12/27	66	20	58	70
12/28	66	19.8	58	70
12/29	66	19.5	58	70
12/30/95	65	18.9	58	70
12/31/93	66	19.2	58	70

WATER CONSUMPTION COMPARISON DATA SHEET

January **1994**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
1/1	66	21	59	70
1/2	66	20.3	60	71
1/3	66	20.3	60	71
1/4	66	20.4	60	71
1/5	66	19.8	59	71
1/6	66	19.5	59	71
1/7	66	20.7	59	71
1/8	66	20.4	59	71
1/9	66	19.1	60	71
1/10	65	19.2	60	71
1/11	66	21.5	57	68
1/12	66	19.4	58	68
1/13	66	20.7	58	68
1/14	66	20.2	58	68
1/15	66	20.3	58	68
1/16	66	20.6	58	68
1/17	66	19.8	58	68
1/18	66	19.4	58	67
1/19	66	21.2	58	67
1/20	66	20.6	57	66
1/21	66	19.7	57	66
1/22	66	20.4	55	66
1/23	66	21	55	66
1/24	66	20.2	55	66
1/25	66	20.6	55	66
1/26	66	20.6	55	66
1/27	66	19.2	55	66
1/28	66	20.2	55	66
1/29	66	19.5	55	66
1/30	66	20.3	55	66
1/31/94	66	20.6	55	66

WATER CONSUMPTION RECORDS

February **1994**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
2/1	66	20.4	55	66
2/2	66	20	56	66
2/3	66	19.4	56	66
2/4	66	21.1	56	66
2/5	66	20.8	57	66
2/6	66	20.6	59	67
2/7	66	19.7	59	67
2/8	66	19.7	59	67
2/9	66	20.3	59	67
2/10	67	20.4	60	67
2/11	67	19.8	60	67
2/12	67	20.1	60	67
2/13	68	20.1	60	67
2/14	68	20.4	60	67
2/15	68	19.1	60	67
2/16	68	20.4	60	68
2/17	68	21.2	62	69
2/18	68	20.4	62	69
2/19	68	21.2	61	69
2/20	67	20.4	61	69
2/21	67	20.3	61	69
2/22	67	21	62	70
2/23	67	20.3	62	70
2/24	67	20.4	62	70
2/25	67	21.2	62	70
2/26	67	19.8	62	70
2/27	67	20.7	62	70
2/28	67	20.3	62	70

WATER CONSUMPTION RECORDS

March **1994**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
3/1	67	20.1	61	70
3/2	67	20.4	61	70
3/3	67	21.3	62	70
3/4	67	18.9	63	71
3/5	67	20.3	63	71
3/6	67	19.9	63	71
3/7	67	19.4	63	71
3/8	67	18.1	63	71
3/9	67	19.3	62	72
3/10	67	19.3	62	72
3/11	67	19.3	62	72
3/12	67	18.2	62	72
3/13	67	19	61	72
3/14	67	19.3	61	72
3/15	67	19	61	72
3/16	67	18.2	61	72
3/17	66	17.9	60	71
3/18	67	18.7	60	71
3/19	67	18	60	71
3/20	67	18.5	61	71
3/21	67	18.5	60	71
3/22	67	19.6	59	71
3/23	67	18.8	59	71
3/24	67	17.8	57	69
3/25	67	18	57	69
3/26	67	18.5	58	69
3/27	67	19.3	58	69
3/28	67	20	57	69
3/29	67	19.3	56	69
3/30	67	18.2	56	69
3/31	67	19.7	56	69

WATER CONSUMPTION COMPARISON DATA SHEET

April **1994**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
4/1	65	16.6	56	69
4/2	65	16.5	55	69
4/3	65	16.2	55	69
4/4	65	17.8	55	69
4/5	64	16.4	54	68
4/6	67	17	54	68
4/7	67	16.3	53	68
4/8	67	16.7	53	68
4/9	67	16.7	54	68
4/10	67	14.8	54	68
4/11	67	20	54	68
4/12	67	18.5	54	68
4/13	67	18.1	56	68
4/14	67	20.7	56	68
4/15	67	19.4	56	68
4/16	67	13.9	56	68
4/17	67	13.4	56	68
4/18	67	17.6	56	68
4/19	67	18.9	57	68
4/20	67	18.1	57	68
4/21	67	18.4	57	68
4/22	67	20.6	57	68
4/23	67	19.3	57	68
4/24	69	20.4	57	68
4/25	69	19.7	57	68
4/26	69	14.6	56	68
4/27	69	15.5	56	68
4/28	67	17	56	68
4/29	67	14.2	56	69
4/30	67	15.5	56	69

WATER CONSUMPTION RECORDS

May **1994**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
5/1	67	16.9	56	69
5/2	67	14.7	56	69
5/3	67	18.7	55	69
5/4	67	18.5	55	69
5/5	67	13.4	55	69
5/6	68	15.6	55	69
5/7	68	17.5	55	69
5/8	68	17.4	55	69
5/9	68	19.9	55	69
5/10	68	17.8	53	67
5/11	68	21.3	54	67
5/12	68	20.9	55	67
5/13	68	19.7	55	67
5/14	68	19.7	55	67
5/15	68	16.6	54	67
5/16	68	17.6	53	67
5/17	68	19.9	53	67
5/18	68	20.9	53	67
5/19	68	22.9	53	67
5/20	68	24.4	53	67
5/21	68	23.4	53	67
5/22	68	23.1	53	67
5/23	68	22	54	67
5/24	68	22.9	54	67
5/25	68	21	54	67
5/26	67	19.4	53	66
5/27	67	19.9	54	67
5/28	67	21.5	54	67
5/29	67	24.6	55	67
5/30	67	20.1	56	68
5/31	66	20.6	55	67

WATER CONSUMPTION RECORDS

June **1994**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
6/1	67	19.9	54	67
6/2	67	17.3	54	67
6/3	67	15.4	54	67
6/4	67	16.9	55	67
6/5	67	18.7	55	67
6/6	67	14.3	55	67
6/7	67	18.2	55	67
6/8	67	16	55	67
6/9	67	19.4	55	67
6/10	67	19.6	55	67
6/11	67	18	55	67
6/12	67	18.9	56	67
6/13	67	21.9	56	67
6/14	67	17.5	56	67
6/15	67	22.7	56	67
6/16	67	18.2	57	68
6/17	67	15.8	57	68
6/18	67	16.6	56	68
6/19	67	15.1	56	68
6/20	67	17.5	56	68
6/21	67	15.8	56	68
6/22	67	23.6	57	68
6/23	67	18.4	57	68
6/24	67	15.2	58	68
6/25	67	28.5	59	68
6/26	67	21.5	59	68
6/27	67	21	59	68
6/28	67	21.8	59	68
6/29	67	21	59	68
6/30	67	21.6	59	68

WATER CONSUMPTION RECORDS

July **1994**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
7/1	67	24.5	60	69
7/2	67	20.7	61	70
7/3	67	19.5	60	70
7/4	67	20.4	59	70
7/5	67	19.1	59	70
7/6	67	17.3	60	70
7/7	67	20.4	57	67
7/8	67	17.2	55	67
7/9	67	17.9	54	67
7/10	67	19.9	53	67
7/11	67	21.2	54	67
7/12	67	19.9	54	67
7/13	66	20.9	54	67
7/14	66	22.8	54	67
7/15	66	- - - -	54	67
7/16	66	20.2	55	67
7/17	66	22.9	55	67
7/18	66	24.2	55	67
7/19	66	22.6	56	67
7/20	66	20.6	56	67
7/21	66	24.2	56	67
7/22	66	18.6	56	67
7/23	66	28.8	56	67
7/24	66	23.3	55	67
7/25	66	24.5	55	67
7/26	66	24.5	54	67
7/27	66	23	54	67
7/28	66	23	54	67
7/29	66	23	54	67
7/30	66	25	53	67
7/31	66	24.1	53	67

WATER CONSUMPTION RECORDS

August **1994**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
8/1	66	23.8	52	67
8/2	67	24.2	52	67
8/3	67	22.7	52	67
8/4	67	23.7	50	65
8/5	67	22.7	50	65
8/6	67	22.2	51	65
8/7	67	20.6	51	65
8/8	67	20.7	50	65
8/9	67	21.6	50	65
8/10	67	20.3	50	65
8/11	67	17	50	65
8/12	68	22.6	49	65
8/13	68	19.1	49	65
8/14	68	18.4	49	65
8/15	68	21.8	50	65
8/16	67	24	50	65
8/17	67	23.3	50	65
8/18	67	21	50	65
8/19	68	21.8	51	65
8/20	68	20.3	51	66
8/21	68	21.2	51	66
8/22	68	21.9	51	66
8/23	68	23.2	51	66
8/24	68	18.4	51	66
8/25	67	20.3	51	66
8/26	67	19.9	50	66
8/27	68	22.5	51	66
8/28	67	19.1	51	67
8/29	67	21.9	51	67
8/30	67	21.8	51	67
8/31	67	17.9	51	67

WATER CONSUMPTION RECORDS

September **1994**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
9/1	67	20.1	51	67
9/2	67	21.5	51	67
9/3	67	19.1	52	67
9/4	67	19	53	67
9/5	67	17.9	54	67
9/6	65	17.2	53	65
9/7	66	22.3	54	66
9/8	66	22.9	55	67
9/9	66	21.8	56	67
9/10	66	23.2	56	68
9/11	66	24.2	57	68
9/12	66	21.1	57	68
9/13	67	18.5	56	67
9/14	67	18.7	56	67
9/15	67	18.8	56	67
9/16	67	18.2	57	68
9/17	67	18.5	57	68
9/18	67	19.3	58	68
9/19	67	21.8	58	68
9/20	67	18.7	59	68
9/21	67	21.5	59	68
9/22	67	15.4	57	68
9/23	67	17.3	57	69
9/24	67	17.8	57	69
9/25	67	17.3	57	69
9/26	67	16.9	57	69
9/27	67	17.5	56	68
9/28	67	18.1	56	68
9/29	67	19.1	55	68
9/30	67	18.8	55	68

WATER CONSUMPTION RECORDS

October **1994**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
10/1	67	17.8	55	68
10/2	68	19.9	54	68
10/3	69	17.4	54	68
10/4	69	15.2	53	68
10/5	69	16.8	53	68
10/6	69	16.7	54	68
10/7	69	17.2	55	68
10/8	69	18.4	55	68
10/9	68	18.1	55	68
10/10	68	17.2	55	68
10/11	68	18.7	56	68
1012	68	19	57	69
10/13	67	20.9	58	69
10/14	67	19.1	58	69
10/15	67	19	60	70
10/16	67	17.6	60	70
10/17	67	14.9	60	70
10/18	67	14	61	70
10/19	67	15.8	61	70
10/20	67	17.2	61	70
10/21	67	17.9	61	70
10/22	67	18.8	61	70
10/23	67	16.9	60	70
10/24	67	19.4	60	70
10/25	67	17.9	60	70
10/26	67	19.6	60	70
10/27	67	18.7	60	70
10/28	67	19	60	70
10/29	67	17.5	60	70
10/30	67	17.9	59	70
10/31	67	18.4	59	70

WATER CONSUMPTION RECORDS

November **1994**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
11/1	67	18.4	59	70
11/2	67	17.9	59	70
11/3	67	17.2	58	70
11/4	67	17.2	58	70
11/5	67	20.3	58	70
11/6	67	19.4	58	70
11/7	67	17.1	58	70
11/8	66	18.6	57	68
11/9	67	18.4	57	68
11/10	67	18.1	57	68
11/11	67	18.2	57	68
11/12	67	17.3	58	68
11/13	67	17.2	58	68
11/14	67	16.7	58	68
11/15	67	18.7	59	69
11/16	67	17	60	69
11/17	67	17.8	58	69
11/18	67	17.5	58	68
11/19	67	16.4	58	68
11/20	67	15.4	57	68
11/21	67	16.1	57	68
11/22	67	15.7	57	68
11/23	67	18.2	58	68
11/24	67	17.9	58	68
11/25	67	18.4	58	68
11/26	67	17.2	58	68
11/27	67	15.7	58	68
11/28	67	16	58	68
11/29	67	15.1	58	68
11/30	67	14.9	59	69

WATER CONSUMPTION RECORDS

December **1994**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
12/1	67	16.7	59	67
12/2	67	15.5	59	69
12/3	67	16.6	59	69
12/4	67	16.1	58	69
12/5	67	14.6	58	69
12/6	67	16.4	60	69
12/7	67	15.2	60	69
12/8	67	14.9	59	68
12/9	67	15.7	60	68
12/10	67	16.3	60	68
12/11	67	16.4	59	68
12/12	67	15.8	59	68
12/13	67	18.1	58	67
12/14	67	16.1	58	66
12/15	67	16.9	58	66
12/16	67	16.6	59	67
12/17	67	16.7	59	67
12/18	67	17.8	59	67
12/19	67	16.6	59	67
12/20	67	17.8	59	67
12/21	67	16.1	59	67
12/22	67	17.8	59	67
12/23	67	17.2	59	67
12/24	67	18.2	59	67
12/25	67	16.4	59	67
12/26	67	16.3	59	67
12/27	67	18.1	59	67
12/28	67	17.3	59	67
12/29	67	17.8	58	66
12/30	67	18.1	58	66
12/31	67	17.9	58	66

WATER CONSUMPTION RECORDS

January **1995**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
1/1	67	15.7	58	66
1/2	67	16	58	66
1/3	67	17.2	58	66
1/4	67	20.7	58	66
1/5	67	18.4	58	66
1/6	67	19.3	57	66
1/7	67	18.4	57	66
1/8	67	19	57	66
1/9	67	18.1	57	66
1/10	67	18.8	57	66
1/11	67	19.4	56	66
1/12	67	19.6	55	66
1/13	67	20.1	55	66
1/14	67	19.1	55	66
1/15	67	19.3	56	66
1/16	67	18.2	56	66
1/17	67	20.7	57	66
1/18	67	19.6	57	66
1/19	67	19.1	57	66
1/20	67	18.4	57	66
1/21	67	19.7	57	66
1/22	67	19.6	57	66
1/23	67	19.6	57	66
1/24	67	19.6	57	66
1/25	67	19.1	57	66
1/26	67	19.6	56	65
1/27	67	19.6	56	65
1/28	67	19	56	65
1/29	67	20	55	65
1/30	67	19.3	55	65
1/31	67	19.4	56	65

WATER CONSUMPTION RECORDS

February **1995**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
2/1	67	20	56	65
2/2	67	19.9	58	66
2/3	67	19.6	58	66
2/4	67	19.4	58	66
2/5	67	19.6	58	66
2/6	67	18.4	58	66
2/7	67	19.1	59	67
2/8	67	19	59	67
2/9	67	19.3	59	67
2/10	67	19.6	59	67
2/11	68	18.2	60	67
2/12	68	18.8	60	67
2/13	68	17.6	60	67
2/14	68	18.7	61	68
2/15	68	20.3	61	68
2/16	68	20.7	62	69
2/17	68	20.3	62	69
2/18	68	19.9	62	69
2/19	68	20.6	62	69
2/20	68	19.3	62	69
2/21	68	21	62	69
2/22	68	18.7	60	69
2/23	68	19.6	60	69
2/24	68	19.3	60	69
2/25	68	18.7	61	70
2/26	68	18.8	61	70
2/27	68	18.4	61	70
2/28	68	18.7	61	70

WATER CONSUMPTION RECORDS

March **1995**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
3/1	68	17.6	61	71
3/2	68	17.9	61	71
3/3	68	19.1	61	71
3/4	68	18.8	61	71
3/5	68	18.8	61	71
3/6	68	18.2	61	71
3/7	68	19.4	61	71
3/8	68	18.7	61	71
3/9	68	19.4	61	71
3/10	68	18.4	62	71
3/11	67	21.5	63	73
3/12	67	19.6	62	73
3/13	67	20.1	62	73
3/14	67	18.7	61	72
3/15	67	17.3	62	72
3/16	68	17.6	62	72
3/17	68	16.8	63	73
3/18	68	16.8	63	73
3/19	68	13.1	63	73
3/20	68	cup leaked	63	73
3/21	68	17.4	63	73
3/22	68	14.8	64	73
3/23	67	17.6	64	73
3/24	67	15.7	63	73
3/25	67	16.1	63	73
3/26	67	18.1	63	73
3/27	67	18.5	63	73
3/28	67	17.2	62	73
3/29	67	18.4	62	73
3/30	67	16.1	61	73
3/31	67	17.3	61	73

WATER CONSUMPTION RECORDS

April **1995**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
4/1	67	18	61	73
4/2	67	14.3	61	73
4/3	68	18.8	61	73
4/4	68	16.1	61	73
4/5	68	18.3	61	73
4/6	67	18.2	61	71
4/7	67	18.2	60	71
4/8	67	20.4	60	71
4/9	67	18.6	60	71
4/10	67	18.3	61	71
4/11	67	19.5	61	71
4/12	67	18.3	61	71
4/13	67	18.9	60	70
4/14	67	18.6	60	70
4/15	67	18.6	59	70
4/16	67	18.3	59	70
4/17	67	19.1	58	70
4/18	67	18.9	57	70
4/19	67	18	57	70
4/20	67	17.9	57	70
4/21	67	17.1	57	70
4/22	67	18	56	70
4/23	67	21.4	56	70
4/24	67	17.9	56	70
4/25	70	18.6	55	69
4/26	70	17.4	55	68
4/27	69	17.2	56	69
4/28	69	17.9	57	70
4/29	69	17.5	58	71
4/30	69	17.3	58	71

WATER CONSUMPTION RECORDS

May **1995**

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
5/1	69	18.1	58	72
5/2	70	17.7	59	72
5/3	69	19.2	59	72
5/4	69	18.5	59	72
5/5	68	17.6	59	72
5/6	Water meter not being	used until 7-17-95	59	72
5/7			60	72
5/8			60	72
5/9			63	74
5/10			63	74
5/11			62	73
5/12			62	73
5/13			63	74
5/14			63	74
5/15			63	74
5/16			63	73
5/17			63	73
5/18			61	73
5/19			61	73
5/20			61	73
5/21			61	73
5/22			60	73
5/23			59	72
5/24			59	72
5/25			59	72
5/26			60	73
5/27			60	73
5/28			60	73
5/29			60	73
5/30			59	73
5/31			58	73

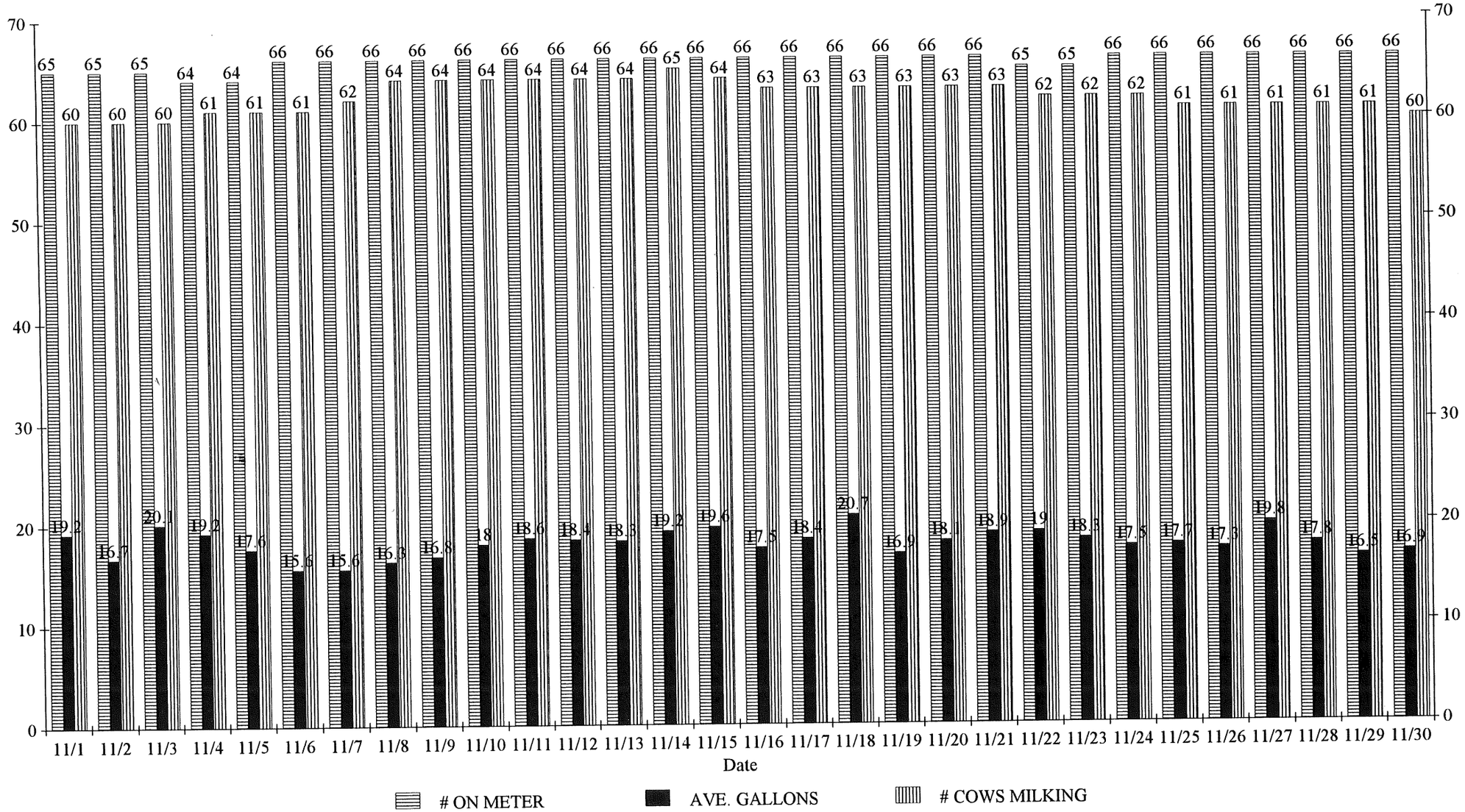
WATER CONSUMPTION COMPARISON DATA SHEET

10 - 8 - 93 TO 11 - 16 - 93 1993

DATE	# ON METER	AVE. GALLONS	# COWS MILKING	TOTAL COW
10/8	67	13	62	73
10/9	67	15.5	62	73
10/10	67	17.5	62	73
10/11	67	17.3	62	73
10/12	66	18.1	62	72
10/13	65	17.8	61	73
10/14	65	20	63	73
10/15	71	17.2	64	73
10/16	71	16.5	64	73
10/17	71	18.3	64	73
10/18	69	19	63	72
10/19	69	18.4	63	72
10/20	68	20.5	62	72
10/21	68	17.5	62	72
10/22	68	20.8	62	72
10/23	68	20	62	72
10/24	66	19.4	61	72
10/25	66	20	61	72
10/26	66	20.6	60	72
10/27	66	19.3	60	72
10/28	66	20.3	61	72
10/29	66	20.2	61	72
10/30	66	20.1	61	72
10/31	66	16.2	61	72
11/1	65	19.2	60	71
11/2	65	16.7	60	71
11/3	65	20.1	60	71
11/4	64	19.2	61	71
11/5	64	17.6	61	71
11/6	66	15.6	61	71
11/7	66	15.6	62	71
11/8	66	16.3	64	72
11/9	66	16.8	64	72
11/10	66	18	64	72
11/11	66	18.6	64	72
11/12	66	18.4	64	72
11/13	66	18.3	64	72
11/14	66	19.2	65	73
11/15	66	19.6	64	73
11/16	66	17.5	63	72

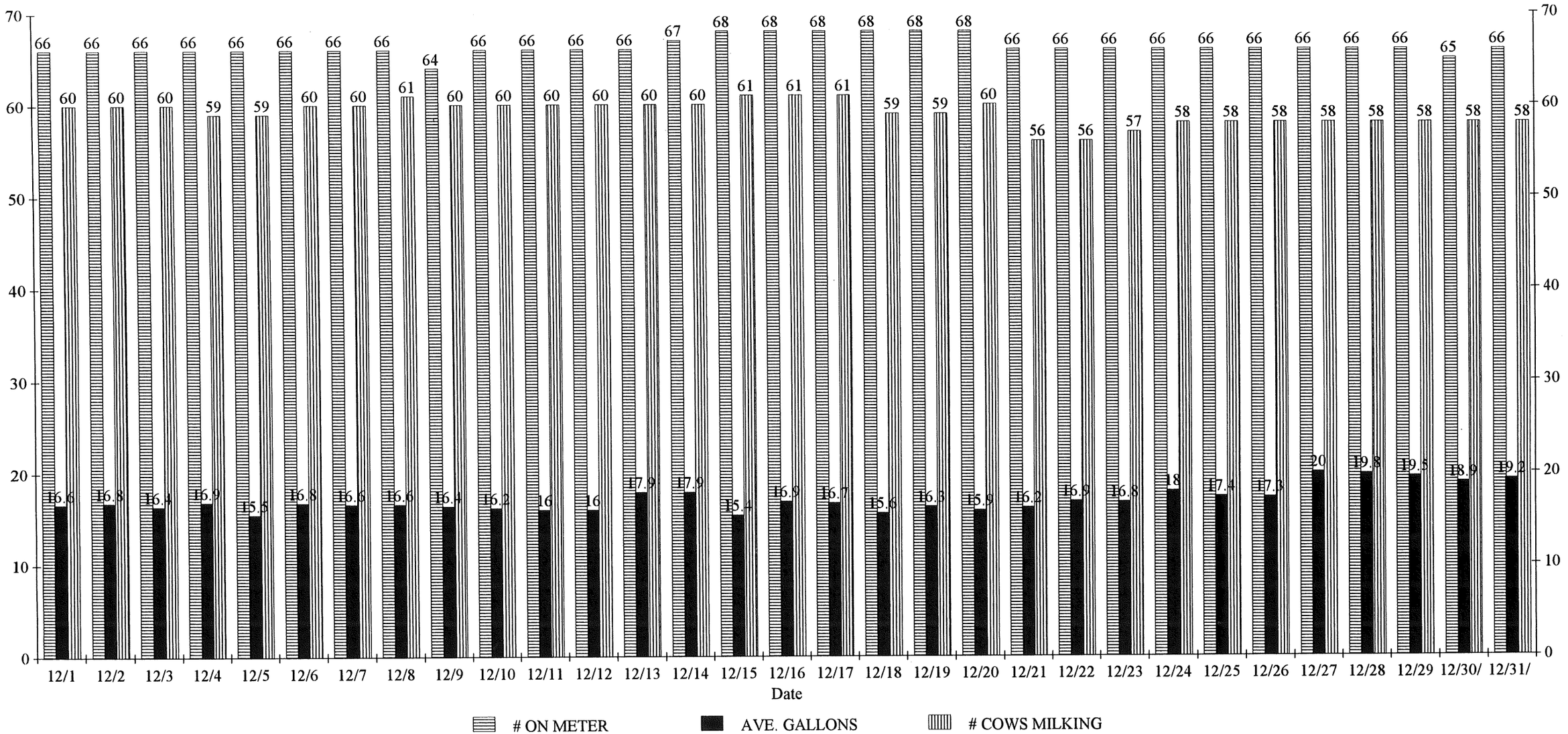
WATER CONSUMPTION GRAPH

November 1993



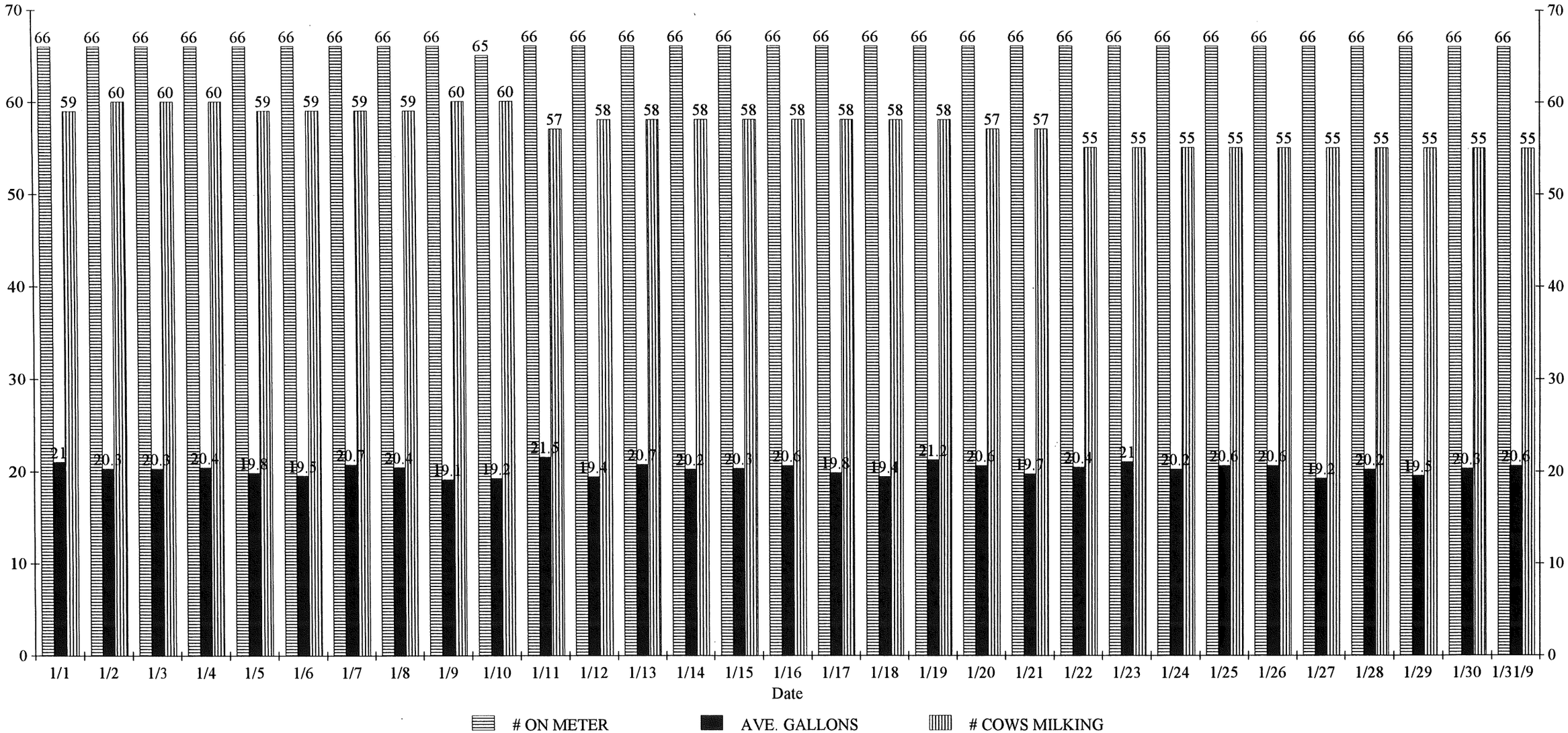
WATER CONSUMPTION GRAPH

December 1993

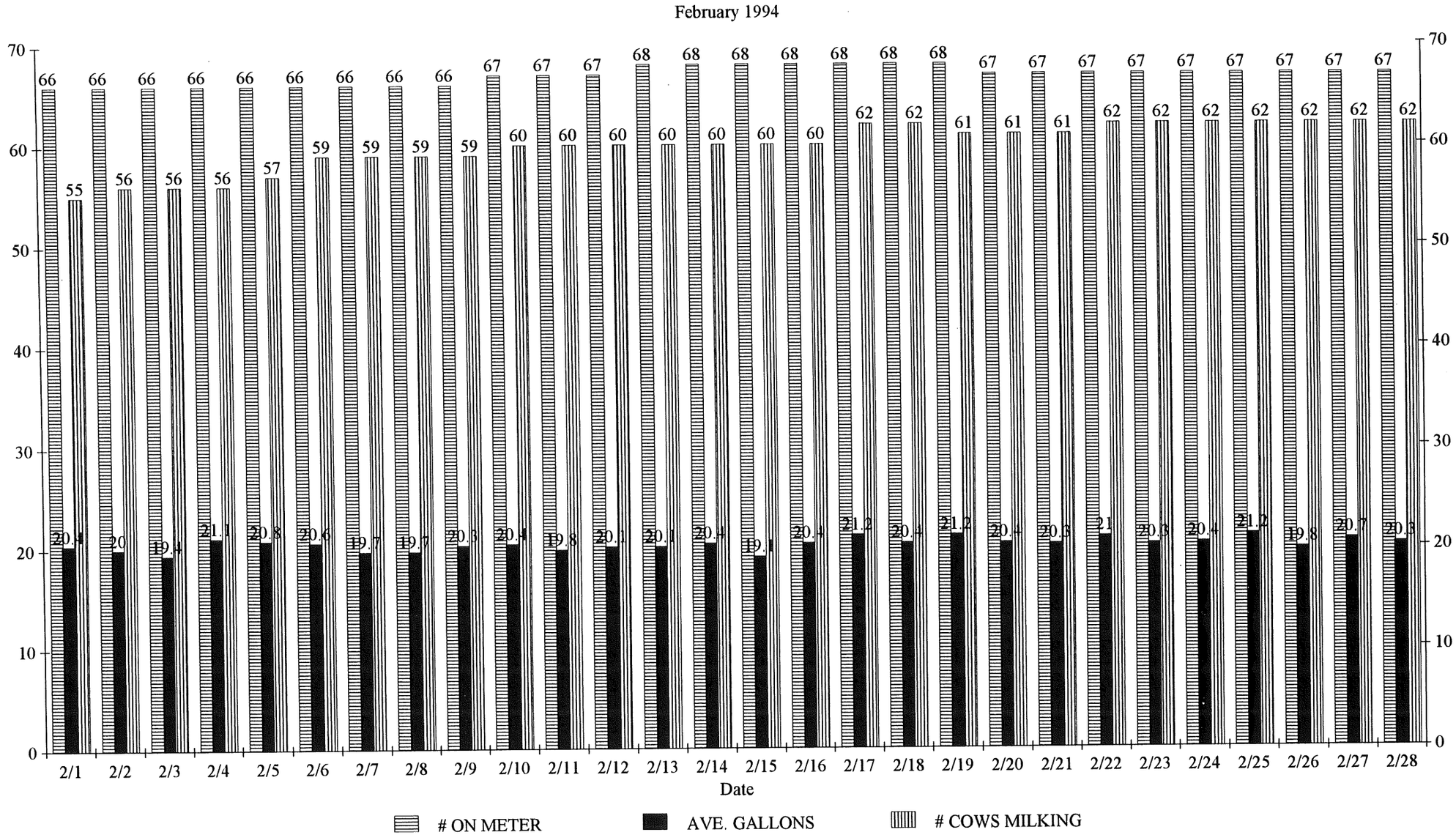


WATER CONSUMPTION GRAPH

January 1994

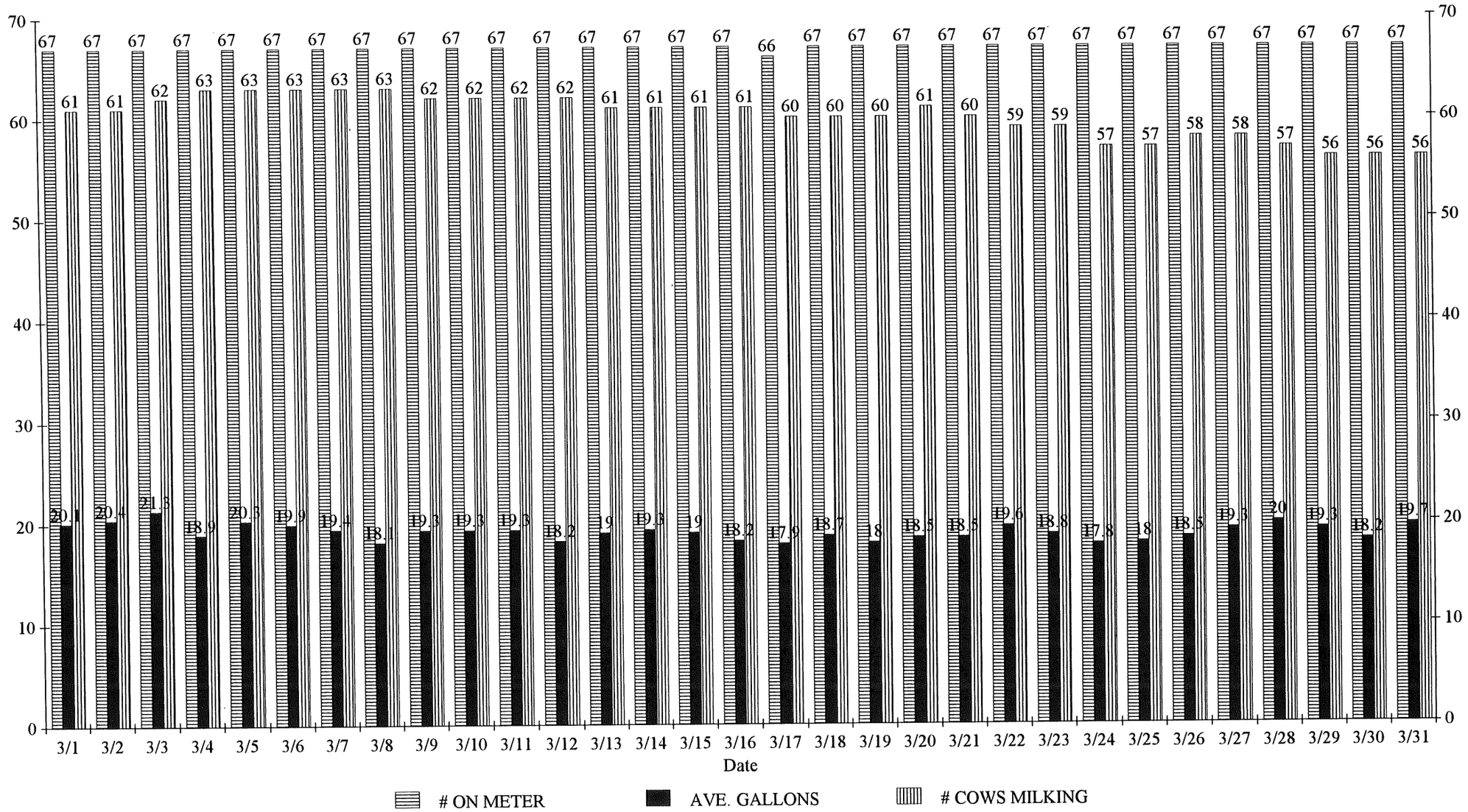


WATER CONSUMPTION GRAPH



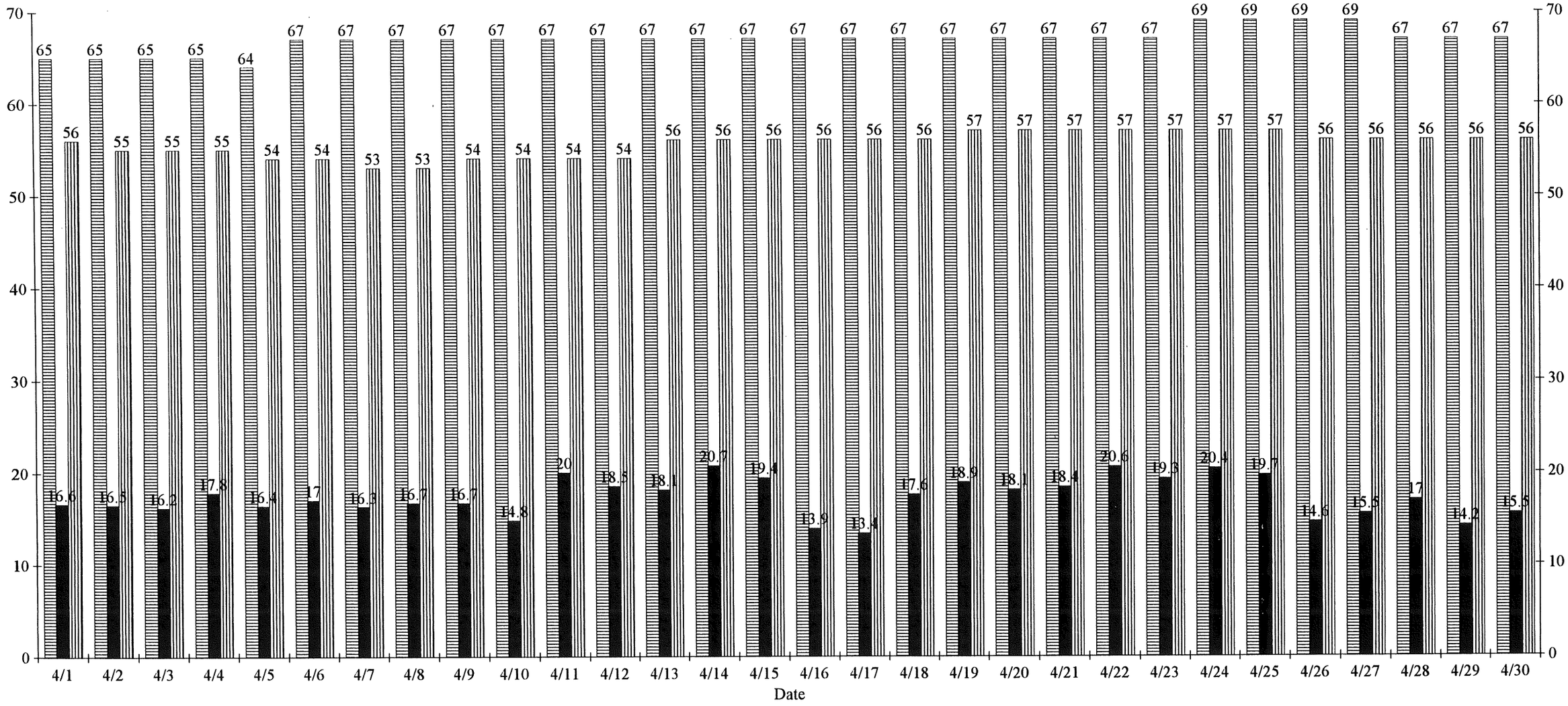
WATER CONSUMPTION GRAPH

March 1994



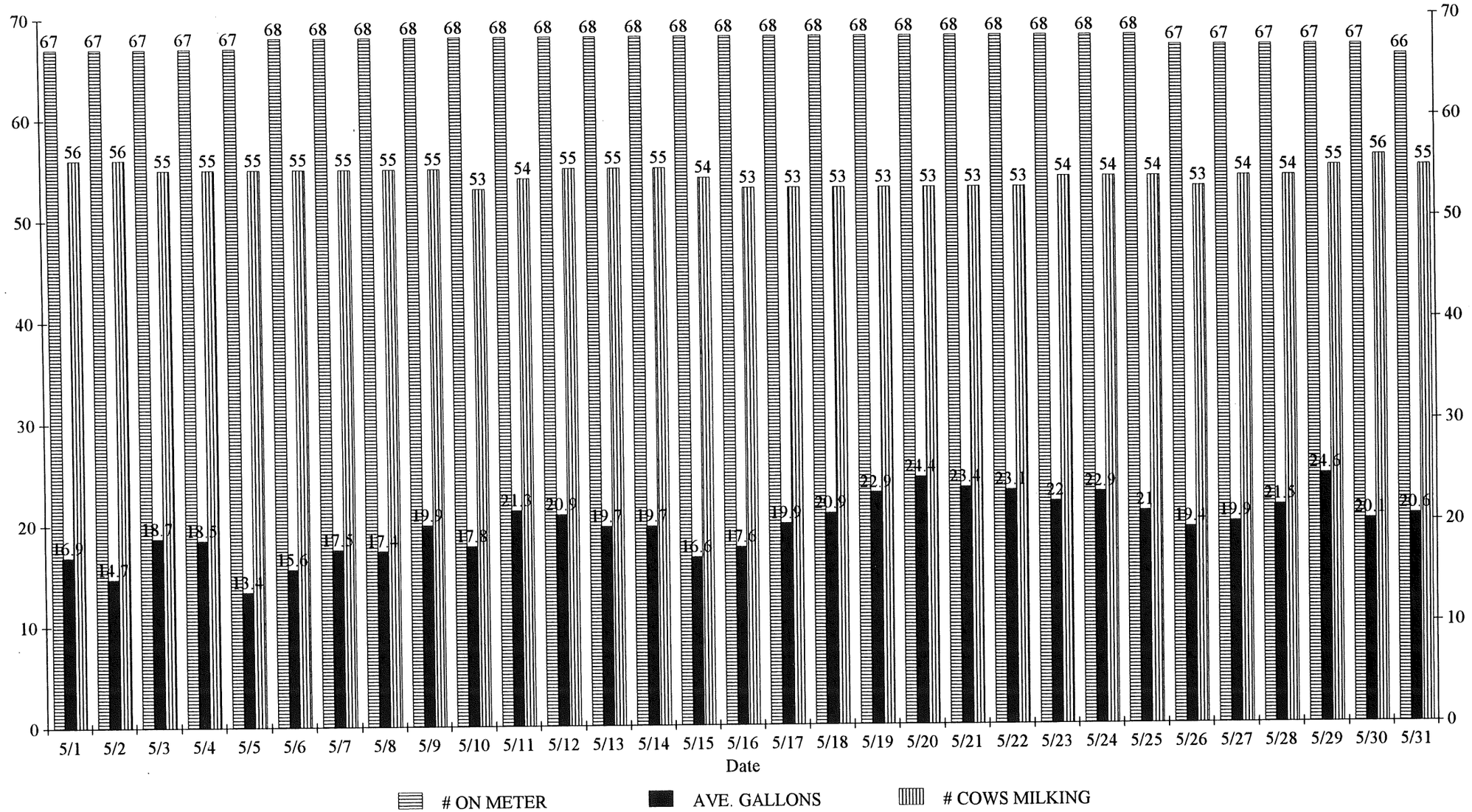
WATER CONSUMPTION GRAPH

April 1994



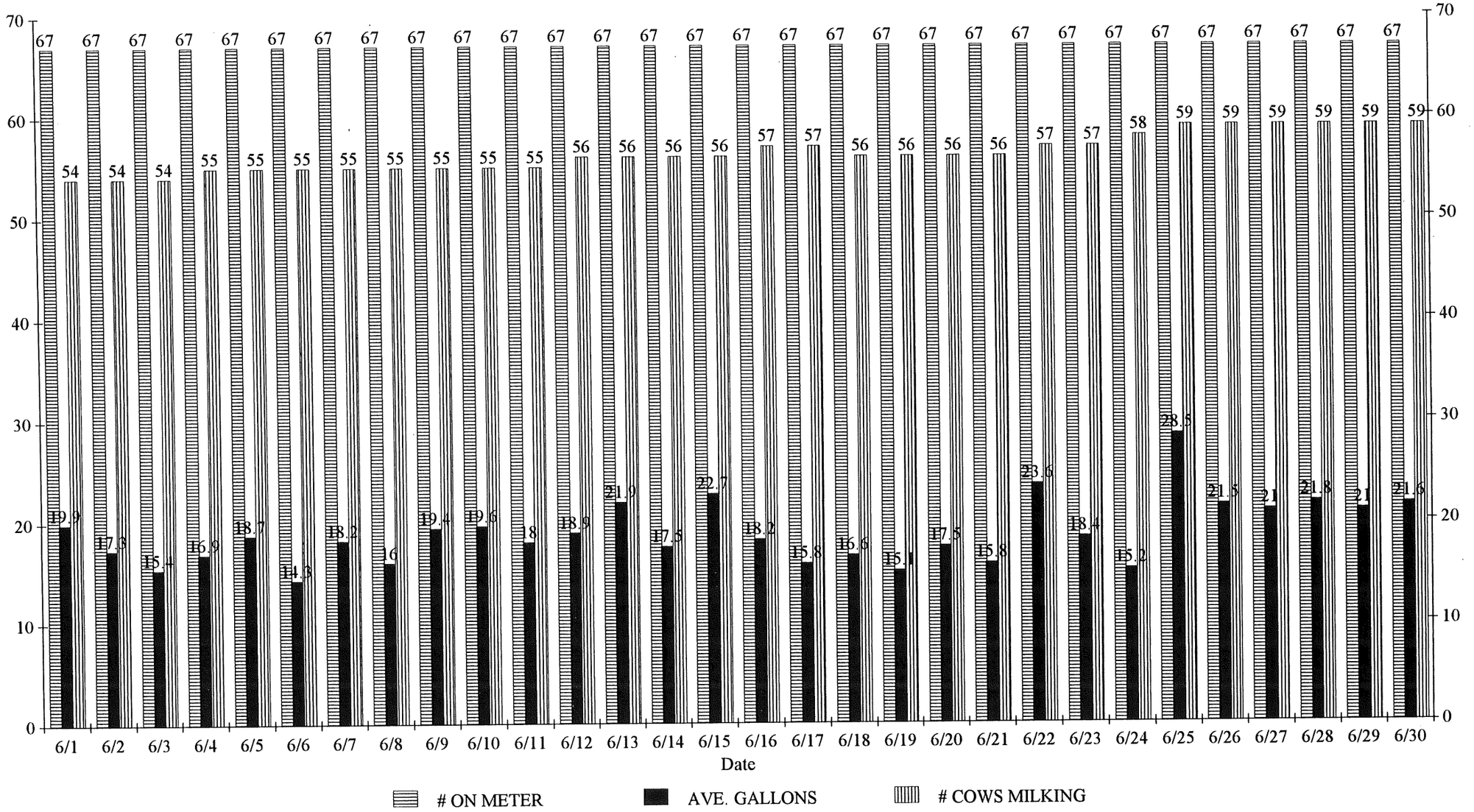
WATER CONSUMPTION GRAPH

May 1994



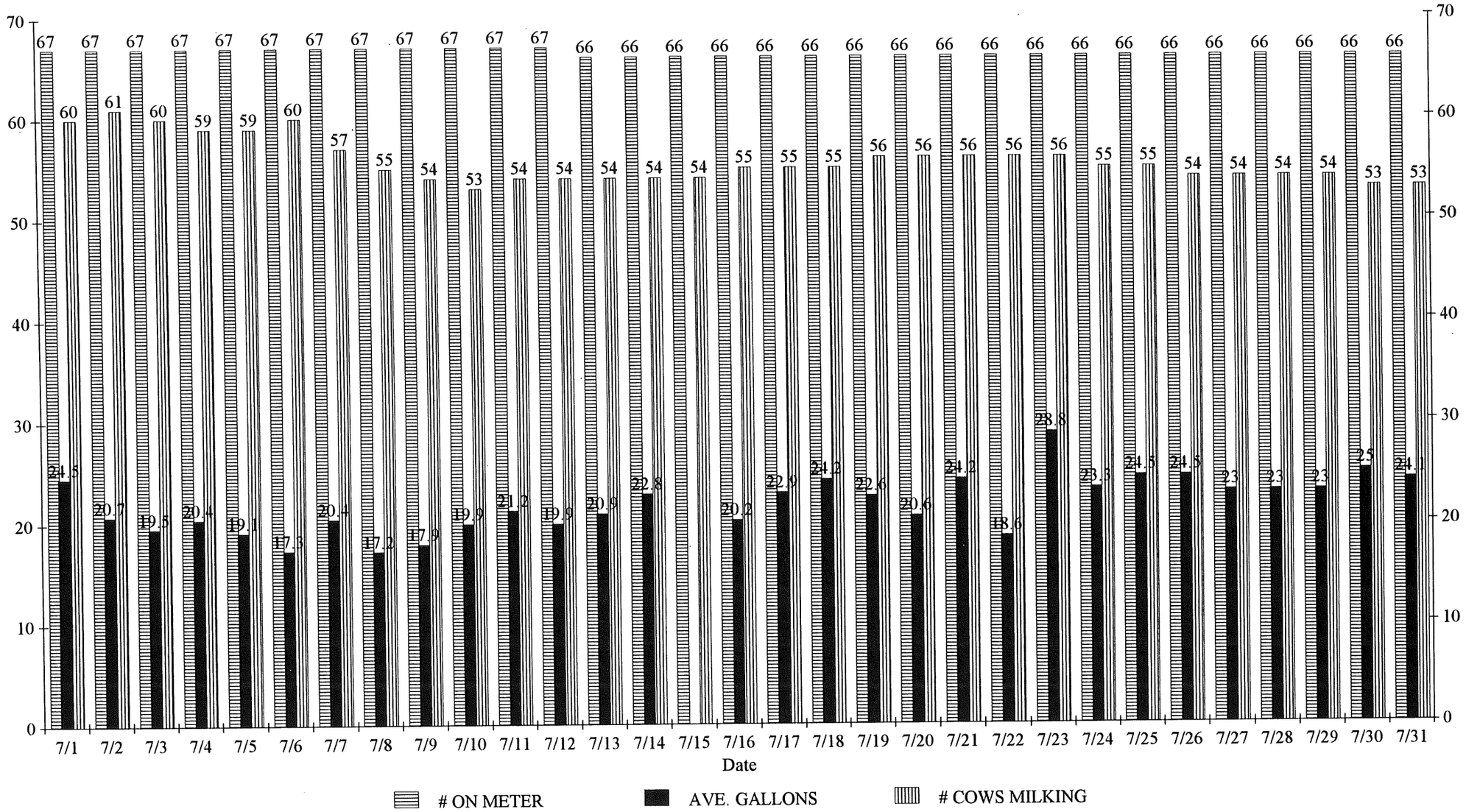
WATER CONSUMPTION GRAPH

June 1994



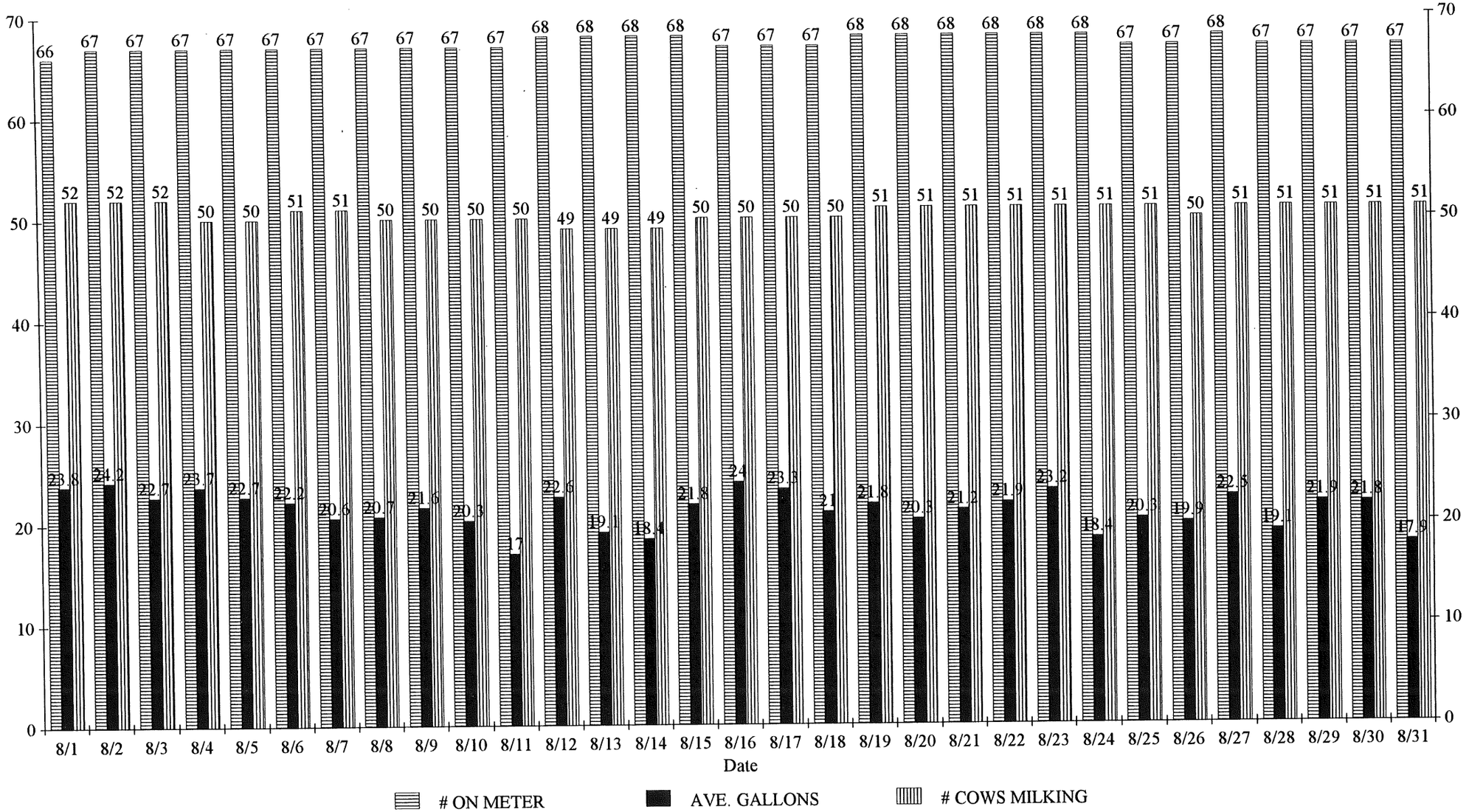
WATER CONSUMPTION GRAPH

July 1994



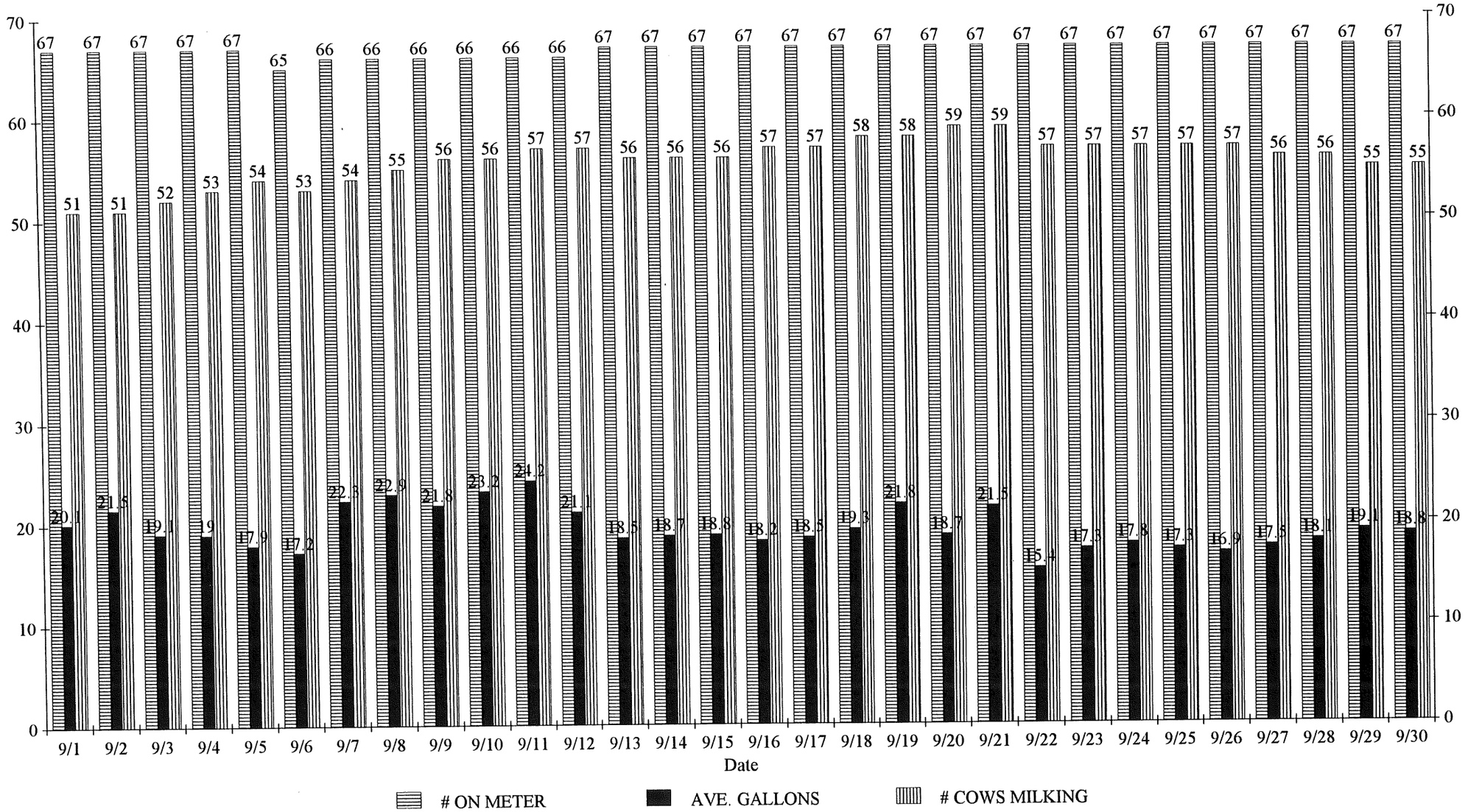
WATER CONSUMPTION GRAPH

August 1994



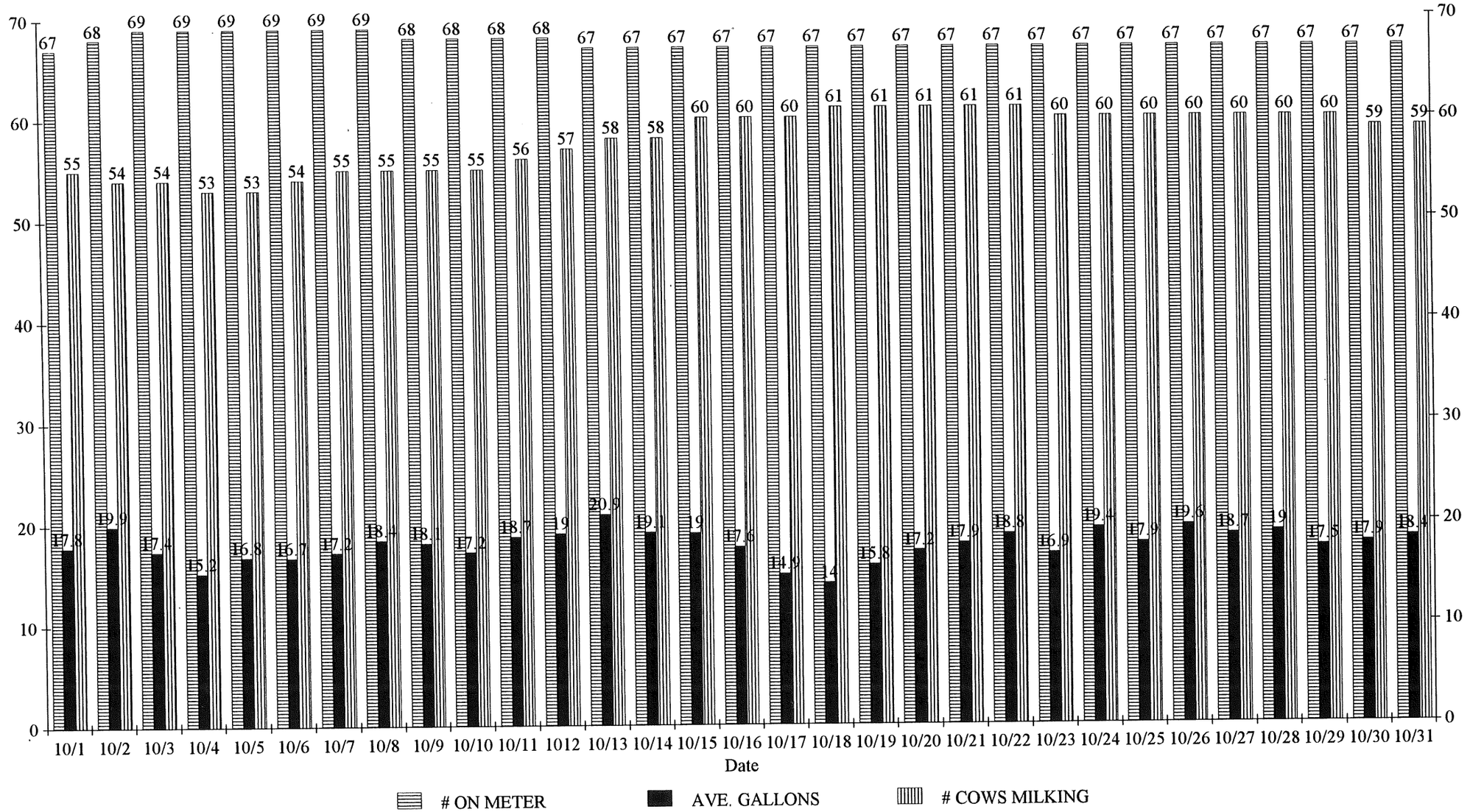
WATER CONSUMPTION GRAPH

September 1994



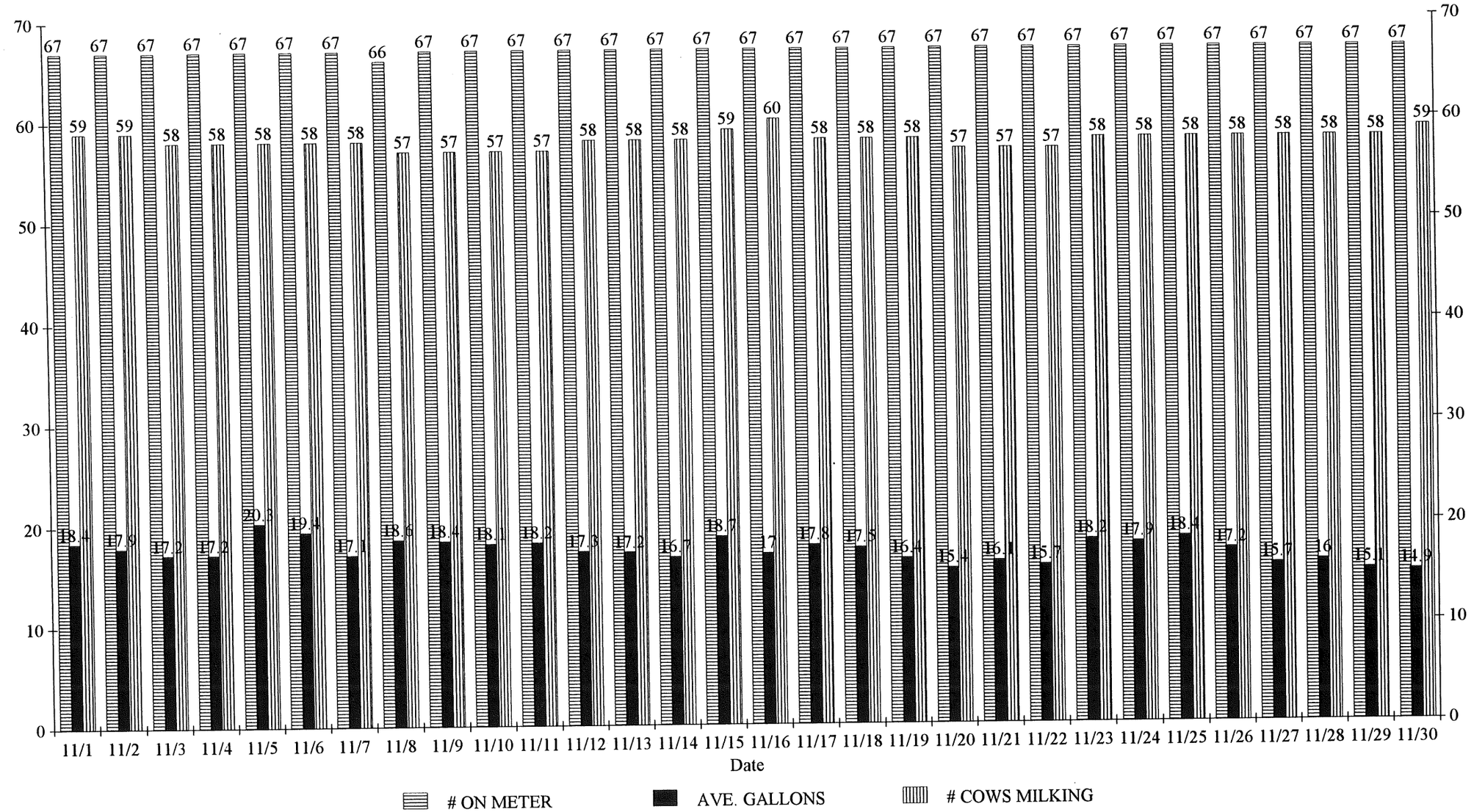
WATER CONSUMPTION GRAPH

October 1994



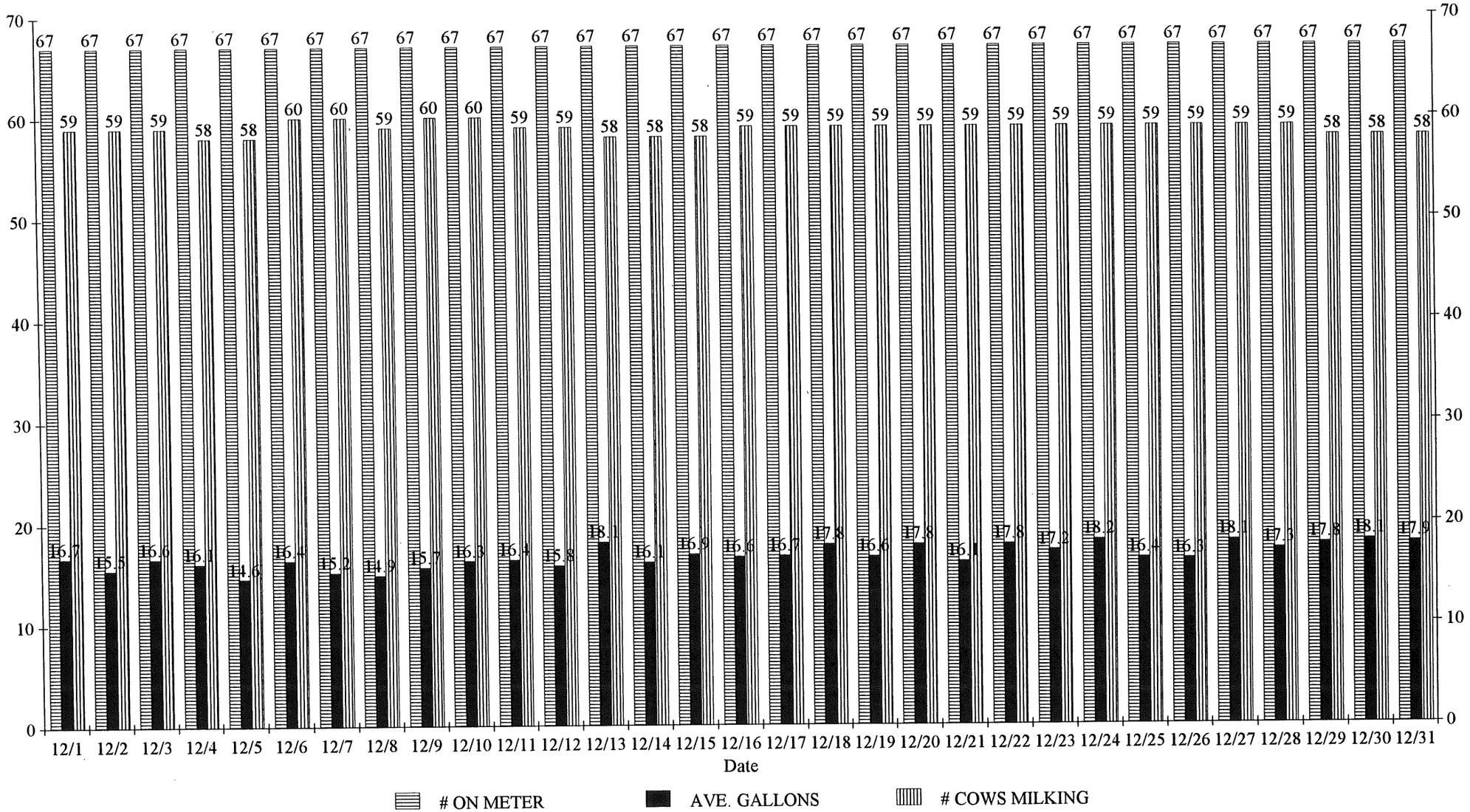
WATER CONSUMPTION GRAPH

November 1994



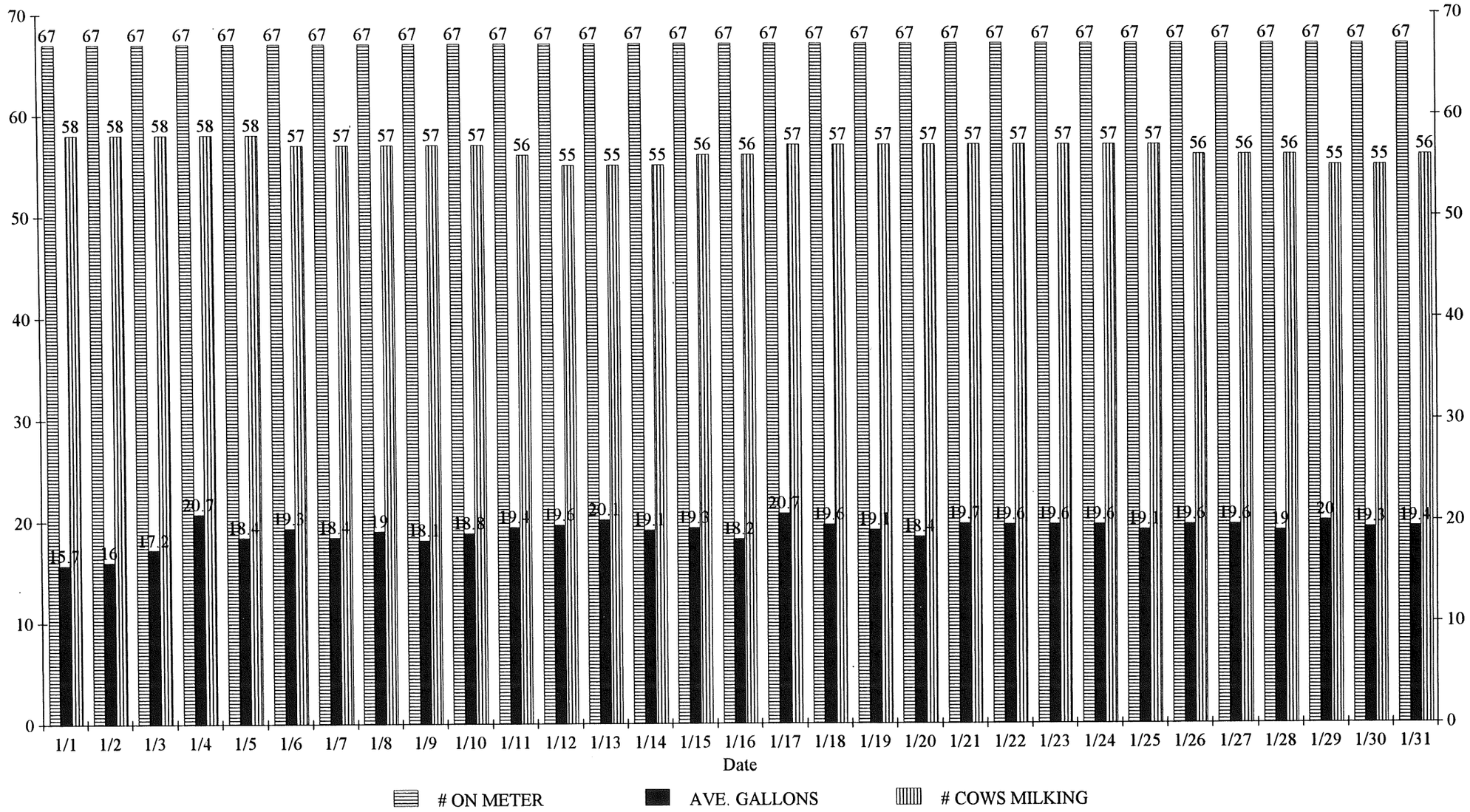
WATER CONSUMPTION GRAPH

December 1994



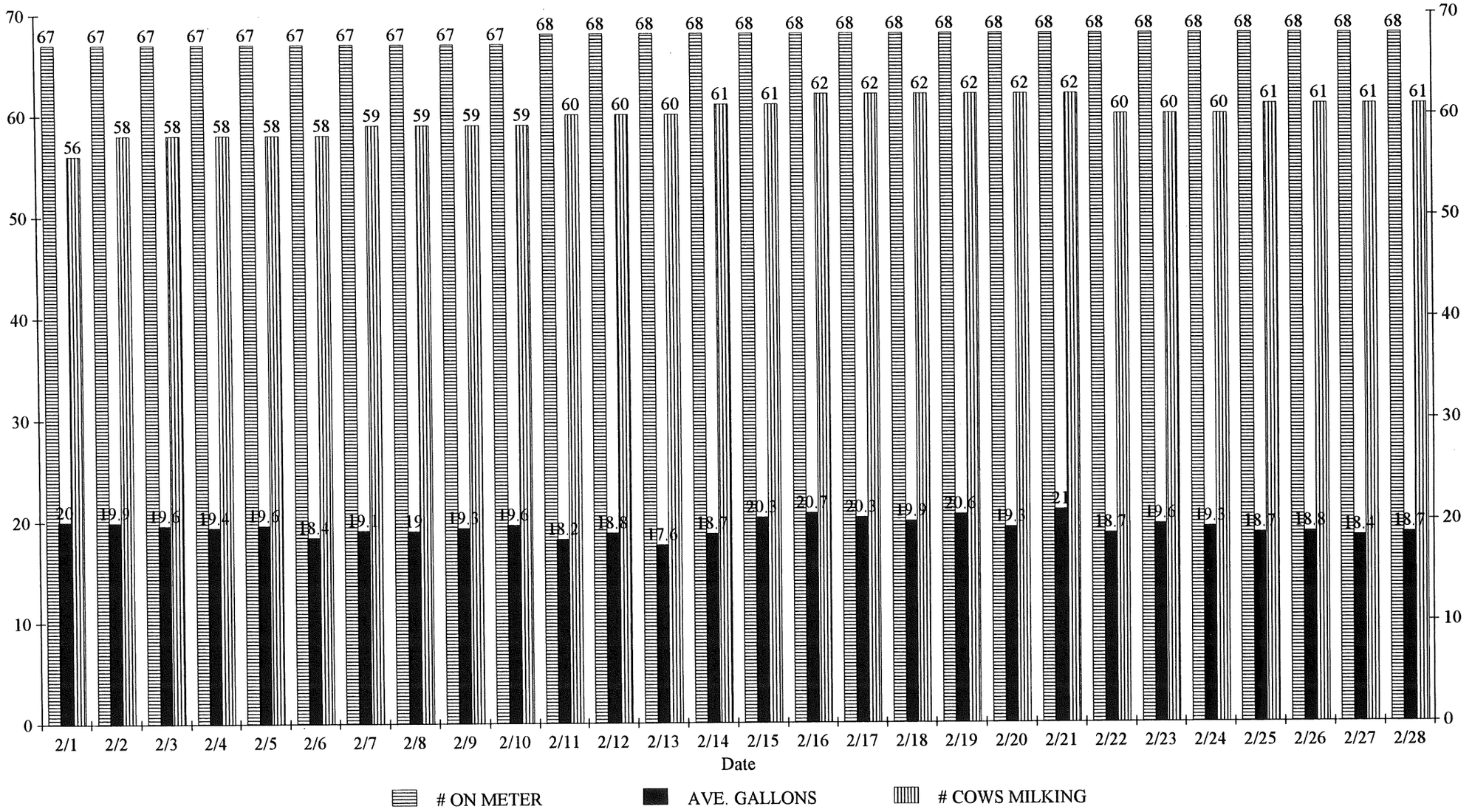
WATER CONSUMPTION GRAPH

January 1995



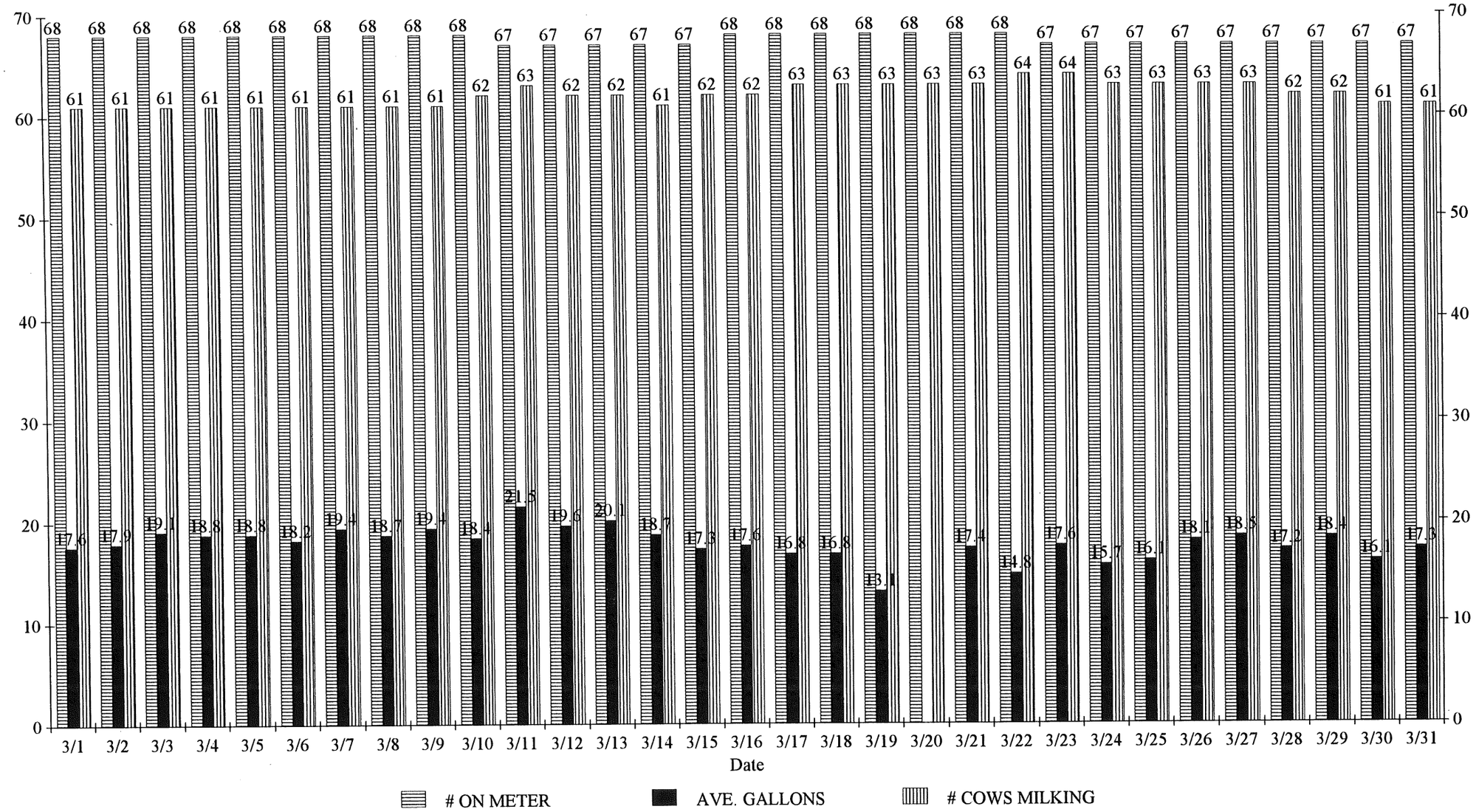
WATER CONSUMPTION GRAPH

February 1995



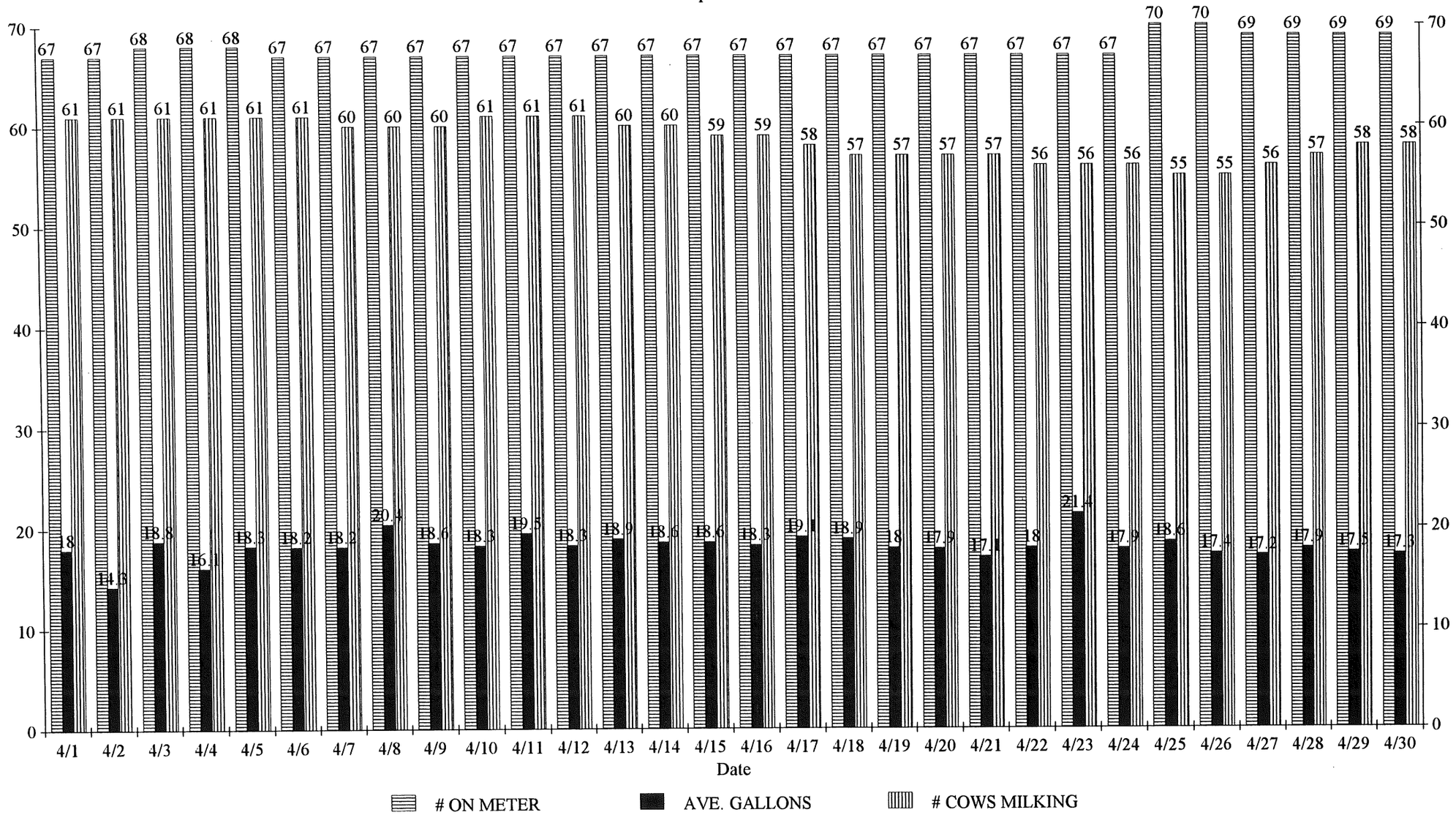
WATER CONSUMPTION GRAPH

March 1995



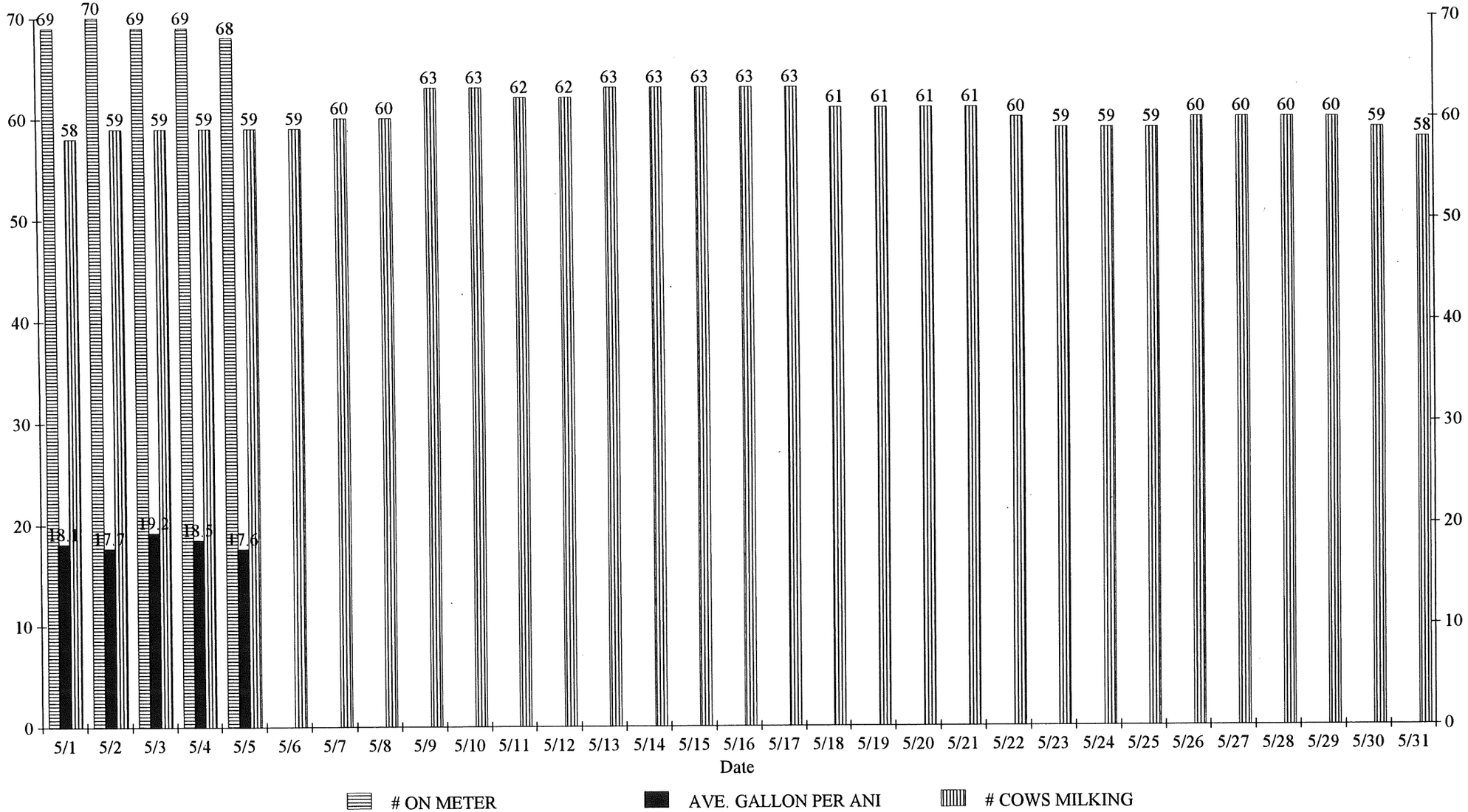
WATER CUNSUMPTION GRAPH

April 1995



WATER CONSUMPTION GRAPH

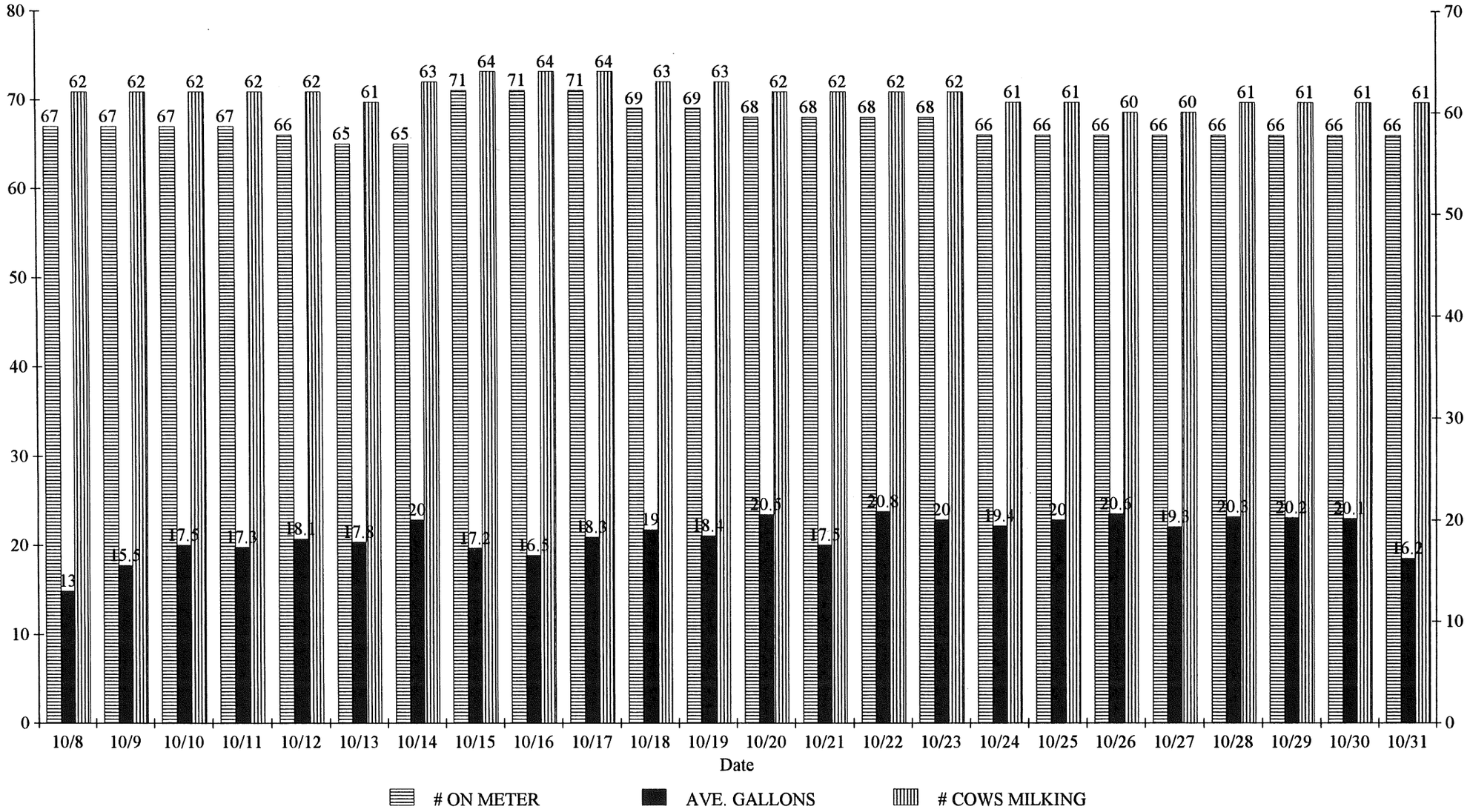
May 1995



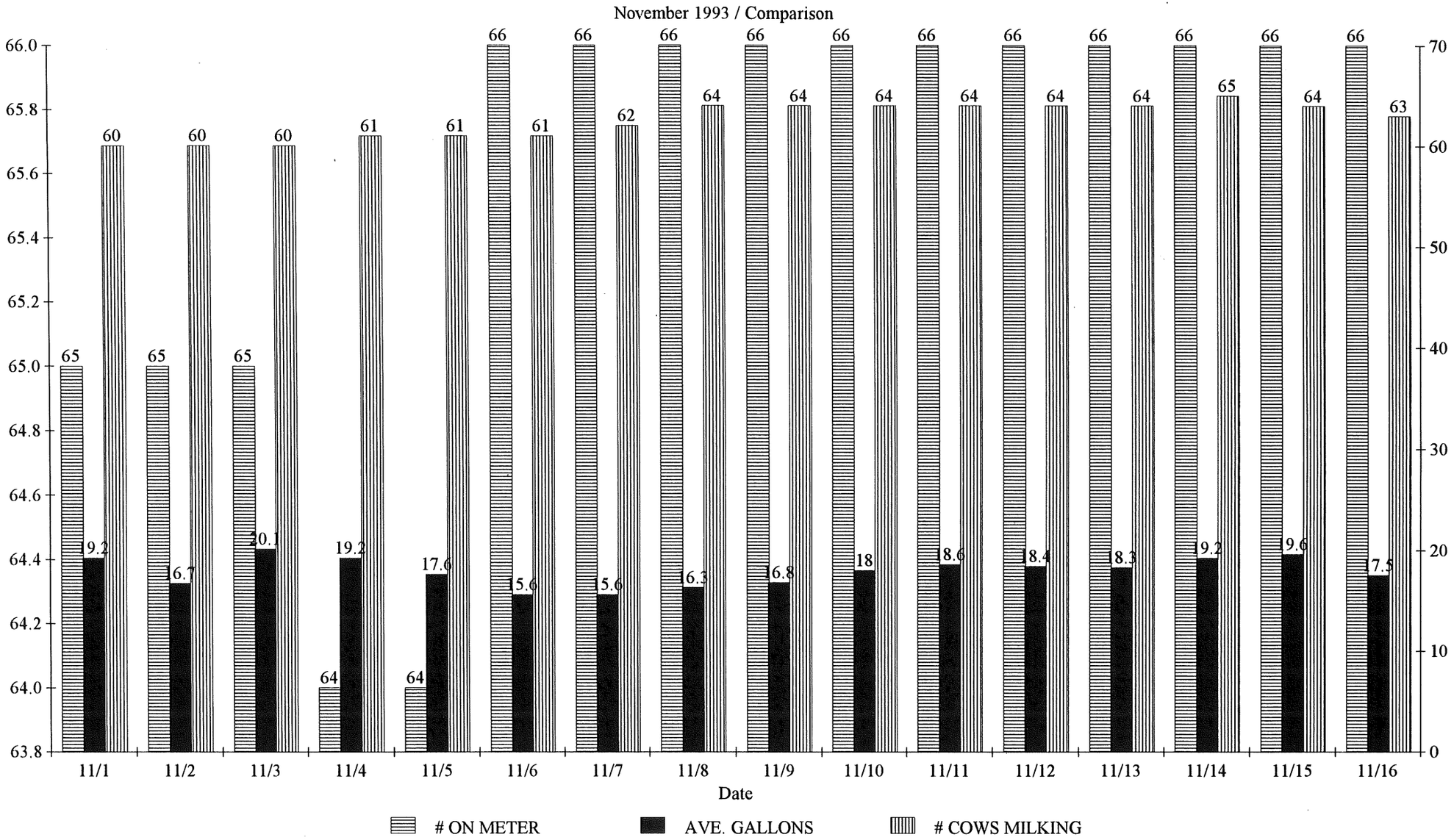
(Water meter not being used until 7-17-95)

WATER CONSUMPTION GRAPH

October 1993 / Comparison



WATER CONSUMPTION GRAPH



Water Consumption & Milk Production , Per Cow/Per day

November 1993

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
11/1	19.2	60	
11/2	16.7	60	
11/3	20.1	60	
11/4	19.2	61	
11/5	17.6	61	
11/6	15.6	61	
11/7	15.6	62	
11/8	16.3	64	
11/9	16.8	64	
11/10	18	64	
11/11	18.6	64	
11/12	18.4	64	
11/13	18.3	64	
11/14	19.2	65	
11/15	19.6	64	
11/16	17.5	63	40.6
11/17	18.4	63	
11/18	20.7	63	40
11/19	16.9	63	
11/20	18.1	63	40
11/21	18.9	63	
11/22	19	62	41
11/23	18.3	62	
11/24	17.5	62	40.3
11/25	17.7	61	
11/26	17.3	61	40.6
11/27	19.8	61	
11/28	17.8	61	40.5
11/29	16.5	61	
11/30	16.9	60	40.8

Water Consumption & Milk Production , Per Cow/Per day

December 1993

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
12/1	16.6	60	
12/2	16.8	60	41.2
12/3	16.4	60	
12/4	16.9	59	41
12/5	15.5	59	
12/6	16.8	60	39.6
12/7	16.6	60	
12/8	16.6	61	39.4
12/9	16.4	60	
12/10	16.2	60	40.4
12/11	16	60	
12/12	16	60	40.4
12/13	17.9	60	
12/14	17.9	60	40.4
12/15	15.4	61	
12/16	16.9	61	39.8
12/17	16.7	61	
12/18	15.6	59	40.9
12/19	16.3	59	
12/20	15.9	60	41
12/21	16.2	56	
12/22	16.9	56	
12/23	16.8	57	
12/24	18	58	43.3
12/25	17.4	58	
12/26	17.3	58	44.9
12/27	20	58	
12/28	19.8	58	43.8
12/29	19.5	58	
12/30/95	18.9	58	43.9
12/31/93	19.2	58	

Water Consumption & Milk Production , Per Cow/Per day

January 1994

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
1/1	21	59	41.9
1/2	20.3	60	
1/3	20.3	60	41.1
1/4	20.4	60	
1/5	19.8	59	43.5
1/6	19.5	59	
1/7	20.7	59	43.8
1/8	20.4	59	
1/9	19.1	60	43.7
1/10	19.2	60	
1/11	21.5	57	44.2
1/12	19.4	58	44.9
1/13	20.7	58	
1/14	20.2	58	44.3
1/15	20.3	58	
1/16	20.6	58	45.3
1/17	19.8	58	
1/18	19.4	58	45.3
1/19	21.2	58	
1/20	20.6	58	43.9
1/21	19.7	57	
1/22	20.4	57	45.1
1/23	21	55	
1/24	20.2	55	45.7
1/25	20.6	55	
1/26	20.6	55	45.7
1/27	19.2	55	
1/28	20.2	55	44.8
1/29	19.5	55	
1/30	20.3	55	44.8
1/31/94	20.6	55	

Water Consumption & Milk Production , Per Cow/Per day

February 1994

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow per day
2/1	20.4	55	45.3
2/2	20	56	
2/3	19.4	56	44.3
2/4	21.1	56	
2/5	20.8	57	44.6
2/6	20.6	59	
2/7	19.7	59	42.3
2/8	19.7	59	
2/9	20.3	59	44.3
2/10	20.4	60	
2/11	19.8	60	42.3
2/12	20.1	60	
2/13	20.1	60	42.8
2/14	20.4	60	
2/15	19.1	60	43.1
2/16	20.4	60	
2/17	21.2	62	42.5
2/18	20.4	62	
2/19	21.2	61	43.4
2/20	20.4	61	
2/21	20.3	61	43.4
2/22	21	62	
2/23	20.3	62	42.8
2/24	20.4	62	
2/25	21.2	62	43.2
2/26	19.8	62	
2/27	20.7	62	42.2
2/28	20.3	62	

Water Consumption & Milk Production , Per Cow/Per day

March 1994

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
3/1	20.1	61	42.5
3/2	20.4	61	
3/3	21.3	62	.41
3/4	18.9	63	
3/5	20.3	63	40.9
3/6	19.9	63	
3/7	19.4	63	41.5
3/8	18.1	63	
3/9	19.3	62	42.3
3/10	19.3	62	
3/11	19.3	62	42.5
3/12	18.2	62	
3/13	19	61	43.6
3/14	19.3	61	
3/15	19	61	43.9
3/16	18.2	61	
3/17	17.9	60	44.6
3/18	18.7	60	
3/19	18	60	44.5
3/20	18.5	61	
3/21	18.5	60	45.1
3/22	19.6	59	
3/23	18.8	59	45.7
3/24	17.8	57	
3/25	18	57	45.1
3/26	18.5	58	
3/27	19.3	58	45.1
3/28	20	57	
3/29	19.3	56	47
3/30	18.2	56	
3/31	19.7	56	48.3

Water Consumption & Milk Production , Per Cow/Per day

April 1994

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
4/1	16.6	56	
4/2	16.5	55	47.4
4/3	16.2	55	
4/4	17.8	55	45.8
4/5	16.4	54	
4/6	17	54	47.5
4/7	16.3	53	
4/8	16.7	56	48.6
4/9	16.7	54	
4/10	14.8	54	47.2
4/11	20	54	
4/12	18.5	54	46.5
4/13	18.1	56	
4/14	20.7	56	45.2
4/15	19.4	56	
4/16	13.9	56	44.1
4/17	13.4	56	
4/18	17.6	56	41
4/19	18.9	57	
4/20	18.1	57	40.5
4/21	18.4	57	
4/22	20.6	57	38.6
4/23	19.3	57	
4/24	20.4	57	39.3
4/25	19.7	57	
4/26	14.6	56	38.9
4/27	15.5	56	
4/28	17	56	40.3
4/29	14.2	56	
4/30	15.5	56	42.1

Water Consumption & Milk Production , Per Cow/Per day

May 1994

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow per day
5/1	16.9	56	
5/2	14.7	56	39.1
5/3	18.7	55	
5/4	18.5	55	41.3
5/5	13.4	55	
5/6	15.6	55	39.9
5/7	17.5	55	41.2
5/8	17.4	55	39.4
5/9	19.9	55	40.5
5/10	17.8	53	36.9
5/11	21.3	54	39.1
5/12	20.9	55	41.2
5/13	19.7	55	41.2
5/14	19.7	55	41.3
5/15	16.6	54	38.7
5/16	17.6	53	40.3
5/17	19.9	53	41
5/18	20.9	53	40.2
5/19	22.9	53	42.2
5/20	24.4	53	41.3
5/21	23.4	53	42.3
5/22	23.1	53	44.9
5/23	22	54	42.2
5/24	22.9	54	44.4
5/25	21	54	45.4
5/26	19.4	53	43
5/27	19.9	54	43.2
5/28	21.5	54	45.3
5/29	24.6	55	43.2
5/30	20.1	56	43.6
5/31	20.6	55	40.6

Water Consumption & Milk Production , Per Cow/Per day

June 1994

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
6/1	19.9	54	
6/2	17.3	54	45.9
6/3	15.4	54	
6/4	16.9	55	44.8
6/5	18.7	55	
6/6	14.3	55	46.4
6/7	18.2	55	
6/8	16	55	42.9
6/9	19.4	55	
6/10	19.6	55	43.7
6/11	18	55	
6/12	18.9	56	44.8
6/13	21.9	56	
6/14	17.5	56	45.8
6/15	22.7	56	
6/16	18.2	57	43.1
6/17	15.8	57	
6/18	16.6	56	44.4
6/19	15.1	56	
6/20	17.5	56	43.9
6/21	15.8	56	
6/22	23.6	57	40.1
6/23	18.4	57	
6/24	15.2	58	41.7
6/25	28.5	59	
6/26	21.5	59	40.6
6/27	21	59	
6/28	21.8	59	40.4
6/29	21	59	
6/30	21.6	59	40.5

Water Consumption & Milk Production , Per Cow/Per day

July 1994

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
7/1	24.5	60	
7/2	20.7	61	38.7
7/3	19.5	60	
7/4	20.4	59	40.9
7/5	19.1	59	
7/6	17.3	60	40.2
7/7	20.4	57	
7/8	17.2	55	42.5
7/9	17.9	54	
7/10	19.9	53	43.5
7/11	21.2	54	
7/12	19.9	54	43.1
7/13	20.9	54	
7/14	22.8	54	43.7
7/15	- - - -	54	
7/16	20.2	55	44.6
7/17	22.9	55	
7/18	24.2	55	43.6
7/19	22.6	56	
7/20	20.6	56	42.7
7/21	24.2	56	
7/22	18.6	56	42.9
7/23	28.8	56	
7/24	23.3	55	43.9
7/25	24.5	55	
7/26	24.5	54	44.6
7/27	23	54	
7/28	23	54	44.8
7/29	23	54	
7/30	25	53	44.2
7/31	24.1	53	

Water Consumption & Milk Production , Per Cow/Per day

August 1994

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
8/1	23.8	52	45.6
8/2	24.2	52	
8/3	22.7	52	44.3
8/4	23.7	50	
8/5	22.7	50	42.9
8/6	22.2	51	
8/7	20.6	51	41.9
8/8	20.7	50	
8/9	21.6	50	41.9
8/10	20.3	50	
8/11	17	50	42.3
8/12	22.6	49	
8/13	19.1	49	44
8/14	18.4	49	
8/15	21.8	50	41
8/16	24	50	
8/17	23.3	50	40.8
8/18	21	50	
8/19	21.8	51	41.2
8/20	20.3	51	
8/21	21.2	51	39.3
8/22	21.9	51	
8/23	23.2	51	40.9
8/24	18.4	51	
8/25	20.3	51	40.9
8/26	19.9	50	
8/27	22.5	51	41
8/28	19.1	51	
8/29	21.9	51	39.4
8/30	21.8	51	
8/31	17.9	51	40.5

Water Consumption & Milk Production , Per Cow/Per day

September 1994

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
9/1	20.1	51	
9/2	21.5	51	40.9
9/3	19.1	52	
9/4	19	53	39.7
9/5	17.9	54	
9/6	17.2	53	41.9
9/7	22.3	54	
9/8	22.9	55	42.3
9/9	21.8	56	
9/10	23.2	56	44
9/11	24.2	57	
9/12	21.1	57	41.6
9/13	18.5	56	
9/14	18.7	56	41.3
9/15	18.8	56	
9/16	18.2	57	41.2
9/17	18.5	57	
9/18	19.3	58	42.4
9/19	21.8	58	
9/20	18.7	59	42.4
9/21	21.5	59	43.2
9/22	15.4	57	
9/23	17.3	57	45.1
9/24	17.8	57	
9/25	17.3	57	41.6
9/26	16.9	57	
9/27	17.5	56	44.5
9/28	18.1	56	
9/29	19.1	55	45.7
9/30	18.8	55	

Water Consumption & Milk Production , Per Cow/Per day

October 1994

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
10/1	17.8	55	
10/2	19.9	54	46.1
10/3	17.4	54	
10/4	15.2	53	46.3
10/5	16.8	53	
10/6	16.7	54	43.6
10/7	17.2	55	
10/8	18.4	55	45.4
10/9	18.1	55	
10/10	17.2	55	44.4
10/11	18.7	56	
1012	19	57	45.4
10/13	20.9	58	
10/14	19.1	58	46.1
10/15	19	60	
10/16	17.6	60	43.5
10/17	14.9	60	
10/18	14	61	43.4
10/19	15.8	61	
10/20	17.2	61	41.2
10/21	17.9	61	
10/22	18.8	61	44.5
10/23	16.9	60	
10/24	19.4	60	42.7
10/25	17.9	60	
10/26	19.6	60	42.6
10/27	18.7	60	
10/28	19	60	43.5
10/29	17.5	60	
10/30	17.9	59	44.3
10/31	18.4	59	

Water Consumption & Milk Production , Per Cow/Per day

November 1994

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
11/1	18.4	59	40.6
11/2	17.9	59	
11/3	17.2	58	42.9
11/4	17.2	58	
11/5	20.3	58	41.2
11/6	19.4	58	
11/7	17.1	58	42.5
11/8	18.6	57	
11/9	18.4	57	36.5
11/10	18.1	57	
11/11	18.2	57	41.3
11/12	17.3	58	
11/13	17.2	58	41.5
11/14	16.7	58	
11/15	18.7	59	40.9
11/16	17	60	
11/17	17.8	58	40.6
11/18	17.5	58	
11/19	16.4	58	39.7
11/20	15.4	57	
11/21	16.1	57	40.4
11/22	15.7	57	
11/23	18.2	58	38.6
11/24	17.9	58	
11/25	18.4	58	40.2
11/26	17.2	58	
11/27	15.7	58	40.2
11/28	16	58	
11/29	15.1	58	39.8
11/30	14.9	59	

Water Consumption & Milk Production , Per Cow/Per day

December 1994

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
12/1	16.7	59	39
12/2	15.5	59	
12/3	16.6	59	39.3
12/4	16.1	58	
12/5	14.6	58	40.4
12/6	16.4	60	
12/7	15.2	60	39
12/8	14.9	59	
12/9	15.7	60	38.8
12/10	16.3	60	
12/11	16.4	59	39.7
12/12	15.8	59	
12/13	18.1	58	38.9
12/14	16.1	58	
12/15	16.9	58	36.8
12/16	16.6	59	
12/17	16.7	59	36.6
12/18	17.8	59	
12/19	16.6	59	37.6
12/20	17.8	59	
12/21	16.1	59	38.7
12/22	17.8	59	
12/23	17.2	59	38.8
12/24	18.2	59	
12/25	16.4	59	40.2
12/26	16.3	59	
12/27	18.1	59	38
12/28	17.3	59	
12/29	17.8	58	39.9
12/30	18.1	58	
12/31	17.9	58	38.6

Water Consumption & Milk Production , Per Cow/Per day

January 1995

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
1/1	15.7	58	
1/2	16	58	38.1
1/3	17.2	58	
1/4	20.7	58	39.1
1/5	18.4	58	
1/6	19.3	57	39.2
1/7	18.4	57	
1/8	19	57	39.7
1/9	18.1	57	
1/10	18.8	57	38.7
1/11	19.4	56	
1/12	19.6	55	41.4
1/13	20.1	55	
1/14	19.1	55	41.7
1/15	19.3	56	
1/16	18.2	56	41.5
1/17	20.7	57	
1/18	19.6	57	40.9
1/19	19.1	57	
1/20	18.4	57	42
1/21	19.7	57	
1/22	19.6	57	41.4
1/23	19.6	57	
1/24	19.6	57	40.6
1/25	19.1	57	
1/26	19.6	56	40.8
1/27	19.6	56	
1/28	19	56	40.4
1/29	20	55	
1/30	19.3	55	41.2
1/31	19.4	56	

Water Consumption & Milk Production , Per Cow/Per day

February 1995

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow / per day
2/1	20	56	40.4
2/2	19.9	58	
2/3	19.6	58	41.6
2/4	19.4	58	
2/5	19.6	58	39.9
2/6	18.4	58	
2/7	19.1	59	40
2/8	19	59	
2/9	19.3	59	38.8
2/10	19.6	59	
2/11	18.2	60	38.9
2/12	18.8	60	
2/13	17.6	60	39.1
2/14	18.7	61	
2/15	20.3	61	37.8
2/16	20.7	62	
2/17	20.3	62	38.1
2/18	19.9	62	
2/19	20.6	62	39.1
2/20	19.3	62	
2/21	21	62	38.1
2/22	18.7	60	
2/23	19.6	60	40.1
2/24	19.3	60	
2/25	18.7	61	39.3
2/26	18.8	61	
2/27	18.4	61	39
2/28	18.7	61	

Water Consumption & Milk Production , Per Cow/Per day

March 1995

Date	Ave. Gal. Water Per Cow	# COWS MILKING	Milk per cow/per day
3/1	17.6	61	38.6
3/2	17.9	61	
3/3	19.1	61	37.4
3/4	18.8	61	
3/5	18.8	61	39.6
3/6	18.2	61	
3/7	19.4	61	.38
3/8	18.7	61	
3/9	19.4	61	38.4
3/10	18.4	62	
3/11	21.5	63	37.4
3/12	19.6	62	
3/13	20.1	62	37.1
3/14	18.7	61	
3/15	17.3	62	36.4
3/16	17.6	62	
3/17	16.8	63	35.2
3/18	16.8	63	
3/19	13.1	63	36.7
3/20	cup leaked	63	
3/21	17.4	63	36.6
3/22	14.8	64	
3/23	17.6	64	38.2
3/24	15.7	63	
3/25	16.1	63	37.5
3/26	18.1	63	
3/27	18.5	63	37.3
3/28	17.2	62	
3/29	18.4	62	38.9
3/30	16.1	61	
3/31	17.3	61	39.1

Water Consumption & Milk Production , Per Cow/Per day

April 1995

Date	Ave. Gal. Per Cow	# COWS MILKING	Milk per cow/per 2 days
4/1	18	61	
4/2	14.3	61	38
4/3	18.8	61	
4/4	16.1	61	39.5
4/5	18.3	61	
4/6	18.2	61	38.4
4/7	18.2	60	
4/8	20.4	60	40.6
4/9	18.6	60	
4/10	18.3	61	39.9
4/11	19.5	61	
4/12	18.3	61	39.4
4/13	18.9	60	
4/14	18.6	60	39.3
4/15	18.6	59	
4/16	18.3	59	40.1
4/17	19.1	58	
4/18	18.9	57	41.5
4/19	18	57	
4/20	17.9	57	40.4
4/21	17.1	57	
4/22	18	56	41.8
4/23	21.4	56	
4/24	17.9	56	41
4/25	18.6	55	
4/26	17.4	55	41
4/27	17.2	56	
4/28	17.9	57	39.7
4/29	17.5	58	
4/30	17.3	58	39.7

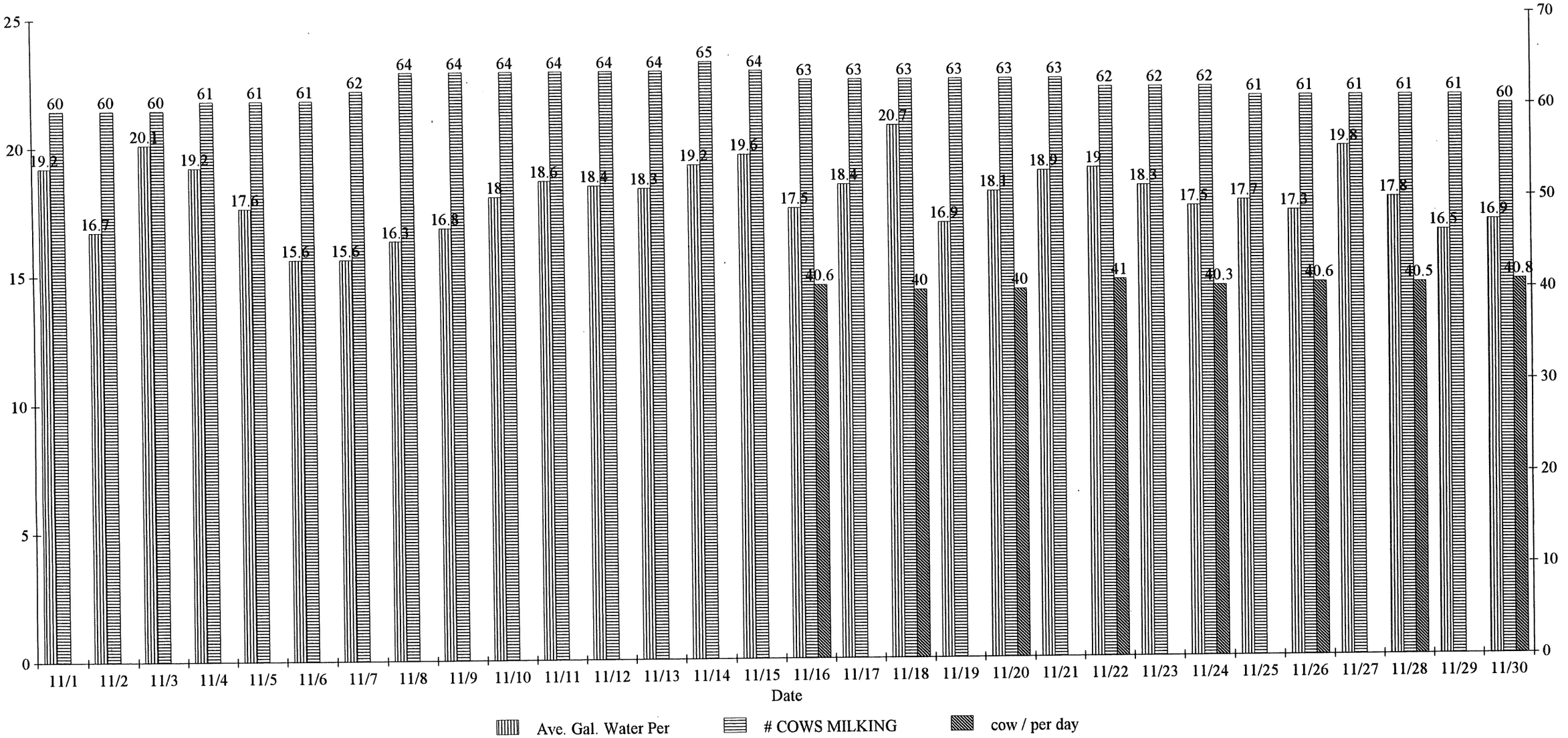
Water Consumption & Milk Production , Per Cow/Per day

May 1995

Date	Ave. Gal. Per Cow	# COWS MILKING	Milk per cow/per 2 days
5/1	18.1	58	
5/2	17.7	59	39.1
5/3	19.2	59	
5/4	18.5	59	41.3
5/5	17.6	59	
5/6		59	39.9
5/7		60	41.2
5/8		60	39.4
5/9		63	40.5
5/10		63	36.9
5/11		62	39.1
5/12		62	41.2
5/13		63	41.3
5/14		63	38.7
5/15		63	40.3
5/16		63	41
5/17		63	40.2
5/18		61	42.2
5/19		61	41.3
5/20		61	42.3
5/21		61	
5/22		60	44.9
5/23		59	42.2
5/24		59	44.4
5/25		59	45.5
5/26		60	43
5/27		60	43.2
5/28		60	45.3
5/29		60	43.2
5/30		59	436
5/31		58	40.6

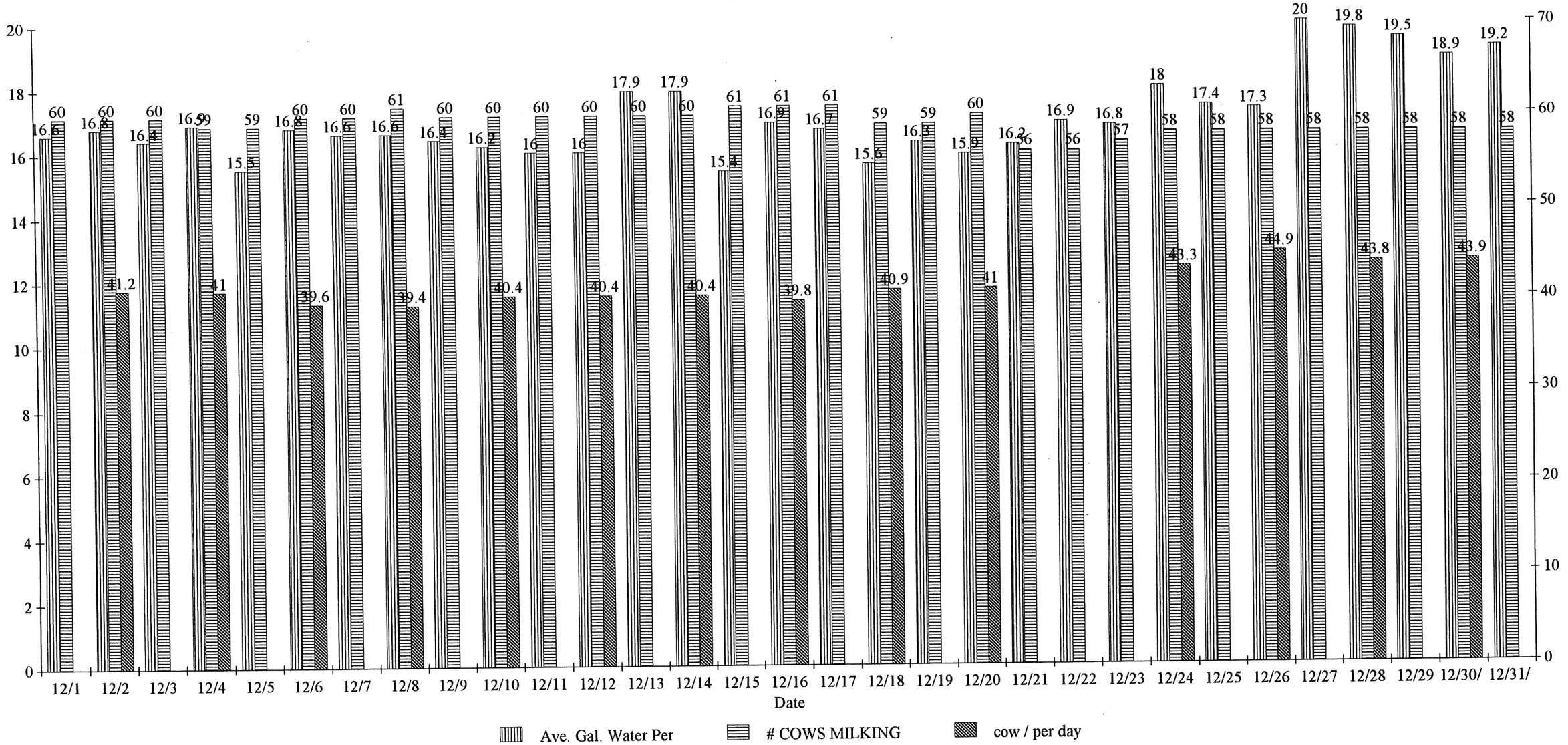
Ave. Gal. Water Per Cow/# Cows Milking/Per Day

November 1993



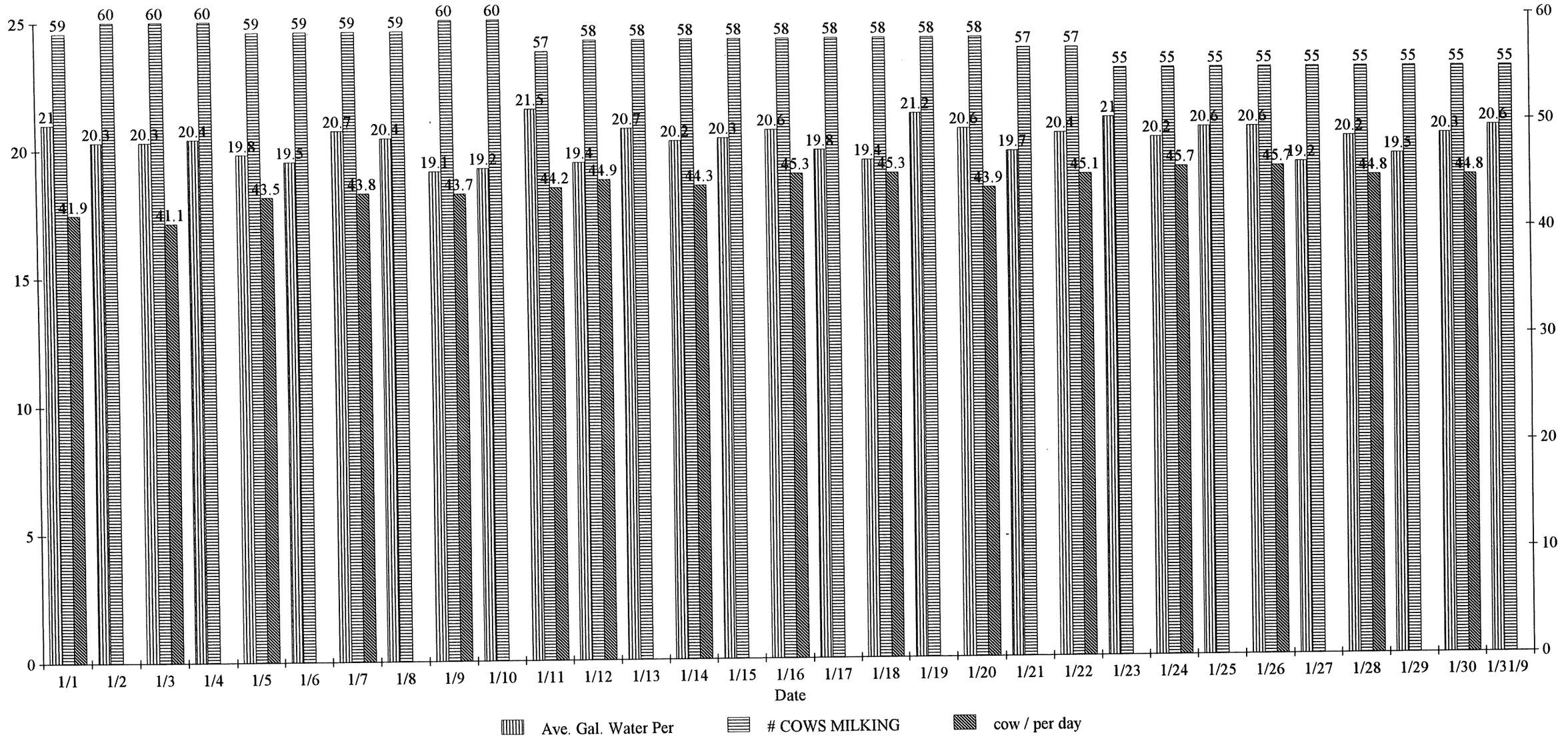
Ave. Gal. Water Per Cow/# Cows Milking/Milk Per Cow/Per Day

December 1993



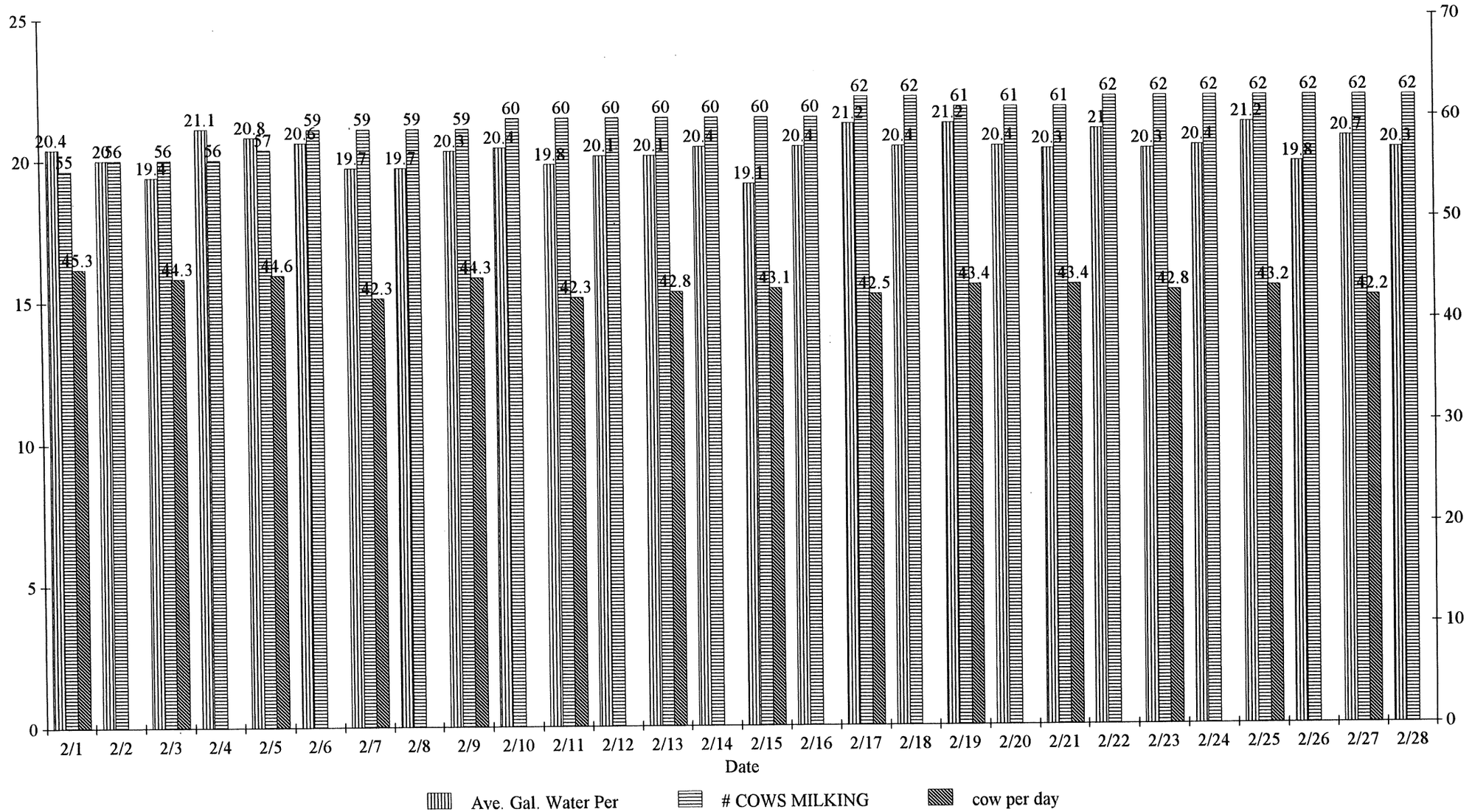
Ave. Gal. Water Per Cow/# Cows Milking/Milk Per Cow/Per Day

January 1994



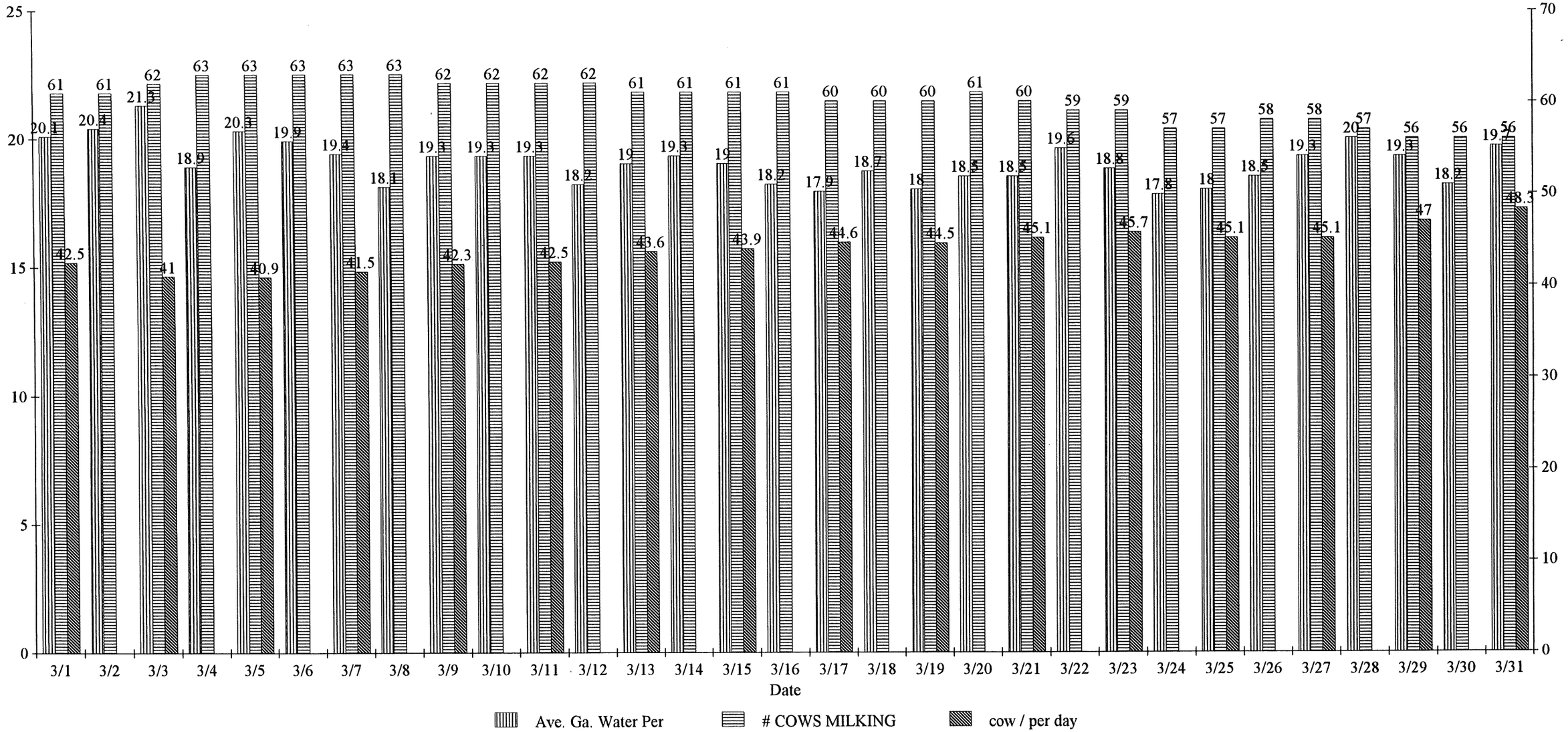
Ave. Gal. Water Per Cow/# Cows Milking/Milk Per Cow/Per Day

February1994



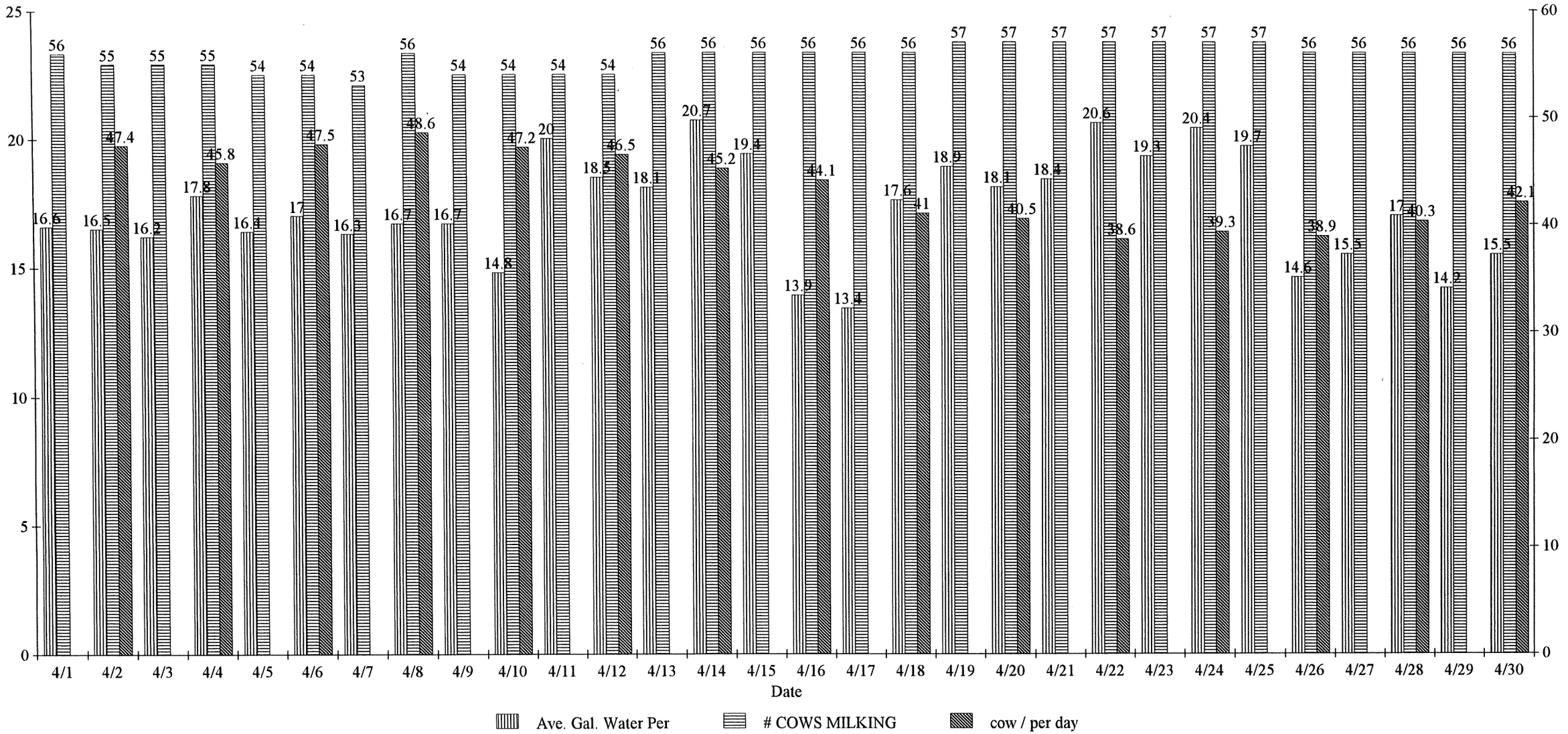
Ave. Gal. Water Per Cow/#Cows Milking/Milk Per Cow/Per Day

March 1994



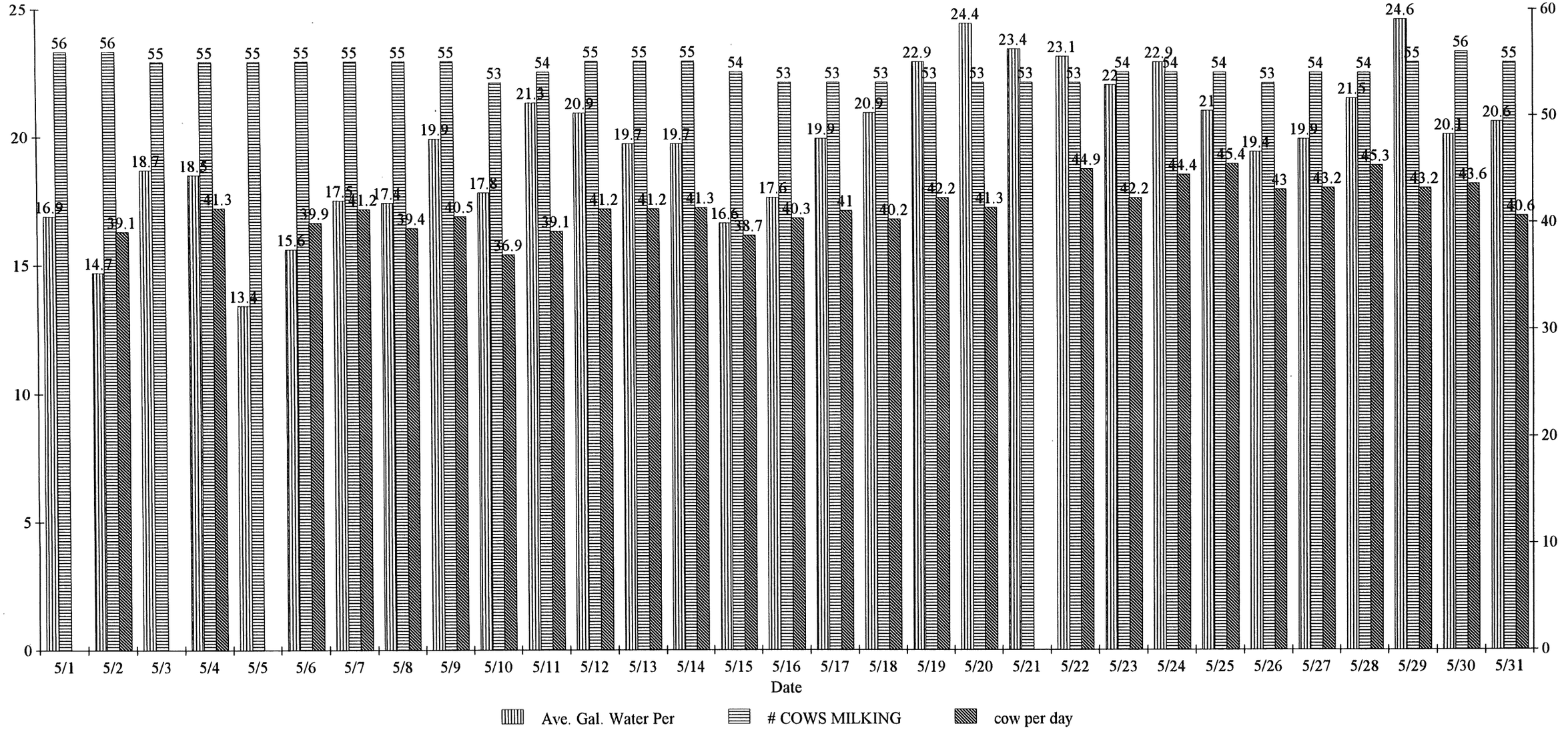
Ave. Gal. Water Per Cow/# Cows Milking/Milk Per Cow/Per Day

April 1994



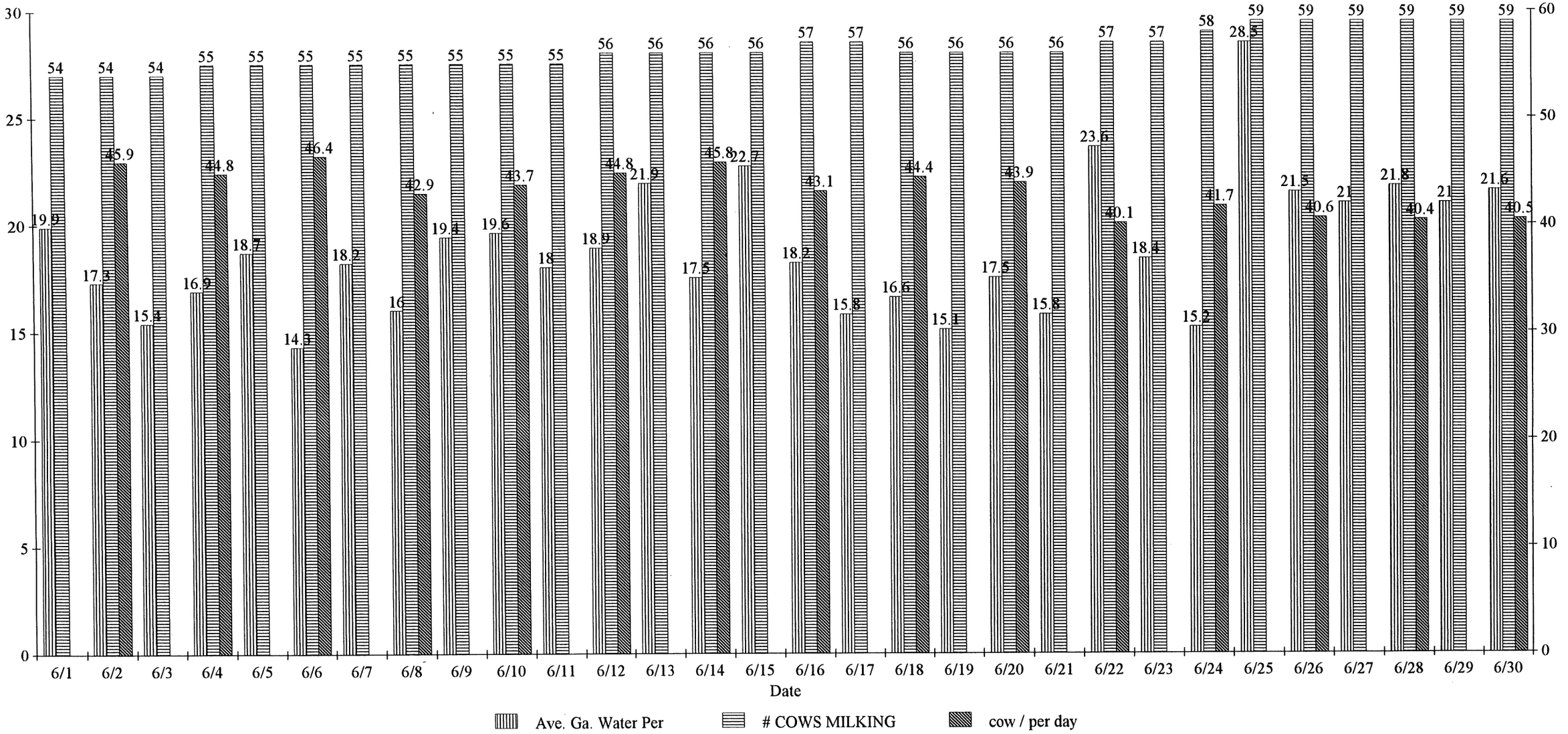
Ave. Gal. Water. Per Cow/#Cows Milking/Milk Per Cow/Per Day

May 1994



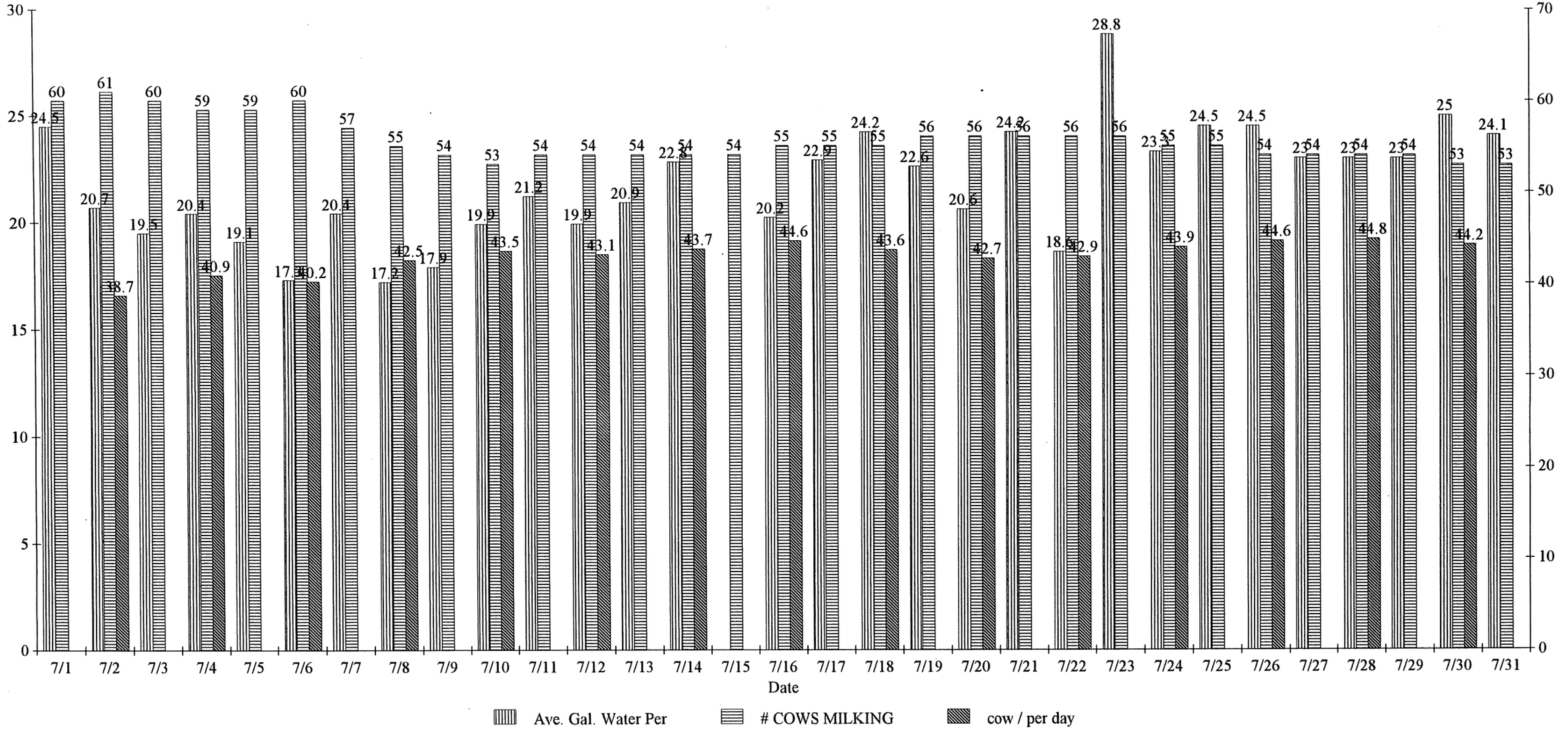
Ave. Gal. Water Per Cow/#Cows Milking/Milk Per Cow/Per Day

June 1994



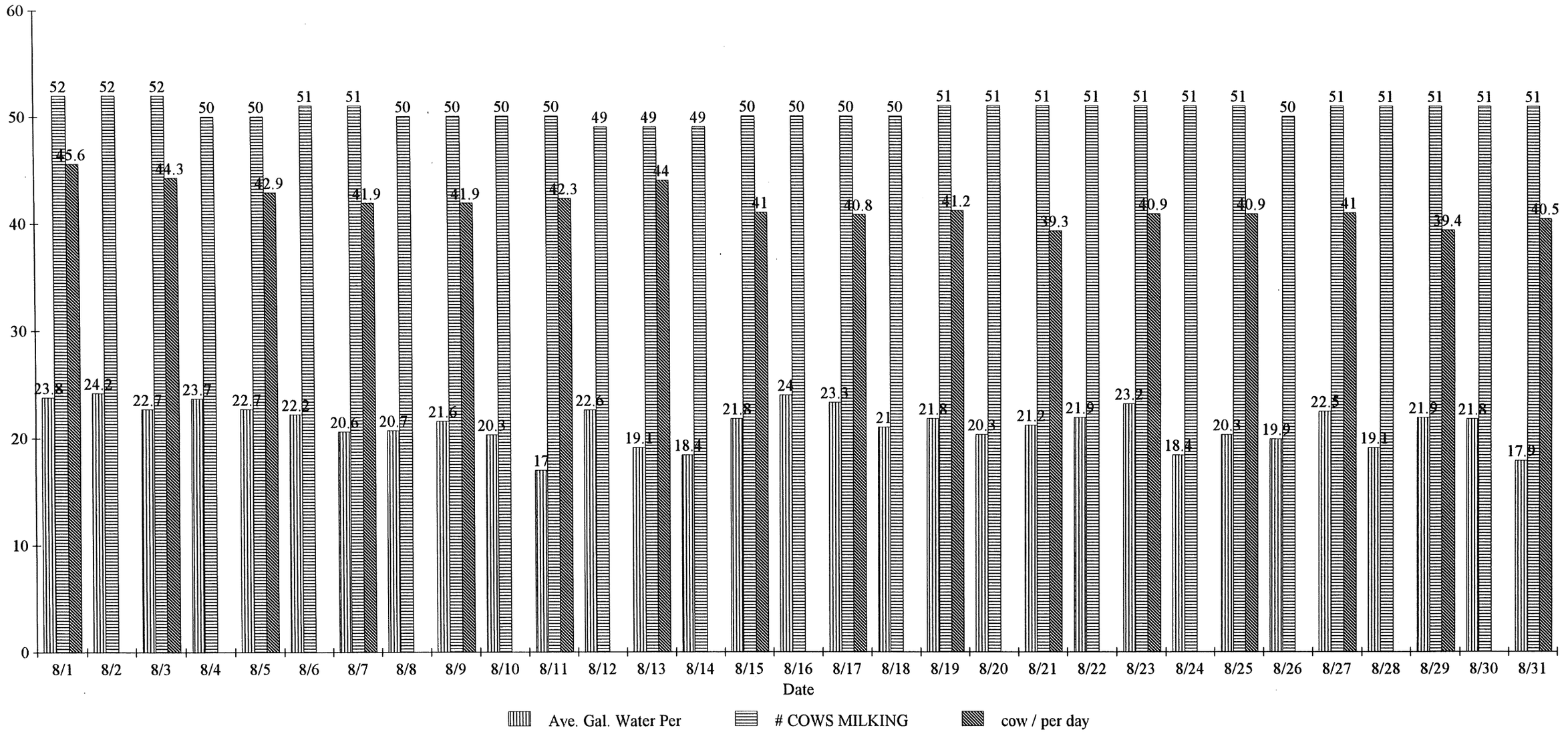
Ave. Gal. Water Per Cow/#Cows Milking/Milk Per Cow/Per Day

July 1994

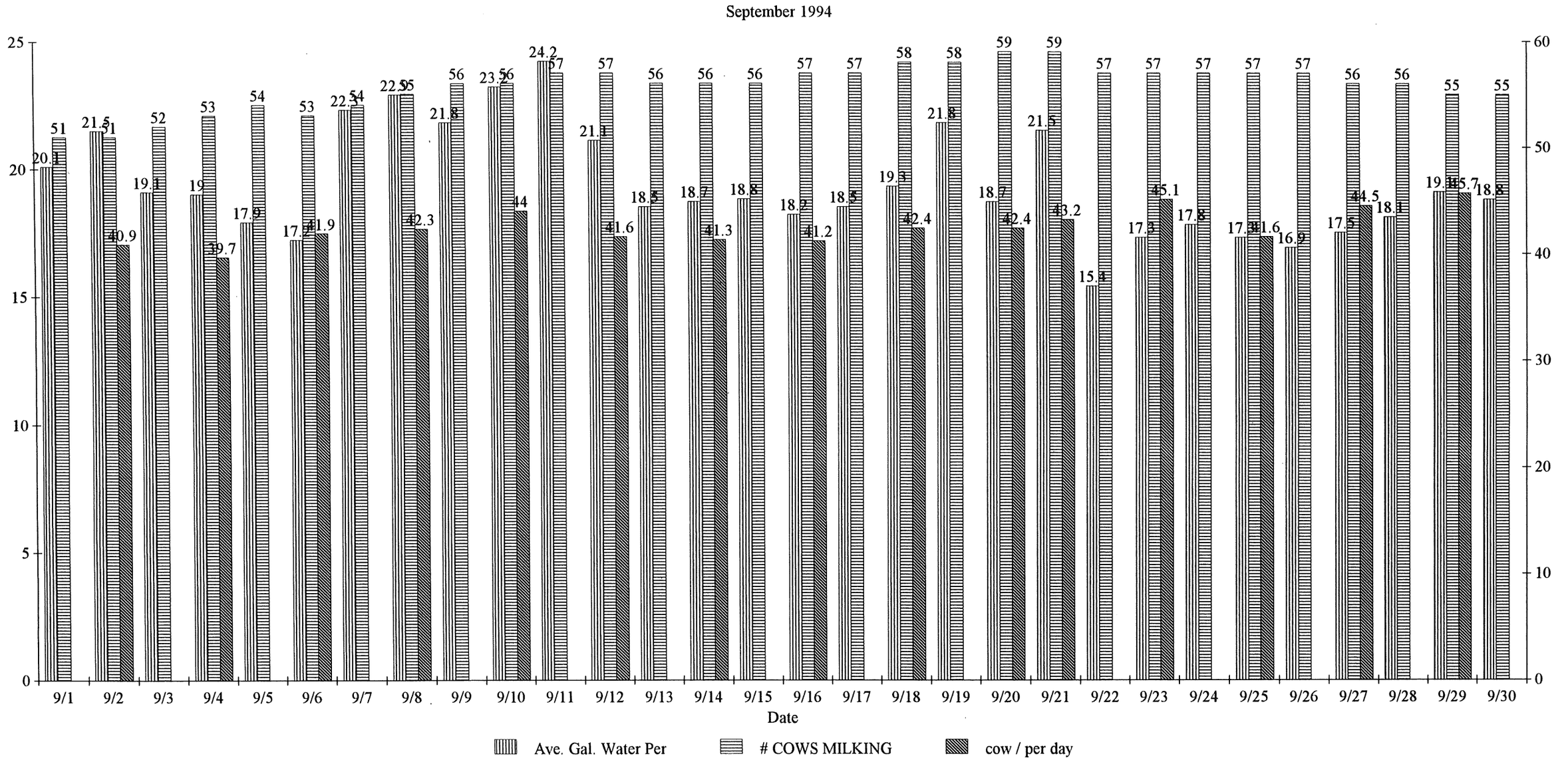


Ave. Gal. Per Cow/#Cows Milking Per Cow/Per Day

August 1994

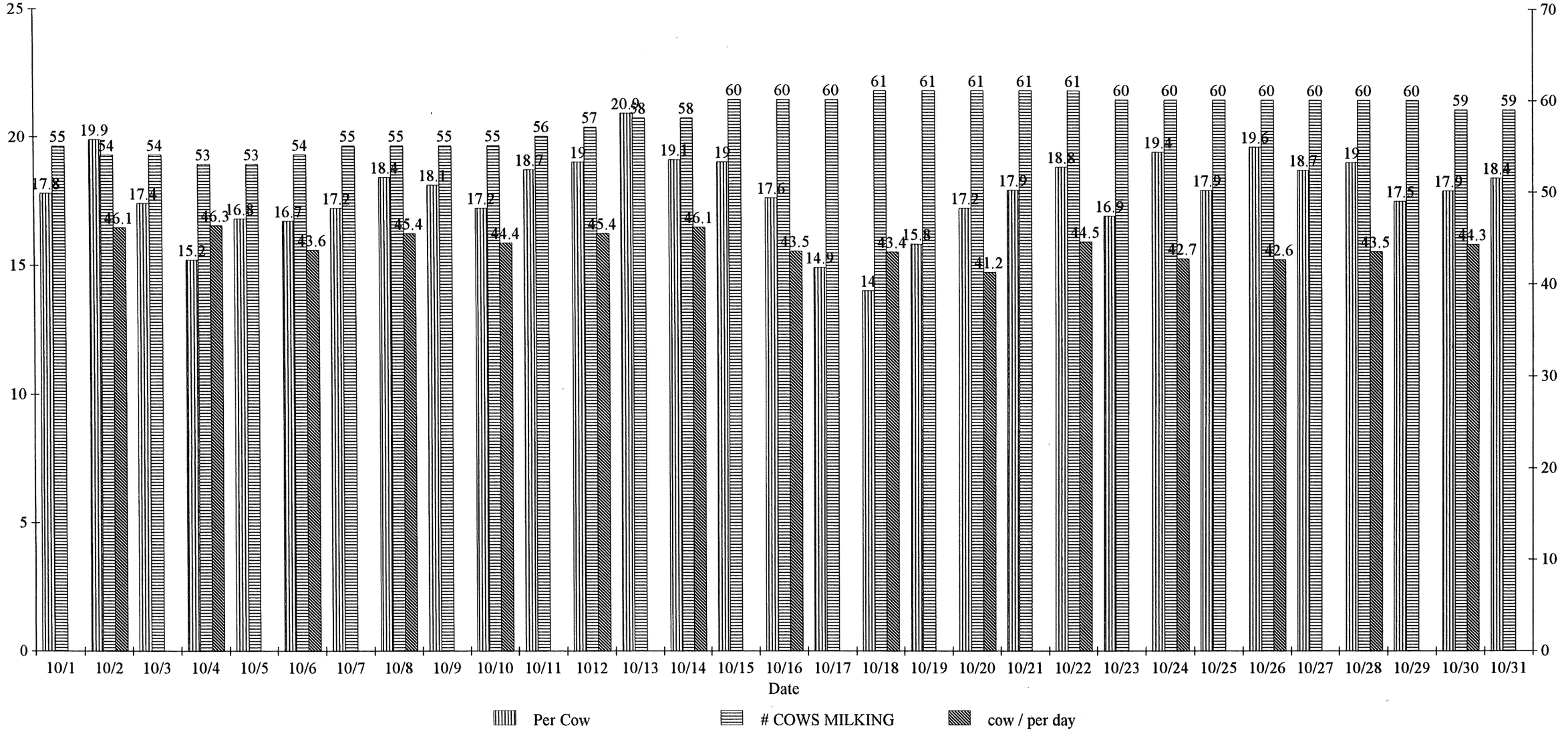


Ave. Gal. Water Per Cow/#Cows Milking Per Cow/Milk Per Cow/Per Day

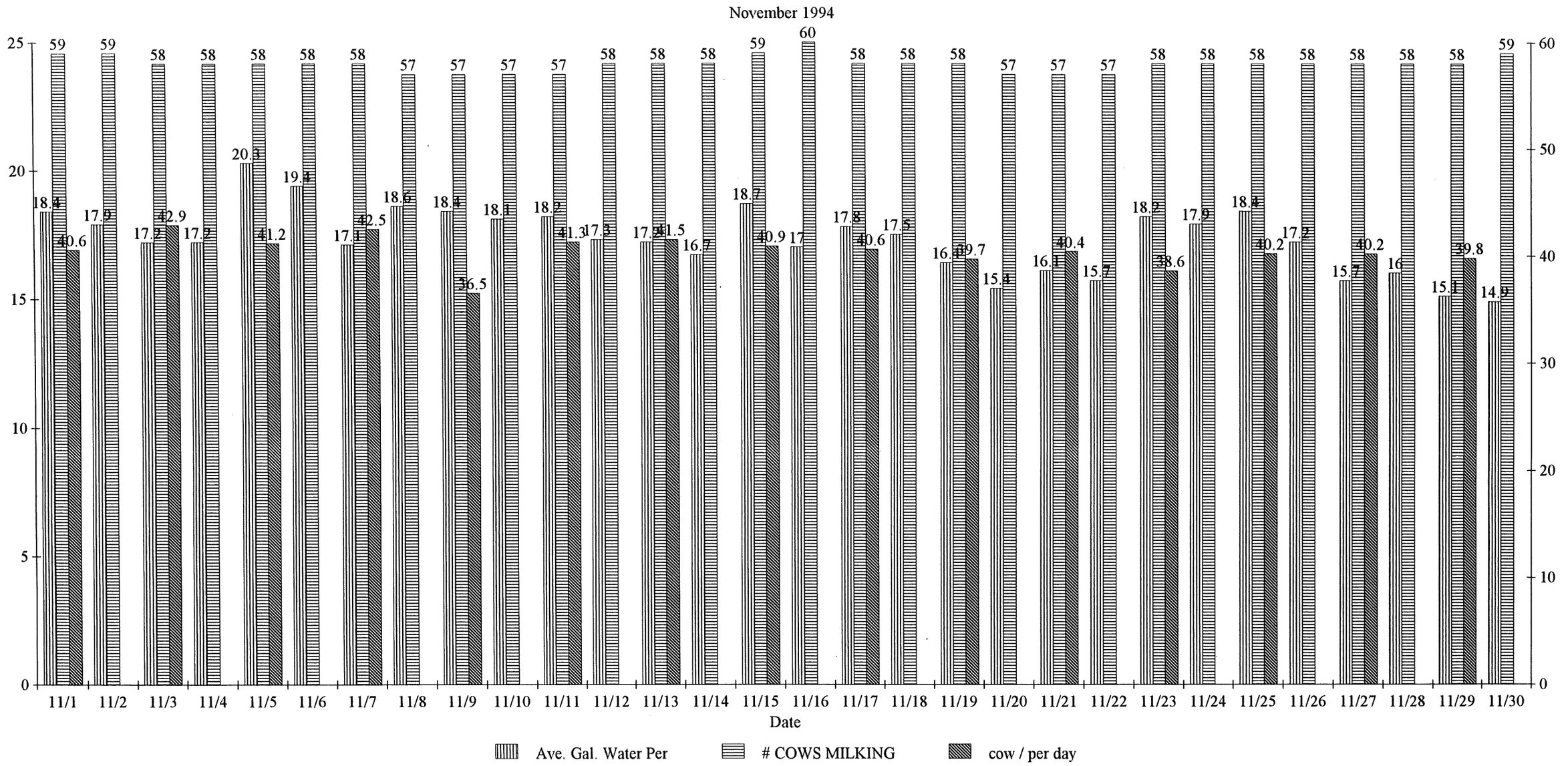


Ave. Gal. Water Per Cow/#Cows MIlking/Milk Per Cow/Per Day

October 1994

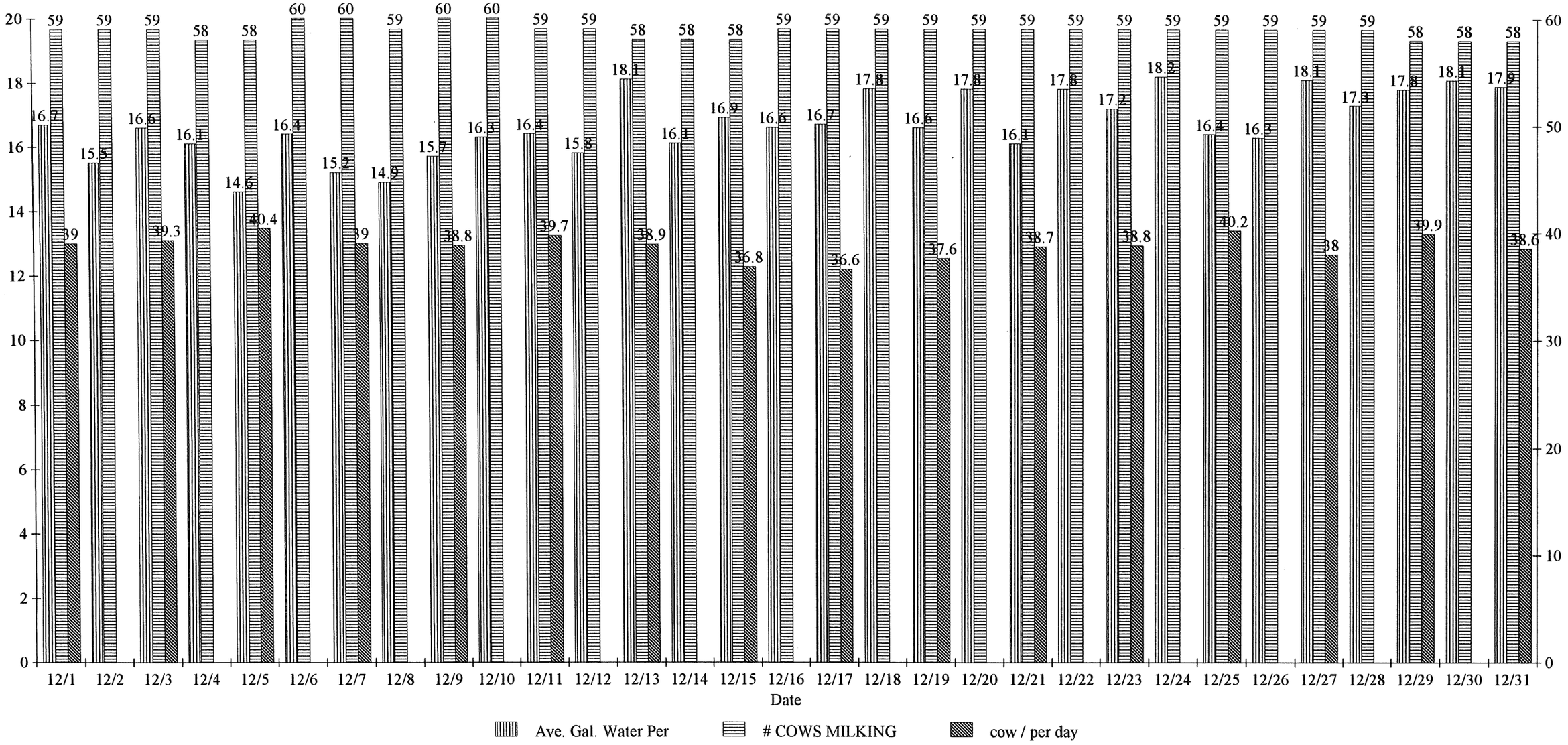


Ave. Gal. Water Per Cow/# Cows MIlking/Milk Per Cow/Per Day



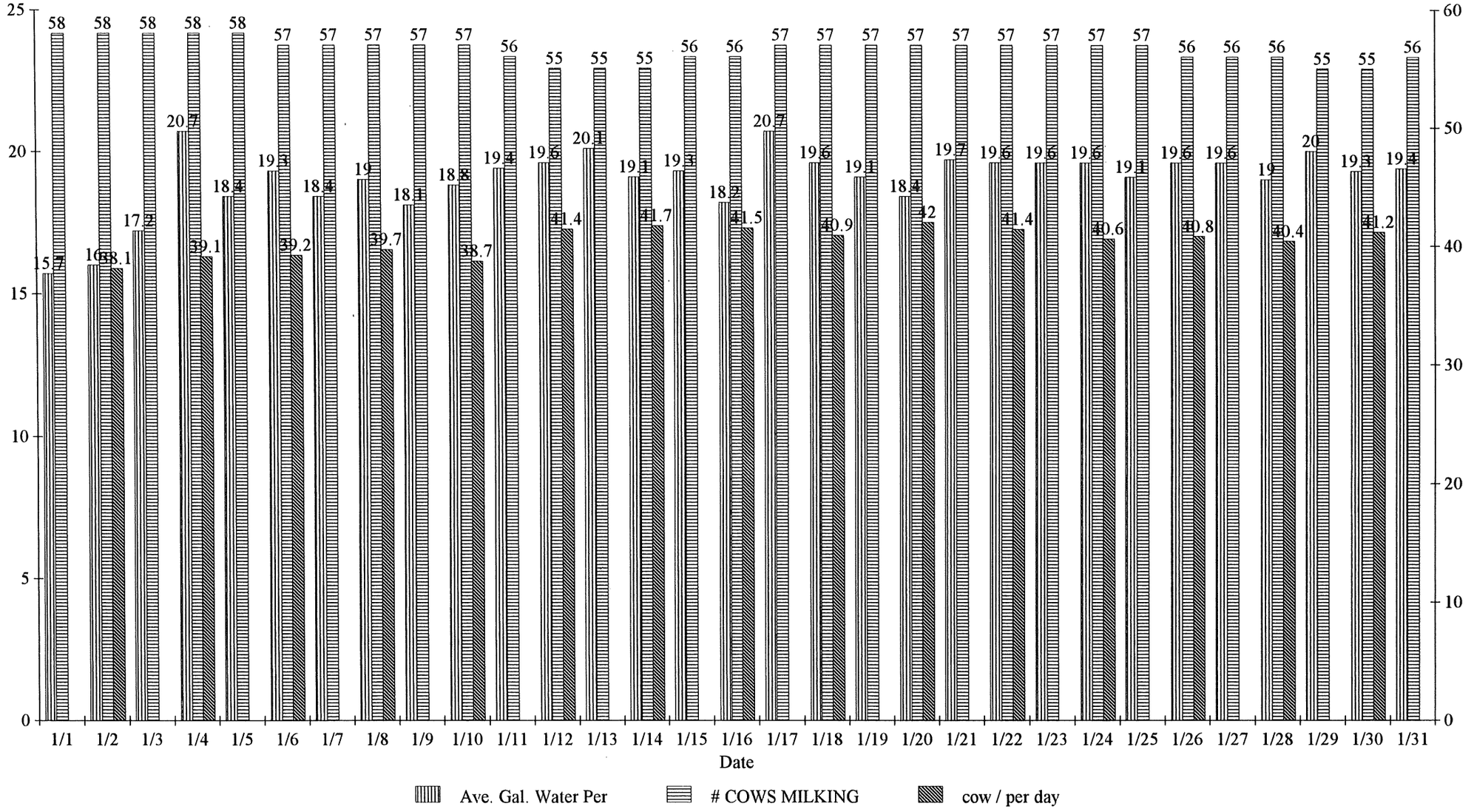
Ave. Gal. Water Per Cow/# Cows Milking/Milk Per Cow/Per Day

December 1994



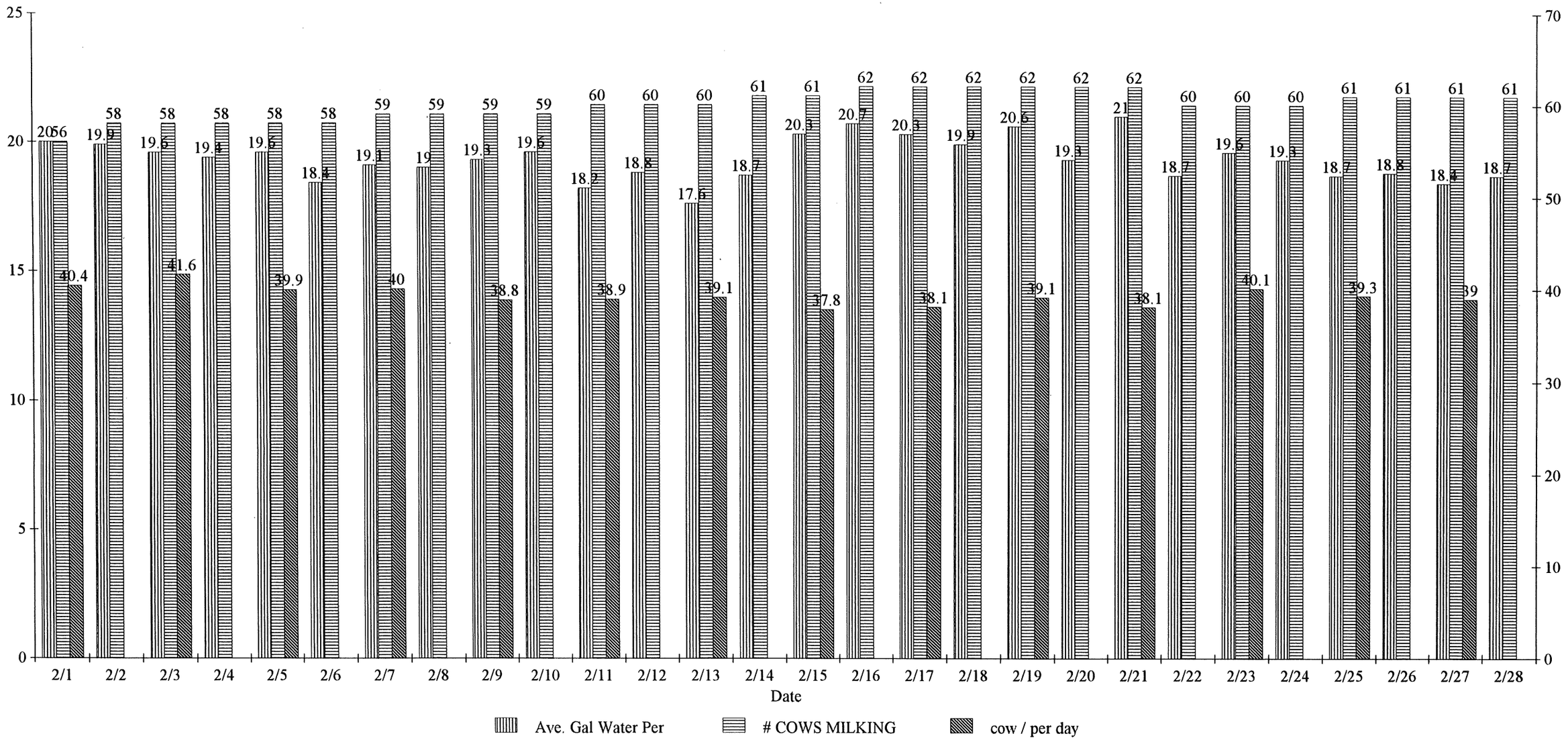
Ave. Gal. Water Per Cow/#Cows Milking/ Milk Per Cow/Per Day

January 1995



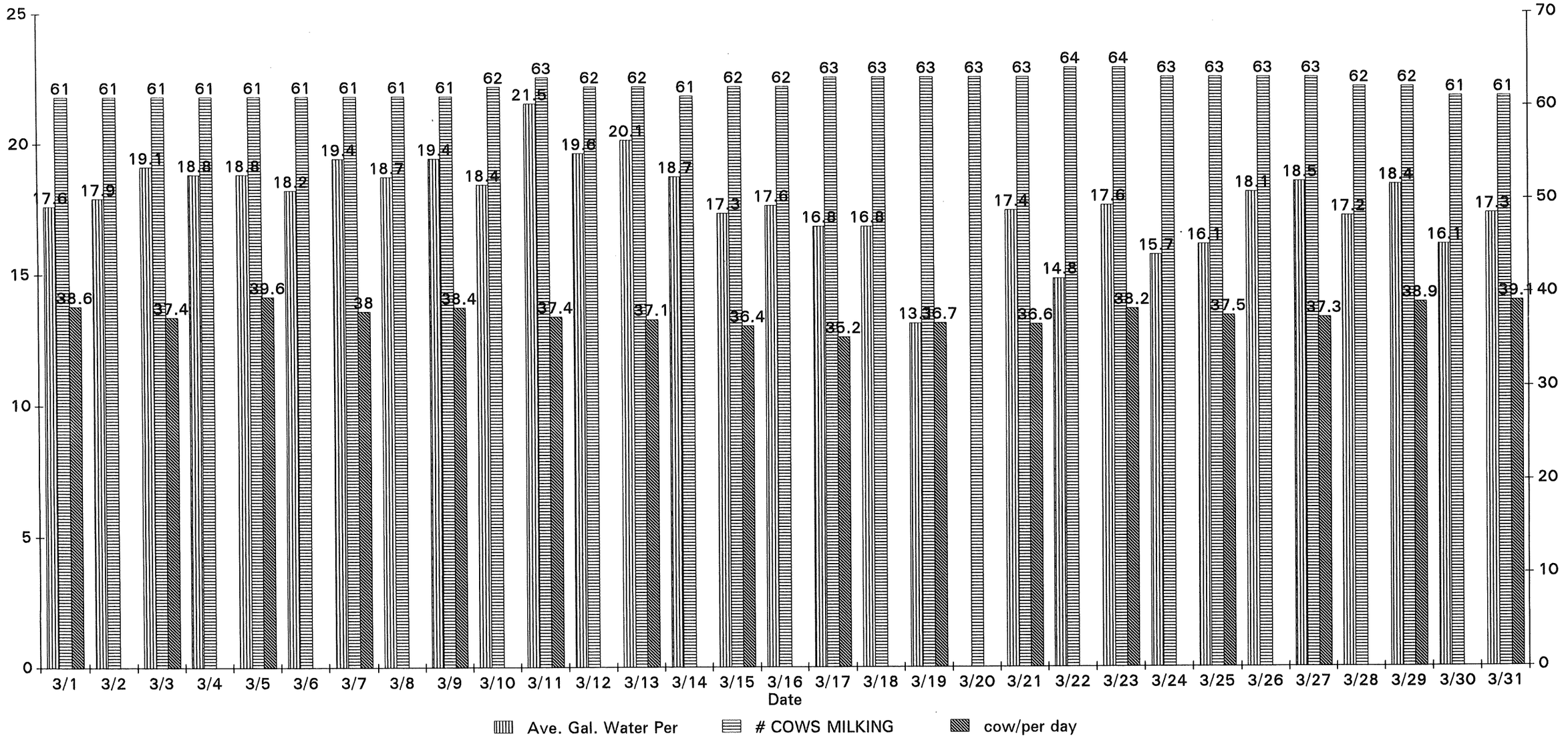
Ave. Gal. Water Per Cow/#Cows Milking/Milk Per Cow/Per Day

February 1995



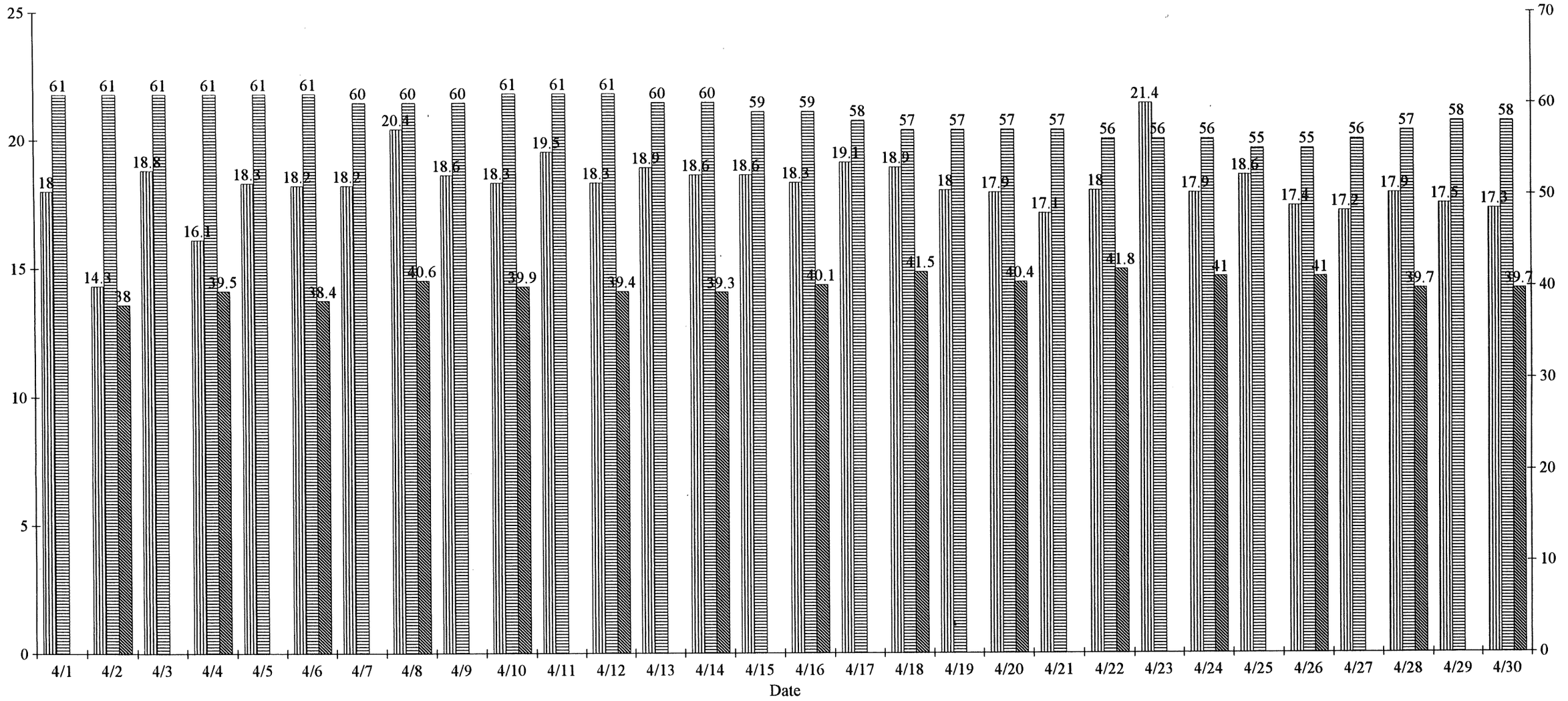
Ave. Gal. Water Per Cow/#Cows Milking/Milk Per Cow/Per Day

March 1995



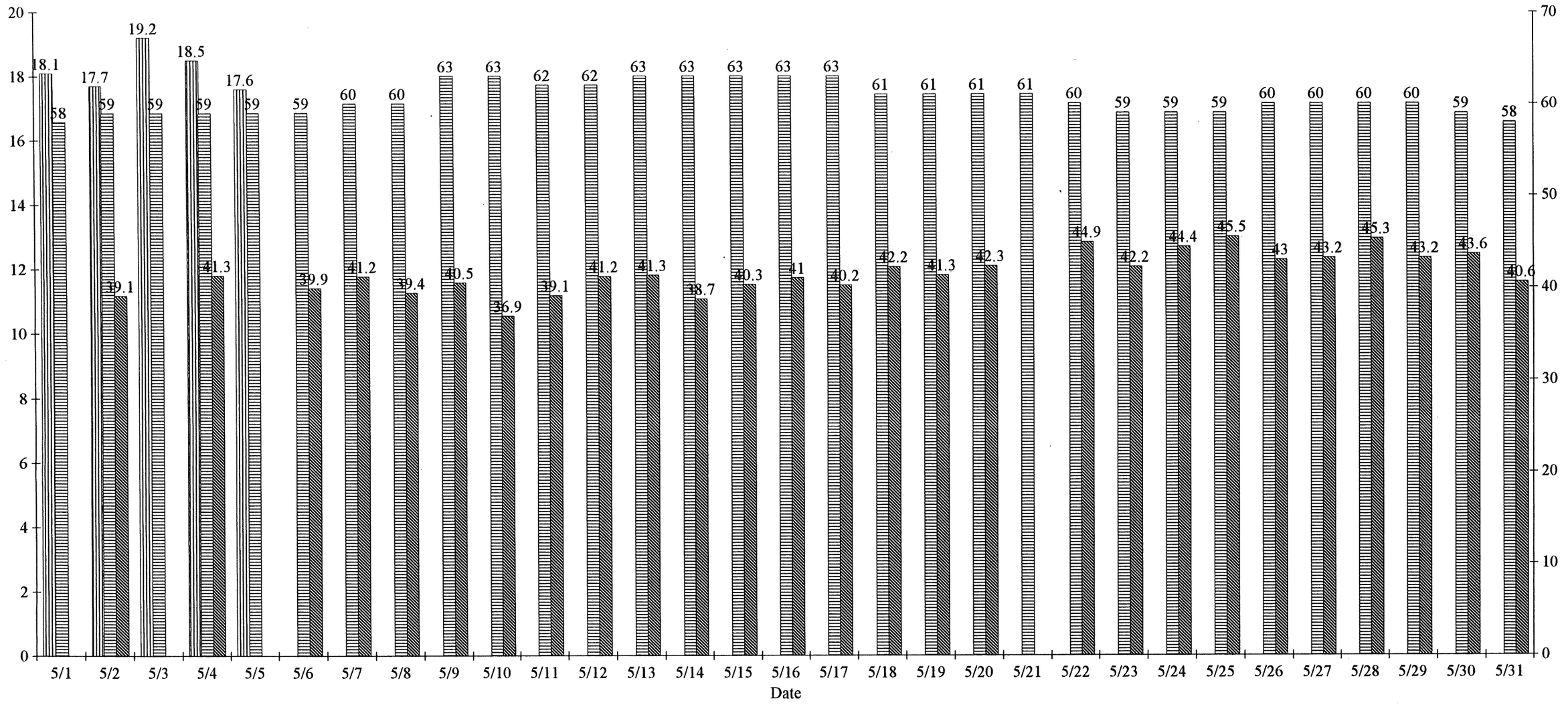
Ave. Gal. Water Per Cow/#Cows Milking/Milk Per Cow/Per Day

April 1995



Ave. Gal. water Per Cow/#Cows Milking/Milk Per cow/Per Day

May 1995



APPENDIX B - DATA

TABLE OF CONTENTS FOR APPENDIX B

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	9/01/93	4411	39	2	409	318	467	260	8	541		1	1	A
P	9/03/93	4329	39	2	390	320	458	340				1	1	A
P	9/05/93	4361	39	2	396	323	451	240				1	1	A
P	9/07/93	4424	39	2	400	325	450	250				1	1	A
P	9/09/93	4493	39	2	404	325	452	240				1	1	A
P	9/11/93	4833	39	2	398	342	450	300				1	1	A
P	9/13/93	4815	39	2	391	323	454	210				1	1	A
P	9/15/93	4680	39	2	404	327	461	180				1	1	A
S	9/17/93	4704	39	2	408	321	457	170				1	1	A
S	9/19/93	4518	39	2	405	323	456	180				1	1	A
S	9/21/93	4530	39	2	428	328	456	300				1	1	A
S	9/23/93	4392	39	2	417	329	461	250				1	1	A
S	9/25/93	4553	40	2	386	302	419	240				1	1	A
S	9/27/93	4480	39	2	419	331	463	240				1	1	A +

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	9/29/93	4467	39	2	424	332	459	240				1	1	A
P	10/01/93	4649	39	2	436	334	464	390				1	1	A
P	10/03/93	4518	39	2	416	338	457	280	4	538		1	1	A
P	10/05/93	4555	39	2	419	334	455	400				1	1	A
P	10/07/93	4717	39	2	427	329	451	370				1	1	A
P	10/09/93	4858	39	2	404	342	461	210				1	1	A
P	10/11/93	4643	39	2	416	334	461	320				1	1	A
P	10/13/93	4766	39	2	397	330	458	270				1	1	A
P	10/15/93	5108	39	2	387	332	453	310				1	1	A
S	10/17/93	4962	39	2	406	336	453	480				1	1	A
S	10/19/93	5120	39	2	404	331	450	440				1	1	A
S	10/21/93	5055	39	2	405	322	461	300				1	1	A
S	10/23/93	5042	40	2	401	322	460	230				1	1	A
S	10/25/93	5048	40	2	392	312	464	280				1	1	A +

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	10/27/93	5085	39	2	384	318	469	260				1	1	A
S	10/29/93	5042	39	2	398	319	464	250				1	1	A
S	10/31/93	5168	39	2	389	311	457	260				1	1	A
P	11/02/93	4944	39	2	401	310	460	320	2	546		1	1	A
P	11/04/93	4938	40	2	394	312	461	230				1	1	A
P	11/06/93	5085	40	2	400	315	459	310				1	1	A

P	11/08/93	4840	39	2	407	316	456	360	63		1	1	A
P	11/10/93	5042	40	2	399	312	457	420	64		1	1	A
P	11/12/93	5061	42	2	403	309	459	330	64		1	1	A
P	11/14/93	4950	40	2	408	311	458	250	65		1	1	A
S	11/16/93	5120	39	2	402	305	459	270	63		1	1	A
S	11/18/93	5036	40	2	398	307	456	300	63		1	1	A
S	11/20/93	5000	40	2	404	306	458	230	63		1	1	A
S	11/22/93	5042	40	2	399	304	460	210	62		1	1	A +

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	11/24/93	5000	39	2	406	296	460	230	62			1	1	A
S	11/26/93	4950	39	2	396	304	461	200	61			1	1	A
S	11/28/93	4938	40	2	396	307	460	190	61			1	1	A
S	11/30/93	4895	39	2	399	305	462	270	60			1	1	A
P	12/02/93	4938	39	2	390	301	463	200	60	6	538	1	1	A
P	12/04/93	4833	39	2	392	302	462	240	59			1	1	A
P	12/06/93	4747	39	2	397	304	460	240	60			1	1	A
P	12/08/93	4810	39	2	400	304	461	380	61			1	1	A
P	12/10/93	4852	39	2	394	302	465	340	60			1	1	A
P	12/12/93	4852	39	2	389	306	464	300	60			1	1	A
P	12/14/93	4852	39	2	396	306	465	290	60			1	1	A
S	12/16/93	4858	39	2	388	311	464	480	61			1	1	A
S	12/18/93	4827	40	2	389	310	460	500	59			1	1	A
S	12/20/93	4920	39	2	396	312	462	460	60			1	1	A +

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	12/22/93	4975	39	2	394	311	461	380	56			1	1	A
D	12/23/93												1	A
S	12/24/93	5024	39	2	386	316	464	330	58			1	1	A
S	12/26/93	5204	39	2	390	322	462	300	58			1	1	A
S	12/28/93	5085	39	2	395	322	465	260	58			1	1	A
S	12/30/93	5091	42	2	392	315	462	220	58			1	1	A
P	1/01/94	4944	39	2	391	314	460	260	59			1	1	A
P	1/03/94	4926	39	2	401	322	460	320	60	3	541	1	1	A
P	1/05/94	5132	39	2	385	315	462	340	59			1	1	A
P	1/07/94	5168	39	2	391	319	463	270	59			1	1	A
P	1/09/94	5240	40	2	399	321	463	240	60			1	1	A
P	1/11/94	5036	39	2	398	316	461	230	57			1	1	A
P	1/12/94	2602	39	1	379	318	460	400	58			1	1	A
P	1/14/94	5144	39	2	396	320	464	380	58			1	1	A +

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01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT - (P=Partial, S=Selected, or Blank)

Cows milking

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	1/16/94	5198	39	2	400	317	461	260	58			1	1	A
S	1/18/94	5258	39	2	392	313	463	280	58			1	1	A
S	1/20/94	5000	39	2	398	311	464	340	57			1	1	A
S	1/22/94	4969	40	2	394	307	466	340	55			1	1	A
S	1/24/94	5030	39	2	393	309	471	310	55			1	1	A
S	1/26/94	5030	39	2	390	309	470	260	55			1	1	A
S	1/28/94	4926	39	2	392	307	465	420	55			1	1	A
S	1/30/94	4932	40	2	389	307	469	580	55			1	1	A
P	2/01/94	4981	39	2	388	308	466	490	55	22	547	1	1	A
P	2/03/94	4962	39	2	383	309	464	380	56			1	1	A
P	2/05/94	5085	39	2	392	310	465	390	57			1	1	A
P	2/07/94	4987	40	2	388	317	457	520	59			1	1	A
P	2/09/94	5228	39	2	377	317	465	520	59			1	1	A
P	2/11/94	5073	39	2	389	317	467	490	60			1	1	A +

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01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	2/13/94	5132	39	2	388	315	463	280	60			1	1	A
P	2/15/94	5168	40	2	380	317	467	370	60			1	1	A
S	2/17/94	5264	40	2	388	316	456	270	62			1	1	A
S	2/19/94	5294	39	2	385	317	458	270	61			1	1	A
S	2/21/94	5300	39	2	387	314	457	320	61			1	1	A
S	2/23/94	5311	39	2	387	311	461	340	62			1	1	A
S	2/25/94	5359	40	2	381	307	460	320	62			1	1	A
S	2/27/94	5234	39	2	397	311	459	310	62			1	1	A
P	3/01/94	5180	39	2	390	309	460	360	61	1	544	1	1	A
P	3/03/94	5085	40	2	379	308	461	370	62			1	1	A
P	3/05/94	5150	40	2	387	306	461	300	63			1	1	A
P	3/07/94	5228	39	2	382	307	463	300	63			1	1	A
P	3/09/94	5246	39	2	384	310	463	360	62			1	1	A
P	3/11/94	5264	40	2	401	308	449	270	62			1	1	A +

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01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	3/13/94	5317	40	2	410	313	450	370	61			1	1	A
P	3/15/94	5353	39	2	385	308	460	390	61			1	1	A
S	3/17/94	5353	39	2	391	308	461	280	60			1	1	A
S	3/19/94	5335	39	2	394	307	459	300	60			1	1	A
S	3/21/94	5413	40	2	386	310	458	380	60			1	1	A
S	3/23/94	5389	40	2	378	305	466	330	59			1	1	A

S	3/25/94	5138	40	2	393	308	457	300	57		1	1	A
S	3/27/94	5228	39	2	390	304	459	390	55		1	1	A
S	3/29/94	5264	39	2	375	305	462	310	56		1	1	A
S	3/31/94	5407	39	2	372	303	463	370	56		1	1	A
P	4/02/94	5216	39	2	384	302	461	450	55		1	1	A
P	4/04/94	5042	39	2	381	303	465	380	55		1	1	A
P	4/06/94	5132	39	2	376	301	465	320	54	4 542	1	1	A
P	4/08/94	5156	39	2	378	297	464	340	53		1	1	A +

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01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry Ant	Sed	Tnk	Gde
P	4/10/94	5102	40	2	375	300	469	300	54		1	1	A
P	4/12/94	5018	39	2	367	294	467	300	54		1	1	A
P	4/14/94	5061	39	2	376	299	463	330	56		1	1	A
S	4/16/94	4944	39	2	375	304	465	340	56		1	1	A
S	4/18/94	4593	39	2	385	300	467	430	56		1	1	A
S	4/20/94	4618	39	2	393	300	462	320	57		1	1	A
S	4/22/94	4398	39	2	402	306	463	420	57		1	1	A
S	4/24/94	4480	39	2	397	309	461	550	57		1	1	A
S	4/26/94	4354	40	2	404	305	457	450	56		1	1	A
S	4/28/94	4518	39	2	390	311	462	490	56		1	1	A
S	4/30/94	4711	39	2	377	307	456	700	56		1	1	A
P	5/02/94	4686	39	2	377	307	456	520	56	3 541	1	1	A
P	5/04/94	4692	39	2	366	315	463	440	55		1	1	A
P	5/05/94	2351	40	1	377	304	460	550	55		1	1	A +

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01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry Ant	Sed	Tnk	Gde
P	5/07/94	4661	42	2	373	306	461	430	55		1	1	A
P	5/09/94	4486	40	2	362	304	463	410	55		1	1	A
P	5/11/94	4354	41	2	381	303	463	570	54		1	1	A
P	5/13/94	4486	41	2	381	302	457	430	55		1	1	A
P	5/15/94	4298	41	2	396	306	456	550	54		1	1	A
S	5/17/94	4361	41	2	395	303	455	570	53		1	1	A
S	5/19/94	4524	41	2	378	302	459	400	53		1	1	A
S	5/21/94	4760	42	2	349	295	459	380	53		1	1	A
S	5/23/94	4938	41	2	345	294	458	320	54		1	1	A
S	5/25/94	4938	41	2	339	292	468	300	54		1	1	A
S	5/27/94	4895	41	2	344	297	463	470	54		1	1	A
S	5/29/94	4889	41	2	360	297	465	420	55		1	1	A
S	5/31/94	4901	41	2	359	308	461	400	55		1	1	A
P	6/02/94	4956	41	2	361	311	462	420	54		1	1	A +

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01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02

Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	6/04/94	4926	41	2	361	311	464	310	6	542		1	1	A
P	6/06/94	5102	41	2	362	304	462	390				1	1	A
P	6/08/94	4723	41	2	358	301	463	340				1	1	A
P	6/10/94	4803	41	2	358	300	469	490				1	1	A
P	6/12/94	5012	41	2	354	302	465	440				1	1	A
P	6/14/94	5132	41	2	369	308	474	370				1	1	A
S	6/16/94	4913	41	2	Lost & not available							1	1	A
S	6/18/94	4969	41	2	382	307	468	390				1	1	A
S	6/20/94	4913	41	2	377	298	463	620				1	1	A
S	6/22/94	4574	41	2	383	300	468	620				1	1	A
S	6/24/94	4840	41	2	368	298	460	540				1	1	A
S	6/26/94	4790	41	2	370	295	451	360				1	1	A
S	6/28/94	4766	41	2	369	303	464	350				1	1	A
S	6/30/94	4778	41	2	382	301	458	440				1	1	A +

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01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	6/04/94	4926	41	2	361	311	464	310	6	542		1	1	A
P	6/06/94	5102	41	2	362	304	462	390				1	1	A
P	6/08/94	4723	41	2	358	301	463	340				1	1	A
P	6/10/94	4803	41	2	358	300	469	490				1	1	A
P	6/12/94	5012	41	2	354	302	465	440				1	1	A
P	6/14/94	5132	41	2	369	308	474	370				1	1	A
S	6/16/94	4913	41	2								1	1	A
S	6/18/94	4969	41	2	382	307	468	390				1	1	A
S	6/20/94	4913	41	2	377	298	463	620				1	1	A
S	6/22/94	4574	41	2	383	300	468	620				1	1	A
S	6/24/94	4840	41	2	368	298	460	540				1	1	A
S	6/26/94	4790	41	2	370	295	451	360				1	1	A
S	6/28/94	4766	41	2	369	303	464	350				1	1	A
S	6/30/94	4778	41	2	382	301	458	440				1	1	A +

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01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	7/02/94	4717	41	2	375	303	468	420	61			1	1	A
P	7/04/94	4827	41	2	375	301	460	680	59	21	541	1	1	A
P	7/06/94	4827	41	2	366	296	463	700	60			1	1	A
P	7/08/94	4680	41	2	369	295	466	690	55			1	1	A
P	7/10/94	4612	40	2	370	289	470	580	53			1	1	A
P	7/12/94	4655	41	2	358	288	466	420	54			1	1	A
P	7/14/94	4723	41	2	363	297	467	320	54			1	1	A
S	7/16/94	4901	41	2	360	301	461	600	55			1	1	A

S	7/18/94	4800	41	2	359	292	461	440	51		1	1	A
S	7/20/94	4784	41	2	360	292	472	380	56		1	1	A
S	7/22/94	4809	41	2	357	291	468	520	54		1	1	A
S	7/24/94	4833	41	2	354	292	460	480	53		1	1	A
S	7/26/94	4815	41	2	351	297	465	480	54		1	1	A
S	7/28/94	4833	41	2	353	300	461	620	54		1	1	A +

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01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	7/02/94	4717	41	2	375	303	468	420				1	1	A
P	7/04/94	4827	41	2	375	301	460	680	21	541		1	1	A
P	7/06/94	4827	41	2	366	296	463	700				1	1	A
P	7/08/94	4680	41	2	369	295	466	690				1	1	A
P	7/10/94	4612	40	2	370	289	470	580				1	1	A
P	7/12/94	4655	41	2	358	288	466	420				1	1	A
P	7/14/94	4723	41	2	363	297	467	320				1	1	A
S	7/16/94	4901	41	2	360	301	461	600				1	1	A
S	7/18/94	4800	41	2	359	292	461	440				1	1	A
S	7/20/94	4784	41	2	360	292	472	380				1	1	A
S	7/22/94	4809	41	2	357	291	468	520				1	1	A
S	7/24/94	4833	41	2	354	292	460	480				1	1	A
S	7/26/94	4815	41	2	351	297	465	480				1	1	A
S	7/28/94	4833	41	2	353	300	461	620				1	1	A +

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01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	7/30/94	4686	41	2	359	296	466	610	53			1	1	A
P	8/01/94	4741	42	2	336	297	471	570	5210	539		1	1	A
P	8/03/94	4606	42	2	344	294	463	450	52			1	1	A
P	8/05/94	4292	41	2	345	295	466	430	50			1	1	A
P	8/07/94	4273	41	2	354	295	469	500	51			1	1	A
P	8/09/94	4191	41	2	355	296	474	670	50			1	1	A
P	8/11/94	4229	40	2	366	298	475	690	50			1	1	A
P	8/13/94	4311	39	2	341	294	474	600	49			1	1	A
P	8/15/94	4103	40	2	359	298	469	530	50			1	1	A
S	8/17/94	4078	40	2	360	296	471	540	50			1	1	A
S	8/19/94	4116	40	2	354	290	473	690	50			1	1	A
S	8/21/94	4009	40	2	360	292	469	440	51			1	1	A
S	8/23/94	4172	40	2	357	295	463	410	51			1	1	A
S	8/25/94	4172	40	2	356	299	477	540	51			1	1	A +

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01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	8/27/94	4103	40	2	360	297	470	510	50			1	1	A
S	8/29/94	4028	40	2	369	304	469	470	51			1	1	A
S	8/31/94	4128	40	2	370	304	465	450	51			1	1	A
P	9/02/94	4172	40	2	379	309	471	420	51			1	1	A
P	9/04/94	4210	40	2	386	309	460	360	53			1	1	A
P	9/06/94	4442	40	2	380	315	460	370	53			1	1	A
P	9/08/94	4655	40	2	387	315	460	370	55			1	1	A
P	9/10/94	4926	39	2	381	317	463	330	56			1	1	A
P	9/12/94	4741	39	2	384	306	468	420	57	6	541	1	1	A
P	9/14/94	4631	39	2	382	299	463	300	56			1	1	A
S	9/16/94	4692	40	2	383	289	468	380	57			1	1	A
S	9/18/94	4919	40	2	369	292	463	380	58			1	1	A
S	9/20/94	5005	41	2	377	294	463	370	59			1	1	A
S	9/22/94	4926	40	2	370	307	460	320	57			1	1	A +

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01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	8/27/94	4103	40	2	360	297	470	510				1	1	A
S	8/29/94	4028	40	2	369	304	469	470				1	1	A
S	8/31/94	4128	40	2	370	304	465	450				1	1	A
P	9/02/94	4172	40	2	379	309	471	420				1	1	A
P	9/04/94	4210	40	2	386	309	460	360				1	1	A
P	9/06/94	4442	40	2	380	315	460	370				1	1	A
P	9/08/94	4655	40	2	387	315	460	370				1	1	A
P	9/10/94	4926	39	2	381	317	463	330				1	1	A
P	9/12/94	4741	39	2	384	306	468	420	6	541		1	1	A
P	9/14/94	4631	39	2	382	299	463	300				1	1	A
S	9/16/94	4692	40	2	383	289	468	380				1	1	A
S	9/18/94	4919	40	2	369	292	463	380				1	1	A
S	9/20/94	5005	41	2	377	294	463	370				1	1	A
S	9/22/94	4926	40	2	370	307	460	320				1	1	A +

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	9/24/94	5138	40	2	382	314	459	490	57			1	1	A
S	9/26/94	4747	40	2	381	307	457	660	57			1	1	A
S	9/28/94	4987	40	2	382	311	466	510	56			1	1	A
S	9/30/94	5024	40	2	374	301	457	540	55			1	1	A
P	10/02/94	4975	40	2	384	306	463	450	54			1	1	A
P	10/04/94	4913	39	2	393	308	463	680	53	34	537	1	1	A
P	10/06/94	4711	40	2	386	303	460	490	54			1	1	A
P	10/08/94	4999	40	2	392	311	473	510	55			1	1	A
P	10/10/94	4889	40	2	396	307	464	450	55			1	1	A
P	10/12/94	5180	39	2	392	315	462	510	57			1	1	A

P	10/14/94	5353	40	2	380	310	455	420	58			1	1	A
S	10/16/94	5216	40	2	389	318	459	500	60			1	1	A
S	10/18/94	5294	39	2	395	308	453	430	61			1	1	A
S	10/20/94	5024	39	2	402	309	456	320	61			1	1	A

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	9/24/94	5138	40	2	382	314	459	490				1	1	A
S	9/26/94	4747	40	2	381	307	457	660				1	1	A
S	9/28/94	4987	40	2	382	311	466	510				1	1	A
S	9/30/94	5024	40	2	374	301	457	540				1	1	A
P	10/02/94	4975	40	2	384	306	463	450				1	1	A
P	10/04/94	4913	39	2	393	308	463	680	34	537		1	1	A
P	10/06/94	4711	40	2	386	303	460	490				1	1	A
P	10/08/94	4999	40	2	392	311	473	510				1	1	A
P	10/10/94	4889	40	2	396	307	464	450				1	1	A
P	10/12/94	5180	39	2	392	315	462	510				1	1	A
P	10/14/94	5353	40	2	380	310	455	420				1	1	A
S	10/16/94	5216	40	2	389	318	459	500				1	1	A
S	10/18/94	5294	39	2	395	308	453	430				1	1	A
S	10/20/94	5024	39	2	402	309	456	320				1	1	A +

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	10/22/94	5433	39	2	381	299	459	330	61			1	1	A
S	10/24/94	5120	39	2	389	302	461	300	60			1	1	A
S	10/26/94	5108	39	2	399	309	466	530	60			1	1	A
S	10/28/94	5216	39	2	388	298	458	460	60			1	1	A
S	10/30/94	5228	39	2	Not available				59			1	1	A
P	11/01/94	4790	40	2	394	296	455	340	59			1	1	A
P	11/03/94	4981	39	2	393	305	462	360	58	2	535	1	1	A
P	11/05/94	4778	40	2	398	305	457	300	58			1	1	A
P	11/07/94	4926	39	2	386	302	459	320	58			1	1	A
P	11/09/94	4166	39	2	384	302	457	290	57			1	1	A
P	11/11/94	4711	39	2	392	304	459	440	57			1	1	A
P	11/13/94	4815	40	2	391	306	458	370	58			1	1	A
P	11/15/94	4827	40	2	393	306	458	440	59			1	1	A
S	11/17/94	4704	39	2	402	308	461	540	58			1	1	A +

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	11/19/94	4606	39	2	394	309	462	310				1	1	A
S	11/21/94	4606	39	2	385	306	461	290				1	1	A
S	11/23/94	4480	39	2	400	309	457	300				1	1	A
S	11/25/94	4668	39	2	391	307	455	410				1	1	A
S	11/27/94	4661	39	2	386	310	458	350				1	1	A
S	11/29/94	4612	39	2	396	311	453	280				1	1	A

F1 Help F3 Exit F12 Previous Roll Keys View More

01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 9:25 AM History Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	11/19/94	4606	39	2	394	309	462	310				1	1	A
S	11/21/94	4606	39	2	385	306	461	290				1	1	A
S	11/23/94	4480	39	2	400	309	457	300				1	1	A
S	11/25/94	4668	39	2	391	307	455	410				1	1	A
S	11/27/94	4661	39	2	386	310	458	350				1	1	A
S	11/29/94	4612	39	2	396	311	453	280				1	1	A

F1 Help F3 Exit F12 Previous Roll Keys View More

01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP178 02
Time: 9:40 AM Daily Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	12/01/94	4600	39	2	397	306	453	260	59			1	1	A
P	12/03/94	4643	40	2	406	305	454	350	59			1	1	A
P	12/05/94	4692	39	2	389	306	459	320	58	7	541	1	1	A
P	12/07/94	4680	39	2	394	312	457	430	60			1	1	A
P	12/09/94	4661	39	2	400	309	458	360	60			1	1	A
P	12/11/94	4686	39	2	414	307	459	340	59			1	1	A
P	12/13/94	4518	39	2	402	308	463	450	58			1	1	A
P	12/15/94	4267	39	2	405	301	454	370	58			1	1	A
S	12/17/94	4323	40	2	395	304	461	490	59			1	1	A
S	12/19/94	4442	39	2	399	301	460	410	59			1	1	A
S	12/21/94	4562	39	2	395	301	462	490	59			1	1	A
S	12/23/94	4580	39	2	393	301	456	500	59			1	1	A
S	12/25/94	4741	39	2	378	300	457	370	59			1	1	A
S	12/27/94	4486	39	2	391	300	460	420	59			1	1	A +

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 1/04/95 ** Kraft General Foods - Melrose ** Prog: PP178 02
Time: 9:40 AM Daily Load Ticket Inquiry by Producer User: KERAT01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	12/29/94	4624	40	2	381	298	463	440	58			1	1	A
S	12/31/94	4480	39	2	371	301	466	390	58			1	1	A
	1/02/95	4417	39	2	382	301	461	330	58			1	1	A

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 3/10/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 8:18 AM History Load Ticket Inquiry by Producer User: KECAH01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

11 Cows milking

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	1/02/95	4417	39	2	382	301	461	330	58			1	1	A
P	1/04/95	4530	39	2	386	302	460	390	58			1	1	A
P	1/06/95	4474	39	2	376	305	468	380	57			1	1	A
P	1/08/95	4530	39	2	378	305	461	290	57			1	1	A
P	1/10/95	4417	39	2	392	305	461	290	57	2	539	1	1	A
P	1/12/95	4555	40	2	387	305	455	360	55			1	1	A
P	1/14/95	4593	39	2	387	306	457	340	55			1	1	A
S	1/16/95	4649	39	2	387	309	460	370	56			1	1	A
S	1/18/95	4661	40	2	395	311	458	370	57			1	1	A
S	1/20/95	4790	39	2	391	308	459	320	57			1	1	A
S	1/22/95	4717	39	2	380	307	462	280	57			1	1	A
S	1/24/95	4631	39	2	385	310	467	300	57			1	1	A
S	1/26/95	4568	39	2	394	306	457	360	56			1	1	A
S	1/28/95	4530	39	2	390	305	456	240	56			1	1	A +

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 3/10/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 8:18 AM History Load Ticket Inquiry by Producer User: KECAH01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	1/30/95	4493	39	2	388	306	458	250	55			1	1	A

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 3/10/95 ** Kraft General Foods - Melrose ** Prog: PP178 02
Time: 8:18 AM Daily Load Ticket Inquiry by Producer User: KECAH01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	2/01/95	4524	39	2	378	308	463	310	56			1	1	A
P	2/03/95	4827	40	2	385	310	456	200	58			1	1	A
P	2/05/95	4631	39	2	394	312	461	200	58			1	1	A
P	2/07/95	4717	39	2	392	311	463	240	59	4	546	1	1	A
P	2/09/95	4580	38	2	393	308	460	260	59			1	1	A
P	2/11/95	4668	39	2	397	309	462	270	60			1	1	A
P	2/13/95	4692	39	2	389	307	461	250	60			1	1	A
P	2/15/95	4618	40	2	409	306	461	260	61			1	1	A
	2/17/95	4723	39	2	401	308	460	220	62			1	1	A
	2/19/95	4846	40	2	404	307	460	230	62			1	1	A
	2/21/95	4729	39	2	397	305	465	320	62			1	1	A
	2/23/95	4809	39	2	390	303	464	270	60			1	1	A
	2/25/95	4800	39	2	391	305	463	300	61			1	1	A
	2/27/95	4760	40	2	392	300	460	380	61			1	1	A +

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 3/10/95 ** Kraft General Foods - Melrose ** Prog: PP178 02
Time: 8:18 AM Daily Load Ticket Inquiry by Producer User: KECAH01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
	3/01/95	4704	40	2	392	298	461	300	61			1	1	A
	3/03/95	4574	39	2	401	304	459	300	61			1	1	A
	3/05/95	4827	39	2	394	299	458	290	61			1	1	A
	3/07/95	4631	39	2	394	301	462	430	61			1	1	A
	3/09/95	4686	40	2	394	300	457	390	61			1	1	A

F1 Help F3 Exit F12 Previous Roll Keys View More
01-01 SA MW KS IM II S1 KGX00002 KB

Date: 4/07/95 ** Kraft General Foods - Melrose ** Prog: PP178 01
Time: 8:59 AM Daily Load Ticket Inquiry by Producer User: KEJBSQ1

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
(P=Partial, S=Selected, or Blank)

#Cows Metering

	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
	3/01/95	4704	40	2	392	298	461	300				1	1	A
	3/03/95	4574	39	2	401	304	459	300				1	1	A
	3/05/95	4827	39	2	394	299	458	290				1	1	A
	3/07/95	4631	39	2	394	301	462	430	10	541		1	1	A
	3/09/95	4686	40	2	394	300	457	390				1	1	A
	3/11/95	4717	40	2	391	302	456	300	63			1	1	A
	3/13/95	4606	40	2	391	301	457	370	62			1	1	A
	3/15/95	4518	39	2	391	299	459	390	62			1	1	A
	3/17/95	4430	39	2	388	302	461	400	63			1	1	A
	3/19/95	4618	39	2	389	295	467	490	63			1	1	A
	3/20/95								63			1	1	A
	3/21/95	4606	39	2	394	294	468	370	63			1	1	A
	3/23/95	4889	39	2	376	302	461	440	64			1	1	A
	3/25/95	4729	39	2	386	301	461	500	63			1	1	A +

F3 Exit F12 Previous Roll Keys View More

01-01 SA MW KS IM II S1 KGX00002 KB

Date: 4/07/95 ** Kraft General Foods - Melrose ** Prog: PP178 02
Time: 8:59 AM Daily Load Ticket Inquiry by Producer User: KEJBSQ1

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
(P=Partial, S=Selected, or Blank)

	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
	3/27/95	4698	39	2	383	299	465	430	63			1	1	A
	3/29/95	4827	39	2	379	299	463	300	62			1	1	A
	3/31/95	4766	39	2	387	298	460	360	61			1	1	A
	4/02/95	4631	40	2	391	300	461	360				1	1	A
	4/04/95	4815	39	2	381	305	464	410				1	1	A
	4/06/95	4680	39	2	380	306	465	450				1	1	A

F3 Exit F12 Previous Roll Keys View More

01-01 SA MW KS IM II S1 KGX00002 KB

(1)

Date: 8/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 12:28 PM History Load Ticket Inquiry by Producer User: KEJBS01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Don's Cows milking

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	4/02/95	4631	40	2	391	300	461	360 61				1	1	A
P	4/04/95	4815	39	2	381	305	464	410 61	8	537		1	1	A
P	4/06/95	4680	39	2	380	306	465	450 61				1	1	A
P	4/08/95	4876	39	2	377	300	455	390 60				1	1	A
P	4/10/95	4864	40	2				61				1	1	A
P	4/12/95	4803	39	2	383	309	457	470 61				1	1	A
P	4/14/95	4711	39	2	374	304	471	400 60				1	1	A
S	4/16/95	4729	39	2	384	305	466	370 59				1	1	A
S	4/18/95	4735	39	2	380	306	465	340 57				1	1	A
S	4/20/95	4600	40	2	373	304	470	300 57				1	1	A
S	4/22/95	4686	39	2	377	302	464	300 56				1	1	A
S	4/24/95	4587	39	2	374	301	466	290 56				1	1	A
S	4/26/95	4505	39	2	380	302	466	300 55				1	1	A
S	4/28/95	4530	39	2	387	308	464	550 57				1	1	A +

F1=Help F3=Exit F12=Cancel PgDn/PgUp=View More

01-01 SA MW KS IM II S1 KGX00002 KB

Date: 8/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 12:28 PM History Load Ticket Inquiry by Producer User: KEJBS01

Sam's herd will be included in The Somatic Cell count From 5-7-95 on

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	4/30/95	4606	39	2	382	306	468	300 58				1	1	A
P	5/02/95	4618	39	2	377	304	469	370 59	11	540		1	1	A
P	5/04/95	4876	39	2	382	306	471	350 59				1	1	A
P	5/06/95	4711	40	2	381	312	469	400 59				1	1	A
P	5/07/95	2471	40	1	394	312	470	510 60				1	1	A
P	5/08/95	2364	40	1	392	313	469	410 60				1	1	A
P	5/09/95	2553	40	1	396	317	469	450 63				1	1	A
P	5/10/95	2325	40	1	407	317	476	560 63				1	1	A
P	5/11/95	2423	40	1	388	310	475	590 62				1	1	A
P	5/12/95	2552	39	1	379	309	477	480 62				1	1	A
P	5/13/95	2603	41	1	381	308	467	440 63				1	1	A
P	5/14/95	2435	39	1	384	306	466	480 63				1	1	A
P	5/15/95	2539	40	1	385	302	461	500 63				1	1	A
S	5/16/95	2586	39	1	384	304	467	470 63				1	1	A +

F1=Help F3=Exit F12=Cancel PgDn/PgUp=View More

01-01 SA MW KS IM II S1 KGX00002 KB

Date: 8/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 12:28 PM History Load Ticket Inquiry by Producer User: KEJBS01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

5/20/95 2582 Prd 367 470 490

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	5/17/95	2531	39	1	376	304	471	480 63				1	1	A
S	5/18/95	2572	39	1	375	297	459	540 61				1	1	A
S	5/19/95	2518	40	1	359	300	470	450 61				1	1	A

B14

S	5/22/95	2691	39	1	371	299	466	420 60	milking	1	1	A	(2)
S	5/23/95	2492	40	1	362	301	476	360 59		1	1	A	
S	5/24/95	2617	39	1	359	298	468	410 59		1	1	A	
S	5/25/95	2677	39	1	367	300	465	430 59		1	1	A	
S	5/26/95	2579	39	1	360	299	464	340 60		1	1	A	
S	5/27/95	2592	41	1	371	303	468	400 60		1	1	A	
S	5/28/95	2716	40	1	366	301	464	420 60		1	1	A	
S	5/29/95	2589	39	1	372	300	468	440 60		1	1	A	
S	5/30/95	2571	39	1	361	302	467	350 59		1	1	A	+

F1=Help F3=Exit F12=Cancel PgDn/PgUp=View More

01-01 SA MW KS IM II S1 KGX00002 KB

Date: 8/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 12:28 PM History Load Ticket Inquiry by Producer User: KEJBS01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	5/31/95	2700	40	1	354	298	467	340 58				1	1	A
P	6/01/95	2582	39	1	365	301	463	390 58				1	1	A
P	6/02/95	2587	39	1	355	305	468	400 58				1	1	A
P	6/03/95	2600	39	1	358	306	466	390 58				1	1	A
P	6/04/95	2647	39	1	360	304	471	440 58				1	1	A
P	6/05/95	2710	39	1	357	303	471	360 58	6	546		1	1	A
P	6/06/95	2685	39	1	362	301	470	350 56				1	1	A
P	6/07/95	2477	39	1	349	302	477	380 56				1	1	A
P	6/08/95	2564	39	1	359	306	470	430 56				1	1	A
P	6/09/95	2592	39	1	370	309	471	490 58				1	1	A
P	6/10/95	2647	39	1	367	311	476	470 58				1	1	A
P	6/11/95	2696	39	1	366	306	471	440 58				1	1	A
P	6/12/95	2603	39	1	360	302	473	460 59				1	1	A
P	6/13/95	2539	39	1	367	307	476	470 59				1	1	A +

F1=Help F3=Exit F12=Cancel PgDn/PgUp=View More

01-01 SA MW KS IM II S1 KGX00002 KB

Date: 8/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 12:28 PM History Load Ticket Inquiry by Producer User: KEJBS01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	6/14/95	2580	40	1	365	306	476	440 58				1	1	A
P	6/15/95	2603	40	1	356	303	474	400 57				1	1	A
S	6/16/95	2543	40	1	364	304	476	450 57				1	1	A
S	6/17/95	2663	40	1	349	298	473	360 56				1	1	A
S	6/18/95	2488	39	1	349	299	471	420 56				1	1	A
S	6/19/95	2419	40	1	350	296	468	410 56				1	1	A
S	6/20/95	2371	40	1	342	295	471	340 56				1	1	A
S	6/21/95	2380	40	1	349	291	468	400 56				1	1	A
S	6/22/95	2300	40	1	343	293	473	450 56				1	1	A
S	6/23/95	2307	40	1	345	295	478	470 56				1	1	A
S	6/24/95	2327	40	1	342	292	478	420 56				1	1	A
S	6/25/95	2290	40	1	343	292	473	410 56				1	1	A
S	6/26/95	2265	40	1	331	288	475	440 56				1	1	A
S	6/27/95	2247	40	1	346	291	469	450 55				1	1	A +

F1=Help F3=Exit F12=Cancel 815 PgDn/PgUp=View More

Date: 8/04/95 ** Kraft General Foods - Melrose ** Prog: PP179 02
Time: 12:28 PM History Load Ticket Inquiry by Producer User: KEJBS01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
S	6/28/95	2224	40	1	339	290	468	490 56				1	1	A
S	6/29/95	2129	40	1	342	285	466	410 56				1	1	A
S	6/30/95	2171	40	1	347	287	467	380 56				1	1	A

F1=Help F3=Exit F12=Cancel PgDn/PgUp=View More

01-01 SA MW KS IM II S1 KGX00002 KB

Date: 8/04/95 ** Kraft General Foods - Melrose ** Prog: PP178 02
Time: 12:29 PM Daily Load Ticket Inquiry by Producer User: KEJBS01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	7/01/95	2211	39	1	353	288	466	570 56				1	1	A
P	7/02/95	2141	39	1	348	288	467	700 56				1	1	A
P	7/03/95	2204	40	1	340	289	465	640 56	7	530		1	1	A
P	7/04/95	2208	38	1	333	291	466	540 56				1	1	A
P	7/05/95	2144	40	1	352	290	463	630 57				1	1	A
P	7/06/95	2080	39	1	365	290	464	740 57				1	1	A
P	7/07/95	1913	39	1	354	286	473	670 51				1	1	A
P	7/08/95	2100	40	1	358	295	471	590 51				1	1	A
P	7/09/95	1860	40	1	366	291	474	720 51				1	1	A
P	7/10/95	2028	40	1	364	292	477	880 52				1	1	A
P	7/11/95	2044	39	1	356	284	476	790 52				1	1	A
P	7/12/95	2038	40	1	358	287	475	770 52				1	1	A
P	7/13/95	1993	40	1	351	285	478	700 51				1	1	A
P	7/14/95	1910	40	1	367	284	473	740 53				1	1	A +

F1=Help F3=Exit F12=Cancel PgDn/PgUp=View More

01-01 SA MW KS IM II S1 KGX00002 KB

Date: 8/04/95 ** Kraft General Foods - Melrose ** Prog: PP178 02
Time: 12:29 PM Daily Load Ticket Inquiry by Producer User: KEJBS01

Producer: 01013 DONALD WOLBECK Phone: 612-352-2538
ACT = (P=Partial, S=Selected, or Blank)

Act	Date	Pounds	Tmp	Prd Day	B/F	Prot	Lac	Cell	Plc	Cry	Ant	Sed	Tnk	Gde
P	7/15/95	1902	39	1	354	277	472	860 53				1	1	A
	7/16/95	2078	39	1	365	293	467	840 54				1	1	A
	7/17/95	2016	39	1	360	293	470	760 54				1	1	A
	7/18/95	2058	40	1	354	294	469	610 55				1	1	A
	7/20/95	4147	39	2	360	302	467	760 53				1	1	A

7/22/95 4131 Prd 354 301 470 660

B16

7/25/95	2223	40	1	355	298	463	420 54	M. King	1	1	A
7/26/95	2065	40	1	360	300	465	730 54		1	1	A
7/27/95	2134	39	1	346	297	464	600 55		1	1	A
7/28/95	2078	40	1	358	301	474	750 57		1	1	A
7/29/95	2184	40	1	360	302	469	600 57		1	1	A
7/30/95	2252	40	1	353	297	470	600 57		1	1	A
7/31/95	2192	40	1	349	301	472	920 57		1	1	A +

(7)

F1=Help F3=Exit F12=Cancel PgDn/PgUp=View More

01-01 SA MW KS IM II S1 KGX00002 KB

None for 7/21 or 7/23

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

L. USA

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 12-9-93 Log# 8022

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus	✓	≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	>1500	✓		2,3,
Staphylococcus species		≤500	500-1200	>1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 12-13-93 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

Note# 4 The category identification of '*Staphylococcus species* ' are *Staphylococcus*; **NOT** - *Staphylococcus aureus*

Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 7 **INFLUENCE OF CONTAMINATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'out of system' contamination source (i.e. poor seals and gaskets, 'sucking' air and dust, etc.) Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the concentration and the severity of the problem.

Note# 8 These isolates are not commonly associated with mastitis. HOWEVER, they can affect milk quality AND their presence supports deficiencies in milk quality management practices which CAN lead to serious problems.

Note# 9 This high concentration of growth WILL hide the presence of *S. agalactiae* or *S. aureus.* This problem MUST be eliminated to detect the contagious, mastitis-producing bacteria.

COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

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BA

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A013A

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 12/4/94 Log# 8h.39

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus	✓	≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	≥1500	✓		2,3,
Staphylococcus species		≤500	500-1200	≥1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 1-6-94 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

Note# 4 The category identification of '*Staphylococcus species* ' are *Staphylococcus*; **NOT** - *Staphylococcus aureus*

Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 7 **INFLUENCE OF CONTAMINATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'out of system' contamination source (i.e. poor seals and gaskets, 'sucking' air and dust, etc.) Review sanitation procedures, milk handling, and milk storage.
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Note# 8 These isolates are not commonly associated with mastitis. HOWEVER, they can affect milk quality AND their presence supports deficiencies in milk quality management practices which CAN lead to serious problems.

Note# 9 This high concentration of growth WILL hide the presence of *S. agalactiae* or *S. aureus.* This problem MUST be eliminated to detect the contagious, mastitis-producing bacteria.

COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

B19

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-0134

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 2-10-94 Log# 9916

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	>400			1,
Staphylococcus aureus	✓	≤100	100-400	>400			1,
Streptococcus species		≤500	500-1500	>1500		✓	2,3,
Staphylococcus species		≤500	500-1200	>1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	>700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	>700			6,8,
MOLD/*BACILLUS*		≤100	100-700	>700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 2-14-94 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus*, DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

Note# 4 The category identification of '*Staphylococcus species* ' are *Staphylococcus*; **NOT** - *Staphylococcus aureus*

Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 7 **INFLUENCE OF CONTAMINATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'out of system' contamination source (i.e. poor seals and gaskets, 'sucking' air and dust, etc.) Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the concentration and the severity of the problem.

Note# 8 These isolates are not commonly associated with mastitis. HOWEVER, they can affect milk quality AND their presence supports deficiencies in milk quality management practices which CAN lead to serious problems.

Note# 9 This high concentration of growth WILL hide the presence of *S. agalactiae* or *S. aureus.* This problem MUST be eliminated to detect the contagious, mastitis-producing bacteria.

COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

B 20

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-013A

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 3-9-94 Log# 1127

CULTURE ISOLATE(S)	RELATIVE NUMBERS				SIGNIFICANCE		NOTES
	None*	Low	Medium	High	Low	High	
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus		≤100	100-400	≥400		✓	1,
Streptococcus species		≤500	500-1500	≥1500	✓		2,3,
Staphylococcus species		≤500	500-1200	≥1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 3-9-94 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

Note# 4 The category identification of '*Staphylococcus species* ' are *Staphylococcus*; **NOT** - *Staphylococcus aureus*

Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 7 **INFLUENCE OF CONTAMINATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'out of system' contamination source (i.e. poor seals and gaskets, 'sucking' air and dust, etc.) Review sanitation procedures, milk handling, and milk storage.
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COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-013 A

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 4-7-94 Log# 2875

CULTURE ISOLATE(S)	RELATIVE NUMBERS				SIGNIFICANCE		NOTES
	None*	Low	Medium	High	Low	High	
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus	✓	≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	≥1500	✓		2,3,
Staphylococcus species		≤500	500-1200	≥1200		✓	2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 4-11-94 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
An association can be drawn between the relative number and the significance or severity of the problem.

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Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage.
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Note# 7 **INFLUENCE OF CONTAMINATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'out of system' contamination source (i.e. poor seals and gaskets, 'sucking' air and dust, etc.) Review sanitation procedures, milk handling, and milk storage.
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COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

B 22

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

R C134

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 5-11-94 Log# 4846

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae		≤200	200-400	≥400			1,
Staphylococcus aureus		≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	≥1500	✓		2,3,
Staphylococcus species		≤500	500-1200	≥1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS		≤100	100-700	≥700		✓	6,8,9
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 5-13-94 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

Note# 4 The category identification of '*Staphylococcus species* ' are *Staphylococcus*; **NOT** - *Staphylococcus aureus*

Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 7 **INFLUENCE OF CONTAMINATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'out of system' contamination source (i.e. poor seals and gaskets, 'sucking' air and dust, etc.) Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the concentration and the severity of the problem.

Note# 8 These isolates are not commonly associated with mastitis. HOWEVER, they can affect milk quality AND their presence supports deficiencies in milk quality management practices which CAN lead to serious problems.

Note# 9 This high concentration of growth WILL hide the presence of *S. agalactiae* or *S. aureus.* This problem MUST be eliminated to detect the contagious, mastitis-producing bacteria.

COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-13 (1013)
(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 6-9-94 Log# 5904

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	>400			1,
Staphylococcus aureus	✓	≤100	100-400	>400			1,
Streptococcus species		≤500	500-1500	>1500	✓		2,3,
Staphylococcus species		≤500	500-1200	>1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	>700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	>700			6,8,
MOLD/*BACILLUS*		≤100	100-700	>700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 6-13-94 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus*, DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices. An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

Note# 4 The category identification of '*Staphylococcus species* ' are *Staphylococcus*; **NOT** - *Staphylococcus aureus*

Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage. An association can be drawn between the relative number and the significance or severity of the problem.

Note# 7 **INFLUENCE OF CONTAMINATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'out of system' contamination source (i.e. poor seals and gaskets, 'sucking' air and dust, etc.) Review sanitation procedures, milk handling, and milk storage. An association can be drawn between the concentration and the severity of the problem.

Note# 8 These isolates are not commonly associated with mastitis. HOWEVER, they can affect milk quality AND their presence supports deficiencies in milk quality management practices which CAN lead to serious problems.

Note# 9 This high concentration of growth WILL hide the presence of *S. agalactiae* or *S. aureus.* This problem MUST be eliminated to detect the contagious, mastitis-producing bacteria.

COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-13

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 7-11-94 Log# 7010

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus	✓	≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	≥1500	✓		2,3,
Staphylococcus species		≤500	500-1200	≥1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 7-13-94 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

Note# 4 The category identification of '*Staphylococcus species* ' are *Staphylococcus*; **NOT** - *Staphylococcus aureus*

Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the relative number and the significance or severity of the problem.

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An association can be drawn between the concentration and the severity of the problem.

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Note# 9 This high concentration of growth WILL hide the presence of *S. agalactiae* or *S. aureus.* This problem MUST be eliminated to detect the contagious, mastitis-producing bacteria.

COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-013A

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 8-9-94 Log# 8063

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus	✓	≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	≥1500		✓	2,3,
Staphylococcus species		≤500	500-1200	≥1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 8-11-94 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

Note# 4 The category identification of '*Staphylococcus species* ' are *Staphylococcus*; **NOT** - *Staphylococcus aureus*

Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 7 **INFLUENCE OF CONTAMINATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'out of system' contamination source (i.e. poor seals and gaskets, 'sucking' air and dust, etc.) Review sanitation procedures, milk handling, and milk storage.
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COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-013A

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 9-7-94 Log# 9334

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus	✓	≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	≥1500	✓		2,3,
Staphylococcus species		≤500	500-1200	≥1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 9-9-94 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices. An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

Note# 4 The category identification of '*Staphylococcus species* ' are *Staphylococcus*; **NOT** - *Staphylococcus aureus*

Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

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COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

B27

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-013 A

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 10-4-94 Log# 239

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus		≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	≥1500		✓	2,3,
Staphylococcus species		≤500	500-1200	≥1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 10-6-94 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

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COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

B 25

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-013A

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 11-8-94 Log# 1583

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus	✓	≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	≥1500		✓	2,3,
Staphylococcus species		≤500	500-1200	≥1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 11-10-94 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
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Note# 4 The category identification of '*Staphylococcus species* ' are *Staphylococcus*; **NOT** - *Staphylococcus aureus*

Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

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Note# 7 **INFLUENCE OF CONTAMINATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'out of system' contamination source (i.e. poor seals and gaskets, 'sucking' air and dust, etc.) Review sanitation procedures, milk handling, and milk storage.
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COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-013A

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 12-6-94 Log# 2427

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus	✓	≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	≥1500 ✓		✓	2,3,
Staphylococcus species		≤500	500-1200 ✓	≥1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*		≤100 ✓	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 12-8-94 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
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Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage.
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COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-0134

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 1-10-95 Log# 3560

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus	✓	≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	≥1500	✓		2,3,
Staphylococcus species		≤500	500-1200	≥1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 1-12-95 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
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Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

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Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 7 **INFLUENCE OF CONTAMINATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'out of system' contamination source (i.e. poor seals and gaskets, 'sucking' air and dust, etc.) Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the concentration and the severity of the problem.

Note# 8 These isolates are not commonly associated with mastitis. HOWEVER, they can affect milk quality AND their presence supports deficiencies in milk quality management practices which CAN lead to serious problems.

Note# 9 This high concentration of growth WILL hide the presence of *S. agalactiae* or *S. aureus.* This problem MUST be eliminated to detect the contagious, mastitis-producing bacteria.

COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A·C13A

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

POST OFFICE USE ONLY

Date 2-8-95 Log# 5046

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus	✓	≤100	100-400	≥400			1,
Streptococcus species		≤400	500-1500	≥1500	✓		2,3,
Staphylococcus species		≤500	500-1200	≥1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*	✓	≤100	100-700	≥700			7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 2-10-95 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices. An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

Note# 4 The category identification of '*Staphylococcus species* ' are *Staphylococcus*; **NOT** - *Staphylococcus aureus*

Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage. An association can be drawn between the relative number and the significance or severity of the problem.

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Note# 9 This high concentration of growth WILL hide the presence of *S. agalactiae* or *S. aureus.* This problem MUST be eliminated to detect the contagious, mastitis-producing bacteria.

COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

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CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-013A
(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 3-13-95 Log# 6115

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	≥400			1,
Staphylococcus aureus	✓	≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	≥1500		✓	2,3,
Staphylococcus species		≤500	500-1200	≥1200		✓	2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	≥700			6,8,
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 3-15-95 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

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Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

Note# 6 **INFLUENCE OF SANITATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'in system' sanitation problem. Review sanitation procedures, milk handling, and milk storage.
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Note# 7 **INFLUENCE OF CONTAMINATION.** High levels of these bacteria suggests the influence of improper sanitation, a reservoir of contamination, and/or inadequate storage of milk. These isolates are frequently associated with an 'out of system' contamination source (i.e. poor seals and gaskets, 'sucking' air and dust, etc.) Review sanitation procedures, milk handling, and milk storage.
An association can be drawn between the concentration and the severity of the problem.

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COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

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BULK TANK MILK CULTURE REPORT

Milk quality is based on important management functions. Included in these functions are sanitation, equipment maintenance, and the control eradication, and prevention of infection-produced mastitis. Successful dairy management programs involve recognizing and responding to adverse influences on milk quality, production and economic loss.

The influence that a culture isolate has on milk quality is portrayed by the 'Relative Number' AND 'Significance'. The designations used to quality these influences are

NONE • LOW • MEDIUM • HIGH

The presence of an adverse influence in a bulk tank milk culture must initiate investigation, control, eradication, and prevention. An appropriate response or action plan is formulated by: a) recognizing the primary source of the influence; b) identifying how the influence is spread or introduced into the milk system, and; c) what control, eradication, and prevention measures must be implemented to resolve the adverse influence. The following chart outlines basic considerations in responding to adverse influences on milk quality.

INFLUENCE OF CONTAGIOUS MASTITIS

Streptococcus agalactiae

Primary Source
Infected udders of other cows in the herd

Primary Spreading Mechanisms
Cow-to -Cow
Contaminated udder wash rags, milking equipment, improperly maintained milking equipment.

Primary Control Mechanisms
Identify infected cows.
Establish 'milking strings' by milking infected cows last or use a 'hospital claw'.
Dry cow treatment
Antibiotic treatment during lactation for eradication is indicated in special cases

INFLUENCE OF CONTAGIOUS MASTITIS

Staphylococcus aureus

Primary Source
Infected udders of other cows in the herd.

Primary Spreading Mechanisms
Cow-to-Cow
Contaminated udder wash rags, milking equipment, etc..
Improperly maintained milking equipment. Bedding contaminated with milk.

Primary Control Mechanisms
Identify infected cows.
Establish 'milking strings' by milking infected cows last or use a 'hospital claw'.
Dry cow treatment.
Culling chronically infected cows.

INFLUENCE OF ENVIRONMENTAL MASTITIS

Streptococcus species; **NOT-*S. agalactiae***

Primary Source
Environment of cow.

Primary Spreading Mechanisms
Environment-to-Cow
Wet and dirty lots. Milking wet cows. Poor cow preparation.

Primary Control Mechanisms
Improve barn, lot, and lane sanitation. Milk clean, dry cows.

INFLUENCE OF ENVIRONMENTAL MASTITIS

Staphylococcus species; **NOT-*S. aureus***

Primary Source
Normal skin inhabitant

Primary Spreading Mechanisms
Poor cow preparation and milking wet.

Primary Control Mechanisms
Milk clean, dry cows.

INFLUENCE OF ENVIRONMENTAL MASTITIS

COLIFORM BACILLI

Primary Source
Environment of cow.

Primary Spreading Mechanisms
Environment-to-Cow
Wet and dirty lots. Milking wet cows. Poor cow preparation. Teat injuries.
Hot and humid weather

Primary Control Mechanisms
Improve barn and lot sanitation.
Milk clean, dry cows. Keep cows standing 1 to 2 hours after milking.
Barrier teat dips in special situations.

INFLUENCE OF SANITATION

NON-COLIFORM BACILLI

Primary Source
A population or reservoir of bacteria INSIDE the milk system which is introduced into the bulk tank milk.
These populations are not commonly associated with mastitis.

Primary Spreading Mechanisms
Inadequate sanitation and an improperly designed milk handling system can lead to an accumulation of moisture and nutrients which promotes the growth of bacteria which are introduced into the bulk tank milk.

Primary Control Mechanisms
Review and remedy deficiencies in sanitation products, procedures, and equipment.
Review and remedy deficiencies in milk handling and milk storage.

INFLUENCE OF CONTAMINATION

MOLD/*BACILLUS*

Primary Source
A population of bacteria or mold gain access into the milk system from an OUTSIDE source and is introduced into the bulk tank milk.
These populations are not commonly associated with mastitis.

Primary Spreading Mechanisms
Vacuum line leaks allow such materials as dirt and dust, with the associated population of bacteria and mold, to be 'sucked' into the milk system.

Primary Control Mechanisms
Review and remedy deficiencies in milking equipment..
Review and remedy deficiencies in milk handling and milk storage.

MISCELLANEOUS

Less frequently encountered pathogens such as yeast, *Pasteurella, Corynebacterium,* etc. will be recorded and identified in this category.

This Bulk Tank Milk Culture is designed to detect the presence or absence of abnormal concentrations of unusual bacteria in bulk tank milk samples, monitor the affect (good and bad) of changes in sanitation, control, and prevention practices, benefit effective dairy management programs by portraying which practices improve milk quality, increase production, and promote economic gain.

The information provided by bulk tank milk cultures is valuable. Bulk tank milk cultures cannot determine the severity of mastitis in a dairy herd, be used to direct appropriate antibiotic therapy or serve as a single, stand-alone test. Somatic cell counts, total bacteria counts, quarter milk sample cultures, and antibiotic sensitivity testing contribute valuable information to dairy management programs.

On rare occasions, situations will arise, when the bulk tank milk culture is negative and the SCC is positive or clinical mastitis is present. All the pathogens responsible for causing mastitis cannot be grown on the media commonly employed in bulk tank milk cultures. The enzymes secreted by a high concentrations of somatic cells in a bulk tank will continue to kill mastitis-producing bacteria. *S. agalactiae* is very vulnerable to the activity of somatic cell enzymes. Systemic infections or diseases, other than mastitis, can result in an increase in somatic cells. Elevated SCC will be present during inflammation or injury of teat or quarter can occur in the absence of infection.

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CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-013A

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 4-11-95 Log# 7198

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	≤200	200-400	>400			1,
Staphylococcus aureus	✓	≤100	100-400	>400			1,
Streptococcus species		≤500	500/1500	>1500	✓		2,3,
Staphylococcus species		≤500	500/1200	>1200	✓		2,4,
COLIFORM BACILLUS	✓	≤100	100-700	>700			2,5,
NON-COLIFORM BACILLUS	✓	≤100	100-700	>700			6,8,
MOLD/*BACILLUS*		≤100	100-700	>700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 4-13-95 Technician AC

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
An association can be drawn between the relative number and the significance or severity of the problem.

Note# 3 The category identification of '*Streptococcus species* ' are *Streptococcus*; **NOT** - *Streptococcus agalactiae.*

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Note# 5 The category identification of 'COLIFORM BACILLUS' includes *Escherichia, Klebsiella,* and *Enterobacter.*

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COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

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CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-013A
(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 5-10-95 Log# 8317

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae		≤200	200-400	≥400			1,
Staphylococcus aureus		≤100	100-400	≥400			1,
Streptococcus species		≤500	500-1500	≥1500		✓	2,3,
Staphylococcus species		≤500	500-1200	≥1200		✓	2,4,
COLIFORM BACILLUS	✓	≤100	100-700	≥700			2,5,
NON-COLIFORM BACILLUS		≤100	100-700	≥700		✓	6,8, 9
MOLD/*BACILLUS*		≤100	100-700	≥700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 5-12-95 Technician A

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
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COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

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CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-013A

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 6-7-95 Log# 9116

CULTURE ISOLATE(S)	RELATIVE NUMBERS None*	Low	Medium	High	SIGNIFICANCE Low	High	NOTES
Streptococcus agalactiae	✓	<200	200-400	>400			1,
Staphylococcus aureus		<100	100-400	>400		✓	1,
Streptococcus species		<500	500-1500	>1500		✓	2,3,
Staphylococcus species		<500	500-1200	>1200	✓		2,4,
COLIFORM BACILLUS	✓	<100	100-700	>700			2,5,
NON-COLIFORM BACILLUS		<100	100-700	>700	✓		6,8,
MOLD/*BACILLUS*		<100	100-700	>700	✓		7,8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 6-9-95 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus*, DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices.
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COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

CONSOLIDATED LABORATORIES INCORPORATED

BULK TANK CULTURE REPORT

ISOLATE CONCENTRATION
ISOLATE IDENTIFICATION

A-013A

(Producer Name and/or Producer Identification Number)

(Address)

(City, State, and Zip Code)

(Telephone Number)

FOR OFFICE USE ONLY

Date 7-5-95 Log# 9867

CULTURE ISOLATE(S)	RELATIVE NUMBERS				SIGNIFICANCE		NOTES
	None*	Low	Medium	High	Low	High	
Streptococcus agalactiae	✓	≤200	200-400	>400			1,
Staphylococcus aureus	✓	≤100	100-400	>400			1,
Streptococcus species		≤500	500-1500	>1500 ✓		✓	2, 3,
Staphylococcus species		≤500	500-1200 ✓	>1200	✓		2, 4,
COLIFORM BACILLUS	✓	≤100	100-700	>700			2, 5,
NON-COLIFORM BACILLUS	✓	≤100 ✓	100-700	>700			6, 8,
MOLD/*BACILLUS*		≤100	100-700	>700	✓		7, 8,
MISCELLANEOUS; (specify)							

*None means to few bacteria to detect.

Date 7-7-95 Technician

***The number of bacteria on the chart is equivilant to the number of bacteria per milliliter of milk.

Note# 1 **INFLUENCE OF CONTAGIOUS MASTITIS.** The presence of contagious bacteria, *S. agalactiae* or *S. aureus* , DEMANDS IMMEDIATE attention. Identify infected cows, identify the mastitis-producing bacteria, and initiate appropriate control, eradication, and prevention practices. The relative number DOES NOT reflect the severity or number of contagious mastitis infections. Any number of these bacteria is very significant and reflects a serious threat to productivity and profit.

Note# 2 **INFLUENCE OF ENVIRONMENTAL MASTITIS.** High levels of the environment bacteria *Streptococcus species, Staphylococcus species, or* COLIFORM BACILLI, suggests the influence of environmental mastitis or conditions which can lead to environmental mastitis. The presence of these bacteria requires special considerations to initiate effective control, eradication, and prevention practices. An association can be drawn between the relative number and the significance or severity of the problem.

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COMMENTS: DIRECT QUESTIONS REGARDING THESE TEST RESULTS TO (800) 253-3448

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BULK TANK MILK CULTURE REPORT

Milk quality is based on important management functions. Included in these functions are sanitation, equipment maintainance, and the control eradication, and prevention of infection-produced mastitis. Successful dairy management programs involve recognizing and responding to adverse influences on milk quality, production and economic loss.

The influence that a culture isolate has on milk quality is portrayed by the 'Relative Number' AND 'Significance'. The designations used to qualify these influences are:

NONE • LOW • MEDIUM • HIGH

The presence of an adverse influence in a bulk tank milk culture must initiate investigation, control, eradication, and prevention. An appropriate response or action plan is formulated by: a) recognizing the primary source of the influence; b) identifying how the influence is spread or introduced into the milk system, and; c) what control, eradication, and prevention measures must be implemented to resolve the adverse influence. The following chart outlines basic considerations in responding to adverse influences on milk quality.

INFLUENCE OF CONTAGIOUS MASTITIS

Streptococcus agalactiae

Primary Source

Infected udders of other cows in the herd

Primary Spreading Mechanisms

Cow-to -Cow

Contaminated udder wash rags, milking equipment, improperly maintained milking equipment.

Primary Control Mechanisms

Identify infected cows.

Establish 'milking strings' by milking infected cows last or use a 'hospital claw'.

Dry cow treatment

Antibiotic treatment during lactation for eradication is indicated in special cases

INFLUENCE OF CONTAGIOUS MASTITIS

Staphylococcus aureus

Primary Source

Infected udders of other cows in the herd.

Primary Spreading Mechanisms

Cow-to-Cow

Contaminated udder wash rags, milking equipment, etc..

Improperly maintained milking equipment. Bedding contaminated with milk.

Primary Control Mechanisms

Identify infected cows.

Establish 'milking strings' by milking infected cows last or use a 'hospital claw'.

Dry cow treatment.

Culling chronically infected cows.

INFLUENCE OF ENVIRONMENTAL MASTITIS

Streptococcus species;* NOT-*S. agalactiae

Primary Source

Environment of cow.

Primary Spreading Mechanisms

Environment-to-Cow

Wet and dirty lots. Milking wet cows. Poor cow preparation.

Primary Control Mechanisms

Improve barn, lot, and lane sanitation. Milk clean, dry cows.

INFLUENCE OF ENVIRONMENTAL MASTITIS

Staphylococcus species;* NOT-*S. aureus

Primary Source

Normal skin inhabitant

Primary Spreading Mechanisms

Poor cow preparation and milking wet.

Primary Control Mechanisms

Milk clean, dry cows.

INFLUENCE OF ENVIRONMENTAL MASTITIS

COLIFORM BACILLI

Primary Source

Environment of cow.

Primary Spreading Mechanisms

Environment-to-Cow

Wet and dirty lots. Milking wet cows. Poor cow preparation. Teat injuries.

Hot and humid weather

Primary Control Mechanisms

Improve barn and lot sanitation.

Milk clean, dry cows. Keep cows standing 1 to 2 hours after milking.

Barrier teat dips in special situations.

INFLUENCE OF SANITATION

NON-COLIFORM BACILLI

Primary Source

A population or reservoir of bacteria INSIDE the milk system which is introduced into the bulk tank milk.

These populations are not commonly associated with mastitis.

Primary Spreading Mechanisms

Inadequate sanitation and an improperly designed milk handling system can lead to an accumulation of moisture and nutrients which promotes the growth of bacteria which are introduced into the bulk tank milk.

Primary Control Mechanisms

Review and remedy deficiencies in sanitation products, procedures, and equipment.

Review and remedy deficiencies in milk handling and milk storage.

INFLUENCE OF CONTAMINATION

MOLD/*BACILLUS*

Primary Source

A population of bacteria or mold gain access into the milk system from an OUTSIDE source and is introduced into the bulk tank milk.

These populations are not commonly associated with mastitis.

Primary Spreading Mechanisms

Vacuum line leaks allow such materials as dirt and dust, with the associated population of bacteria and mold, to be 'sucked' into the milk system.

Primary Control Mechanisms

Review and remedy deficiencies in milking equipment..

Review and remedy deficiencies in milk handling and milk storage.

MISCELLANEOUS

Less frequently encountered pathogens such as yeast, *Pasteurella*, *Corynebacterium*, etc. will be recorded and identified in this category.

This Bulk Tank Milk Culture is designed to detect the presence or absence of abnormal concentrations of unusual bacteria in bulk tank milk samples, monitor the affect (good and bad) of changes in sanitation, control, and prevention practices, benefit effective dairy management programs by portraying which practices improve milk quality, increase production, and promote economic gain.

The information provided by bulk tank milk cultures is valuable. Bulk tank milk cultures cannot determine the severity of mastitis in a dairy herd, be used to direct appropriate antibiotic therapy or serve as a single, stand-alone test. Somatic cell counts, total bacteria counts, quarter milk sample cultures, and antibiotic sensitivity testing contribute valuable information to dairy management programs.

On rare occasions, situations will arise, when the bulk tank milk culture is negative and the SCC is positive or clinical mastitis is present. All the pathogens responsible for causing mastitis cannot be grown on the media commonly employed in bulk tank milk cultures. The enzymes secreted by a high concentrations of somatic cells in a bulk tank will continue to kill mastitis-producing bacteria. *S. agalactiae* is very vulnerable to the activity of somatic cell enzymes. Systemic infections or diseases, other than mastitis, can result in an increase in somatic cells. Elevated SCC will be present during inflammation or injury of teat or quarter can occur in the absence of infection.

LIT.CLI.006.REV.93.05.24.

B 39

WOLFF LABORATORIES, INC.

9025 Penn Avenue South
(612)884-3113

Minneapolis MN 55431
(800)642-9085

8/23/95

Clinic: NORTHERN VALLEY
Client: WOIBECK
Pet: 215 ← cow II
Test Req: BVM
Addtnl Tests:

Patient Id: 803509
Station No: 02-05
Species: BV
Comment:

TEST	RESULT LOW	RESULT NORMAL	RESULT HIGH	COMMENT	NORMAL RANGE		UNITS
CHEMISTRY							
ALBUMIN			3.7		3	3.5	G/DL
BUN		15.0			15	30	MG/DL
CALCIUM			10.4		8.2	10	MG/DL
GLOBULIN			4.4		3	3.5	G/DL
GLUCOSE		51			50	90	MG/DL
MAGNESIUM			2.9		1.8	2.3	MG/DL
PHOSPHORUS	3.9				4	7.4	MG/DL
TOT PROTEIN			8.1		6.7	7.5	G/DL

B40

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9025 Penn Avenue South
(612)884-3113

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8/23/95

Clinic: NORTHERN VALLEY
Client: WOIBECK
Pet: 235
Test Req: BVM
Addtnl Tests:

Patient Id: 803510
Station No: 02-06
Species: BV
Comment:

TEST	RESULT LOW	RESULT NORMAL	RESULT HIGH	COMMENT	NORMAL RANGE		UNITS
CHEMISTRY							
ALBUMIN		3.3			3	3.5	G/DL
BUN		17.2			15	30	MG/DL
CALCIUM			10.3		8.2	10	MG/DL
GLOBULIN			4.9		3	3.5	G/DL
GLUCOSE		73			50	90	MG/DL
MAGNESIUM			2.4		1.8	2.3	MG/DL
PHOSPHORUS		4.9			4	7.4	MG/DL
TOT PROTEIN			8.2		6.7	7.5	G/DL

W O L F F L A B O R A T O R I E S, I N C.

9025 Penn Avenue South Minneapolis MN 55431
(612)884-3113 (800)642-9085

8/23/95

Clinic: NORTHERN VALLEY Patient Id: 803511
Client: WOIBECK Station No: 02-07
Pet: 241 Species: BV
Test Req: BVM Comment:
Addtnl Tests:

TEST	RESULT LOW	RESULT NORMAL	RESULT HIGH	COMMENT	NORMAL RANGE		UNITS
CHEMISTRY							
ALBUMIN		3.3			3	3.5	G/DL
BUN		27.7			15	30	MG/DL
CALCIUM		9.8			8.2	10	MG/DL
GLOBULIN			3.8		3	3.5	G/DL
GLUCOSE		58			50	90	MG/DL
MAGNESIUM			3.4		1.8	2.3	MG/DL
PHOSPHORUS	3.0				4	7.4	MG/DL
TOT PROTEIN		7.1			6.7	7.5	G/DL

W O L F F L A B O R A T O R I E S, I N C.

9025 Penn Avenue South Minneapolis MN 55431
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8/23/95

Clinic: NORTHERN VALLEY Patient Id: 803512
Client: WOIBECK Station No: 02-08
Pet: 247 Species: BV
Test Req: BVM Comment:
Addtnl Tests:

TEST	RESULT LOW	RESULT NORMAL	RESULT HIGH	COMMENT	NORMAL RANGE		UNITS
CHEMISTRY							
ALBUMIN		3.2			3	3.5	G/DL
BUN	14.5				15	30	MG/DL
CALCIUM			10.3		8.2	10	MG/DL
GLOBULIN			4.8		3	3.5	G/DL
GLUCOSE		67			50	90	MG/DL
MAGNESIUM			2.5		1.8	2.3	MG/DL
PHOSPHORUS		5.1			4	7.4	MG/DL
TOT PROTEIN			8.0		6.7	7.5	G/DL

W O L F F L A B O R A T O R I E S, I N C.

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8/23/95

Clinic: NORTHERN VALLEY
Client: WOIBECK
Pet: 257
Test Req: BVM
Addtnl Tests:

Patient Id: 803513
Station No: 02-09
Species: BV
Comment:

TEST	RESULT LOW	RESULT NORMAL	RESULT HIGH	COMMENT	NORMAL RANGE		UNITS
CHEMISTRY							
ALBUMIN		3.4			3	3.5	G/DL
BUN	12.3				15	30	MG/DL
CALCIUM			10.1		8.2	10	MG/DL
GLOBULIN			5.3		3	3.5	G/DL
GLUCOSE		55			50	90	MG/DL
MAGNESIUM			2.5		1.8	2.3	MG/DL
PHOSPHORUS	2.3				4	7.4	MG/DL
TOT PROTEIN			8.7		6.7	7.5	G/DL

W O L F F L A B O R A T O R I E S, I N C.

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8/23/95

Clinic: NORTHERN VALLEY
Client: WOIBECK
Pet: 267
Test Req: BVM
Addtnl Tests:

Patient Id: 803514
Station No: 02-10
Species: BV
Comment:

TEST	RESULT			COMMENT	NORMAL RANGE		UNITS
	LOW	NORMAL	HIGH				
CHEMISTRY							
ALBUMIN		3.4			3	3.5	G/DL
BUN		18.1			15	30	MG/DL
CALCIUM			10.6		8.2	10	MG/DL
GLOBULIN			4.9		3	3.5	G/DL
GLUCOSE		58			50	90	MG/DL
MAGNESIUM			2.9		1.8	2.3	MG/DL
PHOSPHORUS		5.5			4	7.4	MG/DL
TOT PROTEIN			8.3		6.7	7.5	G/DL

W O L F F L A B O R A T O R I E S, I N C.

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8/23/95

Clinic: NORTHERN VALLEY Patient Id: 803515
Client: WOIBECK Station No: 02-11
Pet: 300 Species: BV
Test Req: BVM Comment:
Addtnl Tests:

TEST	RESULT			COMMENT	NORMAL RANGE		UNITS
	LOW	NORMAL	HIGH				
CHEMISTRY							
ALBUMIN			3.6		3	3.5	G/DL
BUN	14.6				15	30	MG/DL
CALCIUM			10.2		8.2	10	MG/DL
GLOBULIN			4.9		3	3.5	G/DL
GLUCOSE		60			50	90	MG/DL
MAGNESIUM			2.8		1.8	2.3	MG/DL
PHOSPHORUS		4.3			4	7.4	MG/DL
TOT PROTEIN			8.5		6.7	7.5	G/DL

W O L F F L A B O R A T O R I E S, I N C.

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8/23/95

Clinic: NORTHERN VALLEY
Client: WOIBECK
Pet: 308
Test Req: BVM
Addtnl Tests:

Patient Id: 803516
Station No: 02-12
Species: BV
Comment:

TEST	RESULT			COMMENT	NORMAL RANGE		UNITS
	LOW	NORMAL	HIGH				
CHEMISTRY							
ALBUMIN		3.2			3	3.5	G/DL
BUN	13.9				15	30	MG/DL
CALCIUM		9.7			8.2	10	MG/DL
GLOBULIN			4.9		3	3.5	G/DL
GLUCOSE		62			50	90	MG/DL
MAGNESIUM		2.3			1.8	2.3	MG/DL
PHOSPHORUS	3.8				4	7.4	MG/DL
TOT PROTEIN			8.1		6.7	7.5	G/DL

W O L F F L A B O R A T O R I E S, I N C.

9025 Penn Avenue South Minneapolis MN 55431
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8/23/95

Clinic: NORTHERN VALLEY Patient Id: 803517
Client: WOIBECK Station No: 02-13
Pet: 316 Species: BV
Test Req: BVM Comment:
Addtnl Tests:

TEST	RESULT			COMMENT	NORMAL RANGE		UNITS
	LOW	NORMAL	HIGH				
CHEMISTRY							
ALBUMIN			3.7		3	3.5	G/DL
BUN	12.0				15	30	MG/DL
CALCIUM			10.4		8.2	10	MG/DL
GLOBULIN			4.9		3	3.5	G/DL
GLUCOSE		58			50	90	MG/DL
MAGNESIUM			2.6		1.8	2.3	MG/DL
PHOSPHORUS		4.2			4	7.4	MG/DL
TOT PROTEIN			8.6		6.7	7.5	G/DL

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8/23/95

Clinic: NORTHERN VALLEY Patient Id: 803518
Client: WOIBECK Station No: 02-14
Pet: 317 Species: BV
Test Req: BVM Comment:
Addtnl Tests:

TEST	RESULT			COMMENT	NORMAL RANGE		UNITS
	LOW	NORMAL	HIGH				
CHEMISTRY							
ALBUMIN		3.4			3	3.5	G/DL
BUN		16.8			15	30	MG/DL
CALCIUM		10.0			8.2	10	MG/DL
GLOBULIN			4.0		3	3.5	G/DL
GLUCOSE		60			50	90	MG/DL
MAGNESIUM			2.7		1.8	2.3	MG/DL
PHOSPHORUS		4.5			4	7.4	MG/DL
TOT PROTEIN		7.4			6.7	7.5	G/DL

B 45

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8/23/95

Clinic: NORTHERN VALLEY
Client: WOIBECK
Pet: 335
Test Req: BVM
Addtnl Tests:

Patient Id: 803519
Station No: 02-15
Species: BV
Comment:

TEST	RESULT			COMMENT	NORMAL RANGE		UNITS
	LOW	NORMAL	HIGH				
CHEMISTRY							
ALBUMIN		3.5			3	3.5	G/DL
BUN		19.8			15	30	MG/DL
CALCIUM			10.1		8.2	10	MG/DL
GLOBULIN			4.0		3	3.5	G/DL
GLUCOSE		57			50	90	MG/DL
MAGNESIUM			2.7		1.8	2.3	MG/DL
PHOSPHORUS		5.6			4	7.4	MG/DL
TOT PROTEIN		7.5			6.7	7.5	G/DL

B 50

WOLFF LABORATORIES, INC.

9025 Penn Avenue South
(612)884-3113

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(800)642-9085

8/23/95

Clinic: NORTHERN VALLEY
Client: WOIBECK
Pet: 342
Test Req: BVM
Addtnl Tests:

Patient Id: 803520
Station No: 02-16
Species: BV
Comment:

TEST	RESULT LOW	RESULT NORMAL	RESULT HIGH	COMMENT	NORMAL RANGE		UNITS
CHEMISTRY							
ALBUMIN		3.4			3	3.5	G/DL
BUN		17.5			15	30	MG/DL
CALCIUM		9.7			8.2	10	MG/DL
GLOBULIN			4.7		3	3.5	G/DL
GLUCOSE	50				50	90	MG/DL
MAGNESIUM		2.3			1.8	2.3	MG/DL
PHOSPHORUS		5.0			4	7.4	MG/DL
TOT PROTEIN			8.1		6.7	7.5	G/DL

W O L F F L A B O R A T O R I E S, I N C.

9025 Penn Avenue South
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Minneapolis MN 55431
(800)642-9085

Clinic: NORTHERN VALLEY
Client: WOIBECK
Pet: 351
Test Req: BVM
Addtnl Tests:

Patient Id: 803521
Station No: 02-17
Species: BV
Comment:

TEST	RESULT			COMMENT	NORMAL RANGE		UNITS
	LOW	NORMAL	HIGH				
CHEMISTRY							
ALBUMIN		3.3			3	3.5	G/DL
BUN	11.5				15	30	MG/DL
CALCIUM			10.1		8.2	10	MG/DL
GLOBULIN			4.0		3	3.5	G/DL
GLUCOSE		60			50	90	MG/DL
MAGNESIUM			2.4		1.8	2.3	MG/DL
PHOSPHORUS		5.4			4	7.4	MG/DL
TOT PROTEIN		7.3			6.7	7.5	G/DL

W O L F F L A B O R A T O R I E S, I N C.

9025 Penn Avenue South Minneapolis MN 55431
(612)884-3113 (800)642-9085

8/23/95

Clinic: NORTHERN VALLEY
Client: WOIBECK
Pet: 362
Test Req: BVM
Addtnl Tests:

Patient Id: 803522
Station No: 02-18
Species: BV
Comment:

TEST	RESULT LOW	RESULT NORMAL	RESULT HIGH	COMMENT	NORMAL RANGE		UNITS
CHEMISTRY							
ALBUMIN	2.9				3	3.5	G/DL
BUN		16.7			15	30	MG/DL
CALCIUM			10.2		8.2	10	MG/DL
GLOBULIN			3.9		3	3.5	G/DL
GLUCOSE		56			50	90	MG/DL
MAGNESIUM			2.4		1.8	2.3	MG/DL
PHOSPHORUS		4.5			4	7.4	MG/DL
TOT PROTEIN		6.8			6.7	7.5	G/DL

W O L F F L A B O R A T O R I E S, I N C.

9025 Penn Avenue South Minneapolis MN 55431
(612)884-3113 (800)642-9085

8/23/95

Clinic: NORTHERN VALLEY Patient Id: 803523
Client: WOIBECK Station No: 02-19
Pet: 374 Species: BV
Test Req: BVM Comment:
Addtnl Tests:

TEST	RESULT LOW	RESULT NORMAL	RESULT HIGH	COMMENT	NORMAL RANGE		UNITS
CHEMISTRY							
ALBUMIN		3.3			3	3.5	G/DL
BUN	13.3				15	30	MG/DL
CALCIUM			10.4		8.2	10	MG/DL
GLOBULIN			4.1		3	3.5	G/DL
GLUCOSE		59			50	90	MG/DL
MAGNESIUM			2.6		1.8	2.3	MG/DL
PHOSPHORUS		5.1			4	7.4	MG/DL
TOT PROTEIN		7.4			6.7	7.5	G/DL

W O L F F L A B O R A T O R I E S, I N C.

9025 Penn Avenue South
(612)884-3113

Minneapolis MN 55431
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8/23/95

Clinic: NORTHERN VALLEY
Client: WOIBECK
Pet: 380
Test Req: BVM
Addtnl Tests:

Patient Id: 803524
Station No: 02-20
Species: BV
Comment:

TEST	RESULT LOW	RESULT NORMAL	RESULT HIGH	COMMENT	NORMAL RANGE		UNITS
CHEMISTRY							
ALBUMIN		3.5			3	3.5	G/DL
BUN		16.1			15	30	MG/DL
CALCIUM			10.9		8.2	10	MG/DL
GLOBULIN			4.3		3	3.5	G/DL
GLUCOSE		63			50	90	MG/DL
MAGNESIUM			3.1		1.8	2.3	MG/DL
PHOSPHORUS		4.4			4	7.4	MG/DL
TOT PROTEIN			7.8		6.7	7.5	G/DL

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W O L F F L A B O R A T O R I E S, I N C.

9025 Penn Avenue South Minneapolis MN 55431
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8/23/95

Clinic: NORTHERN VALLEY Patient Id: 803525
Client: WOIBECK Station No: 02-21
Pet: 389 Species: BV
Test Req: BVM Comment:
Addtnl Tests:

TEST	RESULT			COMMENT	NORMAL RANGE		UNITS
	LOW	NORMAL	HIGH				
CHEMISTRY							
ALBUMIN		3.3			3	3.5	G/DL
BUN		17.4			15	30	MG/DL
CALCIUM			10.2		8.2	10	MG/DL
GLOBULIN			3.9		3	3.5	G/DL
GLUCOSE		64			50	90	MG/DL
MAGNESIUM			2.7		1.8	2.3	MG/DL
PHOSPHORUS		5.3			4	7.4	MG/DL
TOT PROTEIN		7.2			6.7	7.5	G/DL

W O L F F L A B O R A T O R I E S, I N C.

9025 Penn Avenue South Minneapolis MN 55431
(612)884-3113 (800)642-9085

8/23/95
Clinic: NORTHERN VALLEY
Client: WOIBECK
Pet: 403
Test Req: BVM
Addtnl Tests:

Patient Id: 803526
Station No: 02-22
Species: BV
Comment:

TEST	RESULT LOW	RESULT NORMAL	RESULT HIGH	COMMENT	NORMAL RANGE		UNITS
CHEMISTRY							
ALBUMIN		3.0		EDTA PLASMA SAMPLE	3	3.5	G/DL
BUN		15.1			15	30	MG/DL
CALCIUM	.9			ERRONEOUS	8.2	10	MG/DL
GLOBULIN			4.3		3	3.5	G/DL
GLUCOSE		58			50	90	MG/DL
MAGNESIUM	.9			ERRONEOUS	1.8	2.3	MG/DL
PHOSPHORUS	3.2				4	7.4	MG/DL
TOT PROTEIN		7.3			6.7	7.5	G/DL

B 57

Donald Wolbeck

Herd Health Body Score Sheet for 8-1-95

Cow #	Fresh
* 99	8-19-94
143	6-27-95
* 155	7-26-95
167	7-5-95
195	1-15-95
197	due 10-5-95
204	due 9-13-95
209	2-8-95
213	7-17-95
215	7-24-95 3.0
216	7-15-95
222	3-13-95
235	Due October 10-7-94 Dry 3.5
240	1-31-95
241	due 8-16-95 Fresh 8/23/95
246	due 10-11-95
247	3-27-95
249	due 8-10-95
254	11-21-94
255	4-8-95
257	due 8-13-95 Fresh 8-12-95
261	7-30-95
267	7-14-94 Just Dry
270	7-13-95
272	5-8-95

Cow #	Fresh
276	12-20-94
277	due 9-29-95
279	10-9-94
281	due 9-2-95
287	4-30-95
292	due 8-27-95
293	3-7-95
297	6-9-95
298	due 8-26-95
300	6-8-95 2.75
307	8-1-95
308	3.25 due 10-11-95 Dry
312	1-13-95
316	2-26-95 3.5
317	12-3-94 3.5
326	1-29-95
330	7-13-95
333	due 8-16-95
335	due 8-27-95 3.25
339	5-5-95
340	due 9-15-95
341	due 10-3-95
342	7-8-95 3.5
347	6-29-94
348	9-8-94

Cow #	Fresh
349	11-13-94
351	10-13-94 3.5
353	9-21-94
357	6-7-95
360	7-12-95
362	3.0 11-29-94
368	2-12-95
370	3-13-95
373	2-12-95
374	3.0 4-22-95
377	5-24-95
378	2-22-95
379	1-30-95
320	3.5 5-8-95
321	5-10-95
325	4-26-95
387	4-27-95
389	2.0 4-26-95
390	5-3-95
396	7-24-95
398	7-10-95
403	2.25 7-27-95
404	7-6-95

Body Scores Recorded on Farm Are initialled JTB

* Left Herd Since 8/1/95

153 Left Leg Problems

RECEIVED
AUG 17 1995
MINNESOTA PUBLIC UTILITIES COMMISSION

Held Healed
for Donald Wolbeck 5-4-95 Body Score Sheet

Cow #	Fresh
99	8-19-94
143	dry = outside
146	1-9-95
~~155~~	~~4-26-94~~ SOLD
167	dry = outside
195	1-15-95
197	10-5-94
204	9-19-94
209	2-8-95
213	7-5-94
215	dry = inside
216	8-3-94
219	dry = inside
222	3-13-95
235	10-7-94
240	1-31-95
241	8-11-94
246	10-11-94
247	3-27-95
249	9-4-94
254	11-21-94
255	4-8-95
257	9-3-94
261	dry = inside
265	12-5-94

Cow #	Fresh
267	7-14-94
270	dry = inside
272	dry = inside
276	12-20-94
277	10-4-94
279	10-9-94
281	9-7-94
284	9-6-94
287	dry = inside
292	5-10-94
293	3-7-95
296	7-5-94
297	dry = outside
298	9-16-94
300	dry = outside
307	6-3-94
308	5-27-94
312	1-13-95
316	2-26-95
317	12-3-94
326	1-29-95
328	12-5-94
330	dry = inside
333	9-14-94
335	8-27-94

NO scores Recorded ON this Sheet

Herd Health Body Score Sheet for 5-4-95

Cow #	Fresh
339	dry = inside
340	10-11-94
341	9-6-94
342	2-8-95
347	6-29-94
348	9-8-94
349	11-13-94
351	10-13-94
353	9-21-94
357	dry = outside
360	9-5-94
362	11-29-94
368	2-12-95
370	3-13-95
373	2-12-95
374	4-22-95
378	2-22-95
379	1-30-95

Cows from 11-18-93 Herd Health test that have been sold.

	Date Sold	Reas
#187	5-30-94	Nervous & Ki
207	8-3-94	mastitis
274	12-13-94	pinched nerve
288	4-27-94	pinched nerve
299	12-8-94	leg problems
309	9-5-94	no heat cycles
311	1-11-94	leg problems
313	4-13-95	nervous, kicker
318	12-20-93	leg problems

Cows that were tested 11-18-93

155
215
235
241
247
257
267
308
317

Water Consumption Records for Nov. 1993

Date	#on meter (1)	Ave. gallons	#cows milking (2)	Total cows (3)
11-15-93	66	19.6	61	72
11-16-93	66	17.5	63	72
11-17-93	66	18.4	63	72
11-18-93	66	20.7	63	72
11-19-93	66	16.9	63	72
11-20-93	66	18.1	63	72
11-21-93	66	18.9	63	72
11-22-93	65	19.0	62	72
11-23-93	65	18.3	62	72
11-24-93	66	17.5	62	72
11-25-93	66	17.7	61	72
11-26-93	66	17.3	61	72
11-27-93	66	19.8	61	72
11-28-93	66	17.8	61	72
11-29-93	66	16.5	61	72
11-30-93	66	16.9	60	71

(1) This number includes milking cows + dry cows.

(2) This number changes when a cow is dried off or when a cows comes fresh.

(3) This number changes when a heifer enters the milking herd or a cow is sold from the milking herd.

Water Consumption Records for Dec. 1993

Date	# on meter (1)	Ave. gallons	# cows milking (2)	Total cows (3)
12-1-93	64	16.6	60	71
12-2	66	16.8	60	71
12-3	66	16.4	60	71
12-4	66	16.9	59	71
12-5	66	15.5	59	71
12-6	66	16.8	60	72
12-7	66	16.6	60	72
12-8	66	16.6	61	73
12-9	64	16.4	60	72
12-10	66	16.2	60	72
12-11	66	16.0	60	72
12-12	66	16.0	60	72
12-13	66	17.9	60	72
12-14	67	17.9	60	72
12-15	68	15.4	61	72
12-16	68	16.9	61	72
12-17	68	16.1	61	72
12-18	68	15.6	59	72
12-19	68	16.3	59	72
12-20	68	15.9	60	72
12-21	66	16.2	56	70
12-22	66	16.9	56	70
12-23	66	16.8	57	70
12-24	66	18.0	58	70
12-25	66	17.4	58	70
12-26	66	17.3	58	70
12-27	66	20.0	58	70
12-28	66	19.8	58	70
12-29	66	19.5	58	70
12-30	65	18.9	58	70
12-31-93	66	19.2	58	70

Water Consumption Records for Jan. 1994

Date	#① on meter	Ave. gallons	#② cows milking	Total ③ cows
1-1-94	66	21.0	59	70
1-2	66	20.3	60	71
1-3	66	20.3	60	71
1-4	66	20.4	60	71
1-5	66	19.8	59	71
1-6	66	19.5	59	71
1-7	66	20.7	59	71
1-8	66	20.4	59	71
1-9	66	19.1	60	71
1-10	65	19.2	60	71
1-11	66	21.5	57	68
1-12	66	19.4	58	68
1-13	66	20.7	58	68
1-14	66	20.2	58	68
1-15	66	20.3	58	68
1-16	66	20.6	58	68
1-17	66	19.8	58	68
1-18	66	19.4	58	67
1-19	66	21.2	58	67
1-20	66	20.6	57	66
1-21	66	19.7	57	66
1-22	66	20.4	55	66
1-23	66	21.0	55	66
1-24	66	20.2	55	66
1-25	66	20.6	55	66
1-26	66	20.6	55	66
1-27	66	19.2	55	66
1-28	66	20.2	55	66
1-29	66	19.5	55	66
1-30	66	20.3	55	66
1-31-94	66	20.6	55	66

Water Consumption Records for Feb. 1994

Date	# on meter (1)	Ave. gallons	# cows milking (2)	Total cows (3)
2-1-94	66	20.4	55	66
2-2	66	20.0	56	66
2-3	66	19.4	56	66
2-4	66	21.1	56	66
2-5	66	20.8	57	66
2-6	66	20.6	59	67
2-7	66	19.7	59	67
2-8	66	19.7	59	67
2-9	66	20.3	59	67
2-10	67	20.4	60	67
2-11	67	19.8	60	67
2-12	67	20.1	60	67
2-13	68	20.1	60	67
2-14	68	20.4	60	67
2-15	68	19.1	60	67
2-16	68	20.4	61	68
2-17	68	21.2	62	69
2-18	68	20.4	62	69
2-19	68	21.2	61	69
2-20	67	20.4	61	69
2-21	67	20.3	61	69
2-22	67	21.0	62	70
2-23	67	20.3	62	70
2-24	67	20.4	62	70
2-25	67	21.2	62	70
2-26	67	19.8	62	70
2-27	67	20.7	62	70
2-28-94	67	20.3	62	70

Water Consumption Records for Mar. 1994

Date	#on meter (1)	Ave. gallons	#consuming (2)	Total cons (3)
3-1-94	67	20.1	61	70
3-2	67	20.4	61	70
3-3	67	21.3	62	70
3-4	67	18.9	63	71
3-5	67	20.3	63	71
3-6	67	19.9	63	71
3-7	67	19.4	63	71
3-8	67	18.1	63	71
3-9	67	19.3	62	72
3-10	67	19.3	62	72
3-11	67	19.3	62	72
3-12	67	18.2	62	72
3-13	67	19.0	61	72
3-14	67	19.3	61	72
3-15	67	19.0	61	72
3-16	67	18.2	61	72
3-17	66	17.9	60	71
3-18	67	18.7	60	71
3-19	67	18.0	60	71
3-20	67	18.5	61	71
3-21	67	18.5	60	71
3-22	67	19.6	59	71
3-23	67	18.8	59	71
3-24	67	17.8	57	69
3-25	67	18.0	57	69
3-26	67	18.5	58	69
3-27	67	19.3	58	69
3-28	67	20.0	57	69
3-29	67	19.3	56	69
3-30	67	18.2	56	69
3-31-94	67	19.1	56	69

Water Consumption Records for Apr. 1994

Date	#on meter (1)	Ave. gallons	# cows milking (2)	Total cows (3)
4-1-94	65	16.6	56	69
4-2-	65	16.5	55	69
4-3	65	16.2	55	69
4-4	65	17.8	55	69
4-5	64	16.4	54	68
4-6	67	17.0	54	68
4-7	67	16.3	53	68
4-8	67	16.7	53	68
4-9	67	16.1	54	68
4-10	67	14.8	54	68
4-11	67	20.0	54	68
4-12	67	18.5	54	68
4-13	67	18.1	56	68
4-14	67	20.7	56	68
4-15	67	19.4	56	68
4-16	67	13.9	56	68
4-17	67	13.4	56	68
4-18	67	17.6	56	68
4-19	67	18.9	57	68
4-20	67	18.1	57	68
4-21	67	18.4	57	68
4-22	67	20.6	57	68
4-23	67	19.3	57	68
4-24	69	20.4	57	68
4-25	69	19.7	57	68
4-26	69	14.6	56	68
4-27	69	15.5	56	68
4-28	67	17.0	56	68
4-29	67	14.2	56	69
4-30-94	67	15.5	56	69

Water Consumption Records for June 1994

Date	# on meter (1)	Ave. gallons	# cows milking (2)	Total cows (3)
6-1-94	67	19.9	54	67
6-2	67	17.3	54	67
6-3	67	15.4	54	67
6-4	67	16.9	55	67
6-5	67	18.7	55	67
6-6	67	14.3	55	67
6-7	67	18.2	55	67
6-8	67	16.0	55	67
6-9	67	19.4	55	67
6-10	67	19.6	55	67
6-11	67	18.8	55	67
6-12	67	18.9	56	67
6-13	67	21.9	56	67
6-14	67	17.5	56	67
6-15	67	22.7	56	67
6-16	67	18.2	57	68
6-17	67	15.8	57	68
6-18	67	16.6	56	68
6-19	67	15.1	56	68
6-20	67	17.5	56	68
6-21	67	15.8	56	68
6-22	67	23.6	57	68
6-23	67	18.4	57	68
6-24	67	15.2	58	68
6-25	67	28.5	59	68
6-26	67	21.5	59	68
6-27	67	21.0	59	68
6-28	67	21.8	59	68
6-29	67	21.0	59	68
6-30-94	67	21.6	59	68

Water Consumption Records for July 1994

Date	# on meter ①	Av. gallons	# cows milking ②	Total cows ③
7-1-94	61	24.5	60	67
7-2	61	20.7	61	70
7-3	61	19.5	60	70
7-4	61	20.4	59	70
7-5	61	19.1	59	70
7-6	61	17.3	60	70
7-7	61	20.4	57	67
7-8	61	17.2	55	67
7-9	61	17.9	54	67
7-10	61	19.9	53	67
7-11	61	21.2	54	67
7-12	61	19.9	54	67
7-13	66	20.9	54	67
7-14	66	22.8	54	67
7-15	66	—	54	67
7-16	66	20.2	55	67
7-17	66	22.9	55	67
7-18	66	24.2	55	67
7-19	66	22.6	56	67
7-20	66	20.6	56	67
7-21	66	24.2	56	67
7-22	66	18.6	56	67
7-23	66	28.8	56	67
7-24	66	23.3	55	67
7-25	66	24.5	55	67
7-26	66	24.5	54	67
7-27	66	23.0	54	67
7-28	66	23.0	54	67
7-29	66	23.0	54	67
7-30	66	25.0	53	67
7-31-94	66	24.1	53	67

Water Consumption Records for Aug. 1994

Date	#on meter ①	Ave. gallons	#cows milking ②	Total cows ③
8-1-94	66	23.8	52	61
8-2	67	24.2	52	67
8-3	67	22.7	52	67
8-4	67	23.1	50	65
8-5	67	22.7	50	65
8-6	67	22.2	51	65
8-7	67	20.6	51	65
8-8	67	20.7	50	65
8-9	67	21.6	50	65
8-10	67	20.3	50	65
8-11	67	17.0	50	65
8-12	68	22.6	49	65
8-13	68	19.1	49	65
8-14	68	18.4	49	65
8-15	68	21.8	50	65
8-16	67	24.0	50	65
8-17	67	23.3	50	65
8-18	67	21.0	50	65
8-19	68	21.8	51	65
8-20	68	20.3	51	66
8-21	68	21.2	51	66
8-22	68	21.9	51	66
8-23	68	23.2	51	66
8-24	68	18.4	51	66
8-25	67	20.3	51	66
8-26	67	19.9	50	66
8-27	68	22.5	51	66
8-28	67	19.1	51	67
8-29	67	21.9	51	67
8-30	67	21.8	51	67
8-31-94	67	17.9	51	67

Water Consumption Records for Sept. 1994

Date	# on meter (1)	Avg. gallons	# cows milking (2)	Total cows (3)
9-1-94	67	20.1	51	67
9-2	67	21.5	51	67
9-3	67	19.1	52	67
9-4	67	19.0	53	67
9-5	67	17.9	54	67
9-6	65	17.2	53	65
9-7	66	22.3	54	66
9-8	66	22.9	55	67
9-9	66	21.8	56	67
9-10	66	23.2	56	68
9-11	66	24.2	57	68
9-12	66	21.1	57	68
9-13	67	18.5	56	67
9-14	67	18.7	56	67
9-15	67	18.8	56	67
9-16	67	18.2	57	68
9-17	67	18.5	57	68
9-18	67	19.3	58	68
9-19	67	21.8	58	68
9-20	67	18.7	59	68
9-21	67	21.5	59	68
9-22	67	15.4	57	68
9-23	67	17.3	57	69
9-24	67	17.8	57	69
9-25	67	17.3	57	69
9-26	67	16.9	57	69
9-27	67	17.5	56	68
9-28	67	18.1	56	68
9-29	67	19.1	55	68
9-30-94	67	18.8	55	68

Water Consumption Records for Oct 1994

Date	#on meter (1)	Ave. gallons	# cows milking (2)	Total cows (3)
10-1-94	67	11.8	55	68
10-2	68	19.9	54	68
10-3	69	17.4	54	68
10-4	69	15.2	53	68
10-5	69	16.8	53	68
10-6	69	16.7	54	68
10-7	69	17.2	55	68
10-8	69	18.4	55	68
10-9	68	18.1	55	68
10-10	68	17.2	55	68
10-11	68	18.7	56	68
10-12	68	19.0	57	69
10-13	67	20.9	58	69
10-14	67	19.1	58	69
10-15	67	19.0	60	70
10-16	67	17.6	60	70
10-17	67	14.9	60	70
10-18	67	14.0	61	70
10-19	67	15.8	61	70
10-20	67	17.2	61	70
10-21	67	19.9	61	70
10-22	67	18.8	61	70
10-23	67	16.9	60	70
10-24	67	19.4	60	70
10-25	67	17.9	60	70
10-26	67	19.6	60	70
10-27	67	18.7	60	70
10-28	67	19.0	60	70
10-29	67	17.5	60	70
10-30	67	17.6	59	70
10-31-94	67	18.4	59	70

Water Consumption Records for Nov. 1994

Date	# on meter (1)	Ave. gallons	# cows milking (2)	Total cows (3)
11-1-94	67	18.4	59	70
11-2	67	17.9	59	70
11-3	67	17.2	58	70
11-4	67	17.2	58	70
11-5	67	20.3	58	70
11-6	67	19.4	58	70
11-7	67	17.1	58	70
11-8	66	18.6	57	68
11-9	67	18.4	57	68
11-10	67	18.1	57	68
11-11	67	18.2	57	68
11-12	67	17.3	58	68
11-13	67	17.2	58	68
11-14	67	16.7	58	68
11-15	67	18.7	59	69
11-16	67	17.0	60	69
11-17	67	17.8	58	69
11-18	67	17.5	58	68
11-19	67	16.4	58	68
11-20	67	15.4	57	68
11-21	67	16.1	57	68
11-22	67	15.7	57	68
11-23	67	18.2	58	68
11-24	67	17.9	58	68
11-25	67	18.4	58	68
11-26	67	17.2	58	68
11-27	67	15.7	58	68
11-28	67	16.0	58	68
11-29	67	15.1	58	68
11-30-94	67	14.9	59	69

Water Consumption Records for Dec., 1994

Date	#on (1) meter	Ave. gallons	# cows (2) milking	Total (3) cows
12-1-94	67	16.7	59	67
12-2	67	15.5	59	69
12-3	67	16.6	59	69
12-4	67	16.1	58	69
12-5	67	14.6	58	69
12-6	67	16.4	60	69
12-7	67	15.2	60	69
12-8	67	14.9	59	68
12-9	67	15.7	60	68
12-10	67	16.3	60	68
12-11	67	16.4	59	68
12-12	67	15.8	59	68
12-13	67	18.1	58	67
12-14	67	16.1	58	66
12-15	67	16.9	58	66
12-16	67	16.6	59	67
12-17	67	16.7	59	67
12-18	67	17.8	59	67
12-19	67	16.6	59	67
12-20	67	17.8	59	67
12-21	67	16.1	59	67
12-22	67	17.8	59	67
12-23	67	17.2	59	67
12-24	67	18.2	59	67
12-25	67	16.4	59	67
12-26	67	16.3	59	67
12-27	67	18.1	59	67
12-28	67	17.3	59	67
12-29	67	17.8	58	66
12-30	67	18.1	58	66
12-31-94	67	17.9	58	66

Water Consumption Records for Jan. 1995

Date	#on meter (1)	Ave. gallons	# cows milking (2)	Total cows (3)
1-1-95	67	15.7	58	66
1-2	67	16.0	58	66
1-3	67	17.2	58	66
1-4	67	20.7	58	66
1-5	67	18.4	58	66
1-6	67	19.3	57	66
1-7	67	18.4	57	66
1-8	67	19.0	57	66
1-9	67	18.1	57	66
1-10	67	18.8	57	66
1-11	67	19.4	56	66
1-12	67	19.6	55	66
1-13	67	20.1	55	66
1-14	67	19.1	55	66
1-15	67	19.3	56	66
1-16	67	18.2	56	66
1-17	67	20.7	57	66
1-18	67	19.6	57	66
1-19	67	19.1	57	66
1-20	67	18.4	57	66
1-21	67	19.7	57	66
1-22	67	19.6	57	66
1-23	67	19.6	57	66
1-24	67	19.6	57	66
1-25	67	19.1	57	66
1-26	67	19.6	56	65
1-27	67	19.6	56	65
1-28	67	19.0	56	65
1-29	67	20.0	55	65
1-30	67	19.3	55	65
1-31-95	67	19.4	56	65

Water Consumption Records for Feb. 1995

Date	#on meter (1)	Ave. gallons	# cows milking (2)	Total cows (3)
2-1-95	67	20.0	56	65
2-2	67	19.9	58	66
2-3	67	19.6	58	66
2-4	67	19.4	58	66
2-5	67	19.6	58	66
2-6	67	18.4	58	66
2-7	67	19.1	59	67
2-8	67	19.0	59	67
2-9	67	19.3	59	67
2-10	67	19.6	59	67
2-11	68	18.2	60	67
2-12	68	18.8	60	67
2-13	68	17.6	60	67
2-14	68	18.7	61	68
2-15	68	20.3	61	68
2-16	68	20.7	62	69
2-17	68	20.3	62	69
2-18	68	19.9	62	69
2-19	68	20.6	62	69
2-20	68	19.3	62	69
2-21	68	21.0	62	69
2-22	68	18.7	60	69
2-23	68	19.6	60	69
2-24	68	19.3	60	69
2-25	68	18.7	61	70
2-26	68	18.8	61	70
2-27	68	18.4	61	70
2-28-95	68	18.7	61	70

Water Consumption Records for Mar. 1995

Date	#on meter (1)	Avg. gallons	#cows milking (2)	Total cows (3)
3-1-95	68	17.6	61	71
3-2	68	17.9	61	71
3-3	68	19.1	61	71
3-4	68	18.8	61	71
3-5	68	18.8	61	71
3-6	68	18.2	61	71
3-7	68	19.4	61	71
3-8	68	18.7	61	71
3-9	68	19.4	61	71
3-10	68	18.4	62	71
3-11	67	21.5	63	73
3-12	67	19.6	62	73
3-13	67	20.1	62	73
3-14	67	18.7	61	72
3-15	67	17.3	62	72
3-16	68	17.6	62	72
3-17	68	16.8	63	73
3-18	68	16.8	63	73
3-19	68	13.1	63	73
3-20	68	drinking cup leaking	63	73
3-21	68	17.4	63	73
3-22	68	14.8	64	73
3-23	67	17.6	64	73
3-24	67	15.7	63	73
3-25	67	16.1	63	73
3-26	67	18.1	63	73
3-27	67	18.5	63	73
3-28	67	17.2	62	73
3-29	67	18.4	62	73
3-30	67	16.1	61	73
3-31-95	67	17.3	61	73

Water Consumption Records For April 1995

Date	① # on meter	ANG. gallons	② # cows milking	③ total cows
4-1-95	67	18.8	61	73
4-2-95	67	14.3	61	73
4-3	68	18.8	61	73
4-4	68	16.1	61	73
4-5	68	18.3	61	73
4-6	67	18.2	61	71
4-7	67	18.2	60	71
4-8	67	20.4	66	71
4-9	67	18.6	60	71
4-10	67	18.3	61	71
4-11	67	19.5	61	71
4-12	67	18.3	61	71
4-13	67	18.9	60	70
4-14	67	18.6	60	70
4-15	67	18.6	59	70
4-16	67	18.3	59	70
4-17	67	19.1	58	70
4-18	67	18.9	57	70
4-19	67	18.0	57	70
4-20	67	17.9	57	70
4-21	67	17.1	57	70
4-22	67	18.0	56	70
4-23	67	21.4	56	70
4-24	67	17.9	56	70
4-25	70	18.6	55	69
4-26	70	17.4	55	68
4-27	69	17.2	56	69
4-28	69	17.9	57	70
4-29	69	17.5	58	71
4-30	69	17.3	58	71

Water Consumption Records For May 1995

Date	① # on meter	Aug. gal.	② # cows milking	③ Total cows
5-1-95	69	18.1	58	72
5-2	70	17.7	59	72
5-3	69	19.2	59	72
5-4	69	18.5	59	72
5-5	68	17.6	59	72
5-6	—	—	59	72
5-7	Water meter		60	72
5-8	not being used		60	72
5-9	until 7-17-95		63	74
5-10			63	74
5-11			62	73
5-12			62	73
5-13			63	74
5-14			63	74
5-15			63	74
5-16			63	73
5-17			63	73
5-18			61	73
5-19			61	73
5-20			61	73
5-21			61	73
5-22			60	73
5-23			59	72
5-24			59	72
5-25			59	72
5-26			60	73
5-27			60	73
5-28			60	73
5-29			60	73
5-30			59	73
5-31			58	73

Water Consumption Records For June 1995

Date	#① on meter	Avg. gal	#② Cows milking	③ Total cows
6-1-95			58	73
6-2	Water meter		58	73
6-3	not being used		58	73
6-4	until 7-17-95		58	73
6-5			58	73
6-6			56	71
6-7			56	71
6-8			56	71
6-9			58	71
6-10			58	71
6-11			58	71
6-12			59	71
6-13			59	71
6-14			58	71
6-15			57	71
6-16			57	71
6-17			56	71
6-18			56	71
6-19			56	71
6-20			56	71
6-21			56	71
6-22			56	71
6-23			56	71
6-24			56	71
6-25			56	71
6-26			56	71
6-27			55	71
6-28			56	71
6-29			56	71
6-30			56	71