

REPORT
of
COMMITTEE ON EXAMINATION

This is to certify that we the undersigned, as a Committee of the Graduate School, have given William Earl Petersen final oral examination for the degree of Master of Science. We recommend that the degree of Master of Science be conferred upon the candidate.

Minneapolis, Minnesota

May 28 1917

W. H. Fildes
Chairman

C. C. Palmer

M. J. Dorsey.

REPORT
of
COMMITTEE ON THESIS

The undersigned, acting as a Committee of the Graduate School, have read the accompanying thesis submitted by William Earl Petersen for the degree of Master of Science. They approve it as a thesis meeting the requirements of the Graduate School of the University of Minnesota and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science.

I. H. Kildee
Chairman

C. C. Palmer

M. J. Lacey

Minneapolis, Minnesota

May 28 . 1917

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FACTORS INFLUENCING PRODUCTION
AS DEDUCED FROM THE REGISTER OF MERIT

A THESIS

Submitted to the Faculty of the Graduate School
of the University of Minnesota

by

WILLIAM EARL PETERSEN

In partial Fulfillment of the Requirements
for
The Degree of Master of Science

June

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INTRODUCTION

With the marvelous development of the dairy breeds, and the rivalry existing between the different breeds for the leadership in the dairy world, it becomes more important to know the factors that influence production of any breed that such breed may maintain or increase its pace toward higher production. There are a variety of factors which influence production. Feed, care, and management are important factors common to all breeds. Other factors, such as size, age, and inheritance are specific for a breed, and I believe very important. Volumes have been written upon feeding and caring for the dairy cow, but very little has been done on the influence of size, age, and inheritance upon production.

It is the purpose of this study to determine the influence of size, age, and inheritance upon the production of the Jersey breed. During the last few years there has been a great deal of discussion as to whether or not Jersey breeders should breed for a larger cow. Some maintain that increasing size does not increase production sufficiently to warrant such; others maintain that it does. It has also been a question with some as to when the Jersey cow reaches her maximum production. Is a cow producing 360 pounds of fat (the minimum requirement of all cows of five years or above, for entrance to the Register of Merit) when eight years old equal to one producing the same when five years old? And if not how much more or less should she produce?

Within the Jersey breed there are several families bred for certain types. Some have been bred for high production only and have consequently deviated a little from the show type. Others have been bred for show type and are not as high producers. It is now a question of how does the crossing of these types effect production.

The Register of Merit with its records of the age, milk, fat, per cent fat, and weight of the cows together with the American Jersey Cattle Club Herd Register, form a source of information which will help solve these problems and from which these deductions are made.

This study is divided into three parts. Part I consists of a discussion of the influence of size upon production. It deals with the influence of size upon the total years milk and fat production together with its influence upon the per cent fat. Part II deals with the influence of age upon the production of milk and fat and upon the per cent fat. Part III deals with the influence of inheritance upon production and takes up a discussion of the American bred sire compared with the imported sire and a study of the breeding of the leading Jersey cows.

Part I

THE INFLUENCE OF SIZE UPON PRODUCTION

When the 1200 pound two year old heifer (Old Mans Darling 2d) received the grand championship at the Oregon State Fair considerable comment was expressed in the Jersey Bulletin and Dairy World. Prof. True¹ scored this cow 96 points out of a possible 100. C. C. Fields² of New York would cut severely or disqualify animals when showing above 1000 pounds, the maximum weight allowed by the Jersey "scale of points." Harry O'Connor³ of New York agrees with Mr. Fields and further states that "there is prevalent in our Colleges the idea that in some undefined manner large size helps production." Mr. Withycombe⁴ recognizing the tendency toward the breeding of larger Jerseys, advocates dividing the breed into two classes, one the Island type or small Jersey, the other the American type or the large Jersey.

While the influence of size upon production has received considerable comment in the Jersey Bulletin and Dairy World no literature can be found upon the subject based upon actual statistics. It is the purpose of this investigation to study the relation of size of the Jersey cow to production from actual figures as found in the Register of Merit.

METHODS OF STUDY

All cows of five years of age or over, with yearly records were selected from the 1916 Register of Merit and divided into groups according to size. A group was made for each hundred pounds increase in weight so that there are seven groups. The

records of the yield of milk, butterfat and per cent of fat were recorded for each individual of each group and an average for each group was calculated. Table I of the appendix contains the average of the year's milk and fat production of each group together with the average per cent fat and the increase of each group over the preceding one for each of these.

From these records it is possible to study the effect of size upon the total production of milk and fat and also upon the per cent of fat. To facilitate the study of these tables, II, III, IV and V were constructed. Table II contains a classification of all mature cows of the 1916 Register of Merit grouped both as to their size and production of milk in thousands of pounds. This table shows the number of cows of a certain production in each group. Table III contains a similar classification of the groups with butterfat in hundreds of pounds.

As the number of cows in the different groups vary, it is impossible to tell at a glance, from these table, the proportion that fall into the various classes of production. Tables IV and V of the appendix were constructed to show this. They contain the percentage of cows that fall into the various groups instead of the numbers that are found in tables II and III.

Findings

The results will be discussed under three heads: first, the influence of size upon milk production; second, the influence of size upon fat production; and third, the influence of size upon the per cent fat.

THE INFLUENCE OF SIZE UPON MILK PRODUCTION

From table I of the appendix it will be seen that there is a decrease in the milk production of 326 pounds from the average of the 600 pound cow to the 700 pound cow. (Too much emphasis must not be placed upon this as there are only two cows in the group of 600 pounds). Group 3 (800 pounds) has an increase of 583 pounds over the group preceding. Group 4 (900 pounds) has an average increase of 587 pounds over the preceding group (3). Group 5 (1000 pound) has only a 229 pound increase over group 4, while group 6 (1100 pound) shows an increase of 919 pounds over group 5. This makes an average increase of 597 pounds for each of the four groups containing respectively the 8, 9, 10 and 11 hundred groups over the group preceding, which with the exception of the 1100 pound group is a uniform increase. Group 7 (1200 pound) shows a decrease of 20 pounds from the preceding group.

Many arguing for the 1000 pound limit of the Jersey cow maintain that the 1200 pound cow is a freak and that she is either a high or a very low producer. In as much as averages would not prove or disprove this theory, as an equal number of high and low producers would bring a medium average, table IV was constructed. This table shows the per cent of low or high producers of the various groups.

A study of table IV will reveal that in group 2 (700 pound) there is a comparative high per cent of low producers and no high producers while in group 3 (800 pound) there is a decrease in the per cent of low producers of nearly one half and a slight increase in higher producers and a small per cent of high producers.

In group 4 (900 pound) there is a similar decrease in the low producers and a further slight increase in the high producers but it will be seen that the big majority are found in the medium high producers. In group 5 (1000 pound) there is an increase in both extremes. The low producers are increased from 8% to 11%, and the high producers from 1.5% to 4.1%. In in group 6 (1100 pound) there is a still further increase in the extremes to 11% of low producers and 11% of high producers. In group 7 there is a still further increase to 25% of low producers and the same of high producers.

THE INFLUENCE OF SIZE UPON FAT PRODUCTION

From table I of the appendix it will be found that there is a fairly uniform increase of fat for each 100 pound increase in weight. There was an average increase of 28 pounds of fat per 100 pounds increase in weight. The maximum increase was of group 6 (1100 pound) over group 5 (1000 pound) with 33.69 pounds. The minimum increase was of group 5 (1000 pound) over group 4 (900 pound) with 19.25 pounds. The increases in fat production compare favorably to those of the milk except of group 7 (1100 pounds) where there was a decrease of 20 pounds of milk and an increase of 31. pounds of fat over group 6 (1100 pounds). This is accounted for by an increase of per cent of fat.

Studying the effect of size upon butter production from the same angle as the effect of size upon milk production or on the theory that large cows are freaks much the same results are found. Studying table V of the appendix it will be found in group 2 (700 pounds) that 42% of the cows produce less than 400 pounds fat and

none as high as 600 pounds. In group 3 (800 pounds) there is a decrease to 27% yielding below 400 pounds and a small per cent yielding as high as 6 and 7 hundred pounds of fat. In group 4 there is a further decrease in the per cent below 400 pounds and an increase in the per cent of those with 5, 6, and 7 hundred pounds. In group 5 (1000 pounds) there is again an increase of high producers and a decrease of low producers. Group 6 (1100 pounds) shows an increase of low producers from 22% of group 5 to 24%, a decrease of those producing 400 pounds and an increase of the high producers. Group 7 (1200 pounds) shows a further increase of the extreme low producers to 25% and the same increase of the high producers.

It will be seen from this table that the majority of cows fall in the group producing 400 pounds of fat per year, with the next greatest number producing less than 400 pounds and the third greatest number producing 500 pounds. The per cent of cows below 400 pounds of fat decreases with each 100 pounds increase in weight up to the 1100 pound cow when there is an increase in per cent, as also there is for the 1200 pound group. The per cent of cows producing 400 pounds of fat decreases up to the 1200 pound cow where there is a slight increase. With cows producing 500 pounds of fat there is an increase with each 100 pound increase in weight up to the 1200 pound cow where there is a slight increase. The per cent of cows producing 500 pounds fat increases up to the 1200 pound where there is a decrease. Of the highest producers there is a slight increase per 100 pound increase in weight up to the 1100 pound cow when there is a rather marked increase.

EFFECT OF SIZE ON PER CENT FAT

From table I of the appendix it will be seen that there is a decrease of .10% from the 600 pound to the 700 pound cow, an increase of .061% of the 800 pound cow over the 700 pound cow, and a decrease of .116%, an increase of .015%, a decrease of .066%, and an increase of .313%, respectively of groups 4 (900 pounds), 5 (1000 pounds), 6 (1100 pounds), and 7 (1200 pounds) over the preceding groups. With the exception of the 1200 pound cow the increase or decrease is very slight with a slightly greater decrease than increase.

SUMMARY

From the foregoing discussion it appears that there is a fairly uniform average increase of milk production for each 100 pounds increase of weight up to the 1200 pound cow when there is a decrease. On closer study it is found that there is an increasing higher percentage of low producing cows for each of the groups, 5 (1000 pounds), 6 (1100 pounds), and 7 (1200 pounds) over group 4 (900 pounds).

In the production of butterfat there is a fairly uniform average increase per 100 pounds increase in weight. On a more detailed study it is again found that the large cows have a larger percentage of low producers and a corresponding larger per cent of high producers.

With the exception of the 1200 pound cow there is a slight general decrease of per cent fat with the increase in size. However, the increase or decrease is not marked.

While it is realized that the number of cows in the 1200 pound group is small to draw any definite conclusions from, the findings point strongly toward upholding the theory that the large Jersey cow is an abnormal producer.

Part II

THE INFLUENCE OF AGE ON PRODUCTION

Eckles⁵ of Missouri says that a cow may be expected to produce as a two year old 70 per cent, as a three year old 80 per cent, and as a four year old 90 per cent of the milk and butter she will produce when mature. For yearly entries into the Register of Merit⁶, the Advanced Register of the Guernsey⁷ or the Advanced Register of the Holstein⁸, a cow must produce as a two year old 250.5 pounds of fat and for each day over two years of age when beginning the test, must produce an additional 0.10 pound of fat until when entered at five years, she must produce 360 pounds of fat. After five years of age no increase of fat is required.

All of the above seem to take for granted that a cow's maximum production is at five years of age. No literature was found upon the effect of age of the Jersey upon per cent fat.

The object of this investigation is to study the relation of age to production of the Jersey breed.

Methods of Study

All cows with three or more yearly entries in the Register of Merit were selected and their age, milk record, butterfat record, per cent fat, and weight were recorded for each entry together with their R. M. No. Then they were grouped, (designated as lots) according to their age at which the various entries were made. Due to the difficulty of grouping according to exact age, the lactation period was estimated from the records given, and they were entered accordingly. All groups are recorded with three ent-

ries only, designated in this paper as first, second, and third entry, which does not in all cases correspond to the same terms used in the Register of Merit. It was attempted to have a group with four entries, but a sufficient number could not be arranged in proper groups. Cows with four or more entries were sometimes entered in more than one lot, as the first, second, and third entries may be used in one group and the third, fourth, and fifth in another lot.

The following table explains the scheme of grouping by showing the lactation periods when the different entries of the various lots were made.

Table I

Showing Scheme of Division into Lots

Lot.No.	<u>Lactation Period of Which Entry was made</u>		
	First Entry	Second Entry	Third Entry
I	1	2	3
II	2	3	4
III	3	4	5
IV	4	5	6
V	5	6	7
VI	1	2	4
VII	1	3	4
VIII	1	when mature	next lactation period

In the appendix beginning with table VII will be found a series of five tables for each lot. The first three tables of each series contain respectively, a detailed entry of the first, second, and third entries for each cow of that lot. The fourth

table contains in details the increase of the second entry over the first entry and the fifth table contains in detail the increase of the third entry over the first. At the head of the first table of each series of tables is a short explanation of the lot.

Beginning with table XLVII is a series of six tables summarizing the milk and fat production and the per cent fat of all the lots. Tables XLVII, XLIX, and LI contain respectively the average of each lot for milk, fat, and per cent fat, recorded in columns of the same lactation period. Tables XLVIII, L, and LII contain respectively the increases of each lactation period over the preceding entry of milk, fat and per cent fat for each lot. At the end of each of these last three tables is calculated the average increase over the preceding lactation period; the average increase of each lactation period over the first; and the average per cent increase of each lactation period over the first of all lots. Also the average ages for each lactation period.

Findings

The findings will be discussed under two heads: 1, effect of age on milk production; 2, effect of age on fat production and per cent fat.

THE EFFECT OF AGE ON MILK PRODUCTION

The following table taken from table XLVIII of the appendix shows the effect of advancing age upon milk production. It shows the increase of each lactation period over the previous one.

Table II

Showing the Increase of Milk with the Advance of Age

	Lactation Period					
	Second	Third	Fourth	Fifth	Sixth	Seventh
Average Increase	2048	1705	479	1536	671	-916
Average % Increase over first lacta- tion period	28.9	53.2	59.8	81.6	90.9	78.0
Average age years and months	3-6	4-7	5-8	6-10	8-3	9-7

It will be seen that there is an increase of each lactation period over the preceding one up to the seventh lactation period, when there is a decrease. The greatest increase is of the second lactation period over the first with the next greatest increase of the third lactation period. The fourth lactation shows only a 59% increase over the first lactation period while the third shows a 53% increase and the fifth an 81% increase. The three lots from which the average of the fourth lactation period is calculated show a uniform average increase for that period. In case of the sixth lactation period there is a 90% increase over the first lactation period. Of the two lots from which the average of the sixth lactation period was made, one shows a decrease while the other shows the largest increase of any. For the average of the seventh lactation period there is only one group, which shows a marked decrease. Calculated on the same basis as Eckles⁹ considering the cow mature in the fourth lactation period, it is found that in the first lactation period (2 years, 3 months) they produced 63%; second lactation period (3 years, 6 months), 80%; and third lactation period (4 years, 7 months), 96% of what they pro-

duced when 5 years, 8 months.

Calculated on a basis of their highest production, they produced during the first lactation period 52%; during the second, 67%; during the third, 80%; during the fourth, 84%; and the fifth, 95% of the milk they produced during the sixth lactation period which was the highest.

THE EFFECT OF AGE ON FAT PRODUCTION, AND PER CENT FAT

Table L. of appendix shows the increase of fat of each lactation. It will be seen that the fat increases with the advance of age up to the seventh lactation period when there is a decrease as in the milk production. While there is an increase of fat production where ever there is an increase in milk production, the fat production did not increase in the same proportions as did the milk production. This is accounted for, when studying table LII, when it is found that the average per cent fat decreases in all but one year with the advance of age. Table III shows the comparative increase of milk and fat by showing the percentage of increase of each over the first lactation period. It also shows the decrease of per cent fat.

Table III

Showing the Comparative Increase or Decrease of Milk, Fat and Per Cent Fat with the Advance of Age over the First Lactation Period

	Lactation Period					
	Second	Third	Fourth	Fifth	Sixth	Seventh
% Increase of Fat over first lactation period	25.8	49.4	62.4	78.8	87.4	72.6
% Increase of milk over first lactation period	28.9	53.2	59.8	81.6	90.9	78.0
Decrease of % Fat from first lactation period	.013	.087	.157	.315	.275	.356
Average Age	3y 6m	4y 7m	5y 8m	6y 10m	8y 3m	9y 7m

Calculated on the basis of a five year old (Fourth lactation period) being a maximum producer, the cows of these lots were found to produce: during the first lactation period, 61%; during the second, 77%; during the third, 91% of the fat they produced during the fourth lactation period.

Calculated on the basis of their maximum production, it was found that they produced: 53% during the first lactation period; 67% during the second; 79% during the third; 86% during the fourth; and 95% during the fifth, of the fat they produced during the sixth lactation period, or the period of their maximum production.

It will be seen from table LII of the appendix that the per cent fat decreases slightly but steadily with the advance of age up to the sixth lactation period, when there is an increase over the preceding lactation period. It will also be noted that this period is the one of highest milk and fat production.

SUMMARY

It was found from the records of the Register of Merit that there was an increase of milk production for each lactation period up through the sixth period or the average age of 8 years and 3 months. During the fourth lactation period or when on the average 8 months older than when considered mature by the breed associations for registration, a cow was found to produce only 84% of the milk she produced when 8 years and 3 months old. It was also found that the increase in per cent of milk production from the first lactation period to the fourth was larger than found by Eckles.

The same was found of butterfat as of milk, except that the per cent of increase was not quite as high due to the decrease of per cent fat with the advance of age.

Part III

It is an acknowledged fact that inheritance plays an important part in production. This is shown by the wide variation in prices paid for breeding sired. A great many Jersey sires have been sold, for breeding purposes, for scarcely more than their value for meat, while prices are on record as high as \$25,000, which was paid for Golden Fern's Noble, considered the greatest bull the breed has ever known. It is true that these prices are sometimes paid to a large extent for show ring purposes rather than for production, yet it is safe to say that in the great majority of cases it is for production.

One can readily see why large sums are paid for a sire or dam with good records, but when large prices are paid for young calves, the question arises as to what extent the ancestry influences production.

There are several possible factors in inheritance which may influence production. The first and one that has received a great deal of discussion in the "Jersey Bulletin and Dairy World" is the relative influence of American bred and Island bred animals. A record is the influence of the immediate ancestry on production. Are cows out of parents with exceptionally high records better producers than cows out of parents with medium or lower records? A third factor may be the influence of the family breeding. What families or crossing of families give the best results?

Due to the limited time only a short discussion of inheritance will be given at this time. The discussion will be

taken up in two parts. The first will be a discussion on the influence of inheritance on production on the sire, and the record the influence of inheritance of production on the cow.

THE INFLUENCE OF INHERITANCE ON THE SIRE

The object of this investigation is to study the comparative influence of American bred and Island bred bulls on production.

Methods of Study

All bulls with 15 or more daughters in the Register of Merit were selected and grouped into two groups. The first group (Table LIII) contained the Island bred bulls and the second group (Table LIV) contains the American bred group. After each animal is given the total number of Register of Merit daughters, and after that the number of daughters classified as to production of 85% butter in hundreds of pounds.

Findings

From Table LIV of the appendix, it will be seen that the American bred bulls have the highest average number of daughters with 28.2 compared to 24.7. This may be partly accounted for by the fact that sometimes the imported bulls were several years of age when imported and thus had a shorted period of service.

Analyzing tables LIII and LIV of the appendix is found that the American sire produces a larger proportion of daughters below 500 pounds of butter and a smaller proportion producing 500 and 600 and 700 pounds. Table V shows a comparison of the two expressed in percentage.

Table V

Showing in Percentage the Daughters producing

	Butter in Hundreds of Pounds						
	below 500	500	600	700	800	900	1000
American	57.8	21.9	11.3	4.9	1.7	.7	.5
Imported	53.9	24.2	13.3	5.6	1.6	.8	

It is seen from this table that the imported sires have a higher number of higher producing daughters than the American sire. The difference, however, is not sufficient to draw any definite conclusions as the imported sires may have been given a better chance by being brought into better herds.

THE INFLUENCE OF INHERITANCE ON PRODUCTION OF COWS.

The five leading cows^a of each of the eight classes of the Jerseys were selected and their pedigree traced back to foundation stock or to imported cattle except in some cases of distant ancestry. This was placed on a chart, the blueprint of which is attached in the appendix. The chart was prepared in two sections placed side by side. The names of the leading cows are arranged in the second column of each chart. Immediately after the column of the names is a column of numerals designating the class to which each cow belongs. Following this is the tabulated pedigrees arranged somewhat into columns, one column for each generation. Immediately preceding each name in the first column of each part is found a group of names designating the families represented in that cow's pedigree.

a. This list was corrected up to October 1916. It contains only 36 cows as in four cases the same cow appeared in two classes.

In the chart there are two names following each name; the upper one is the name of the sire and the lower one the name of the dam. If an animal appears more than once in the pedigrees on the chart, instead of running the pedigree out further, a line is drawn from this to where it is run out in the first place. For example: Hood Farm Torona appears in the pedigree of Lass 40th of Hood Farm, where it is traced out. It appears again in the pedigree of Lass 47th of Hood Farm where, instead of tracing out again, a line is drawn up to where it appears in the pedigree of Lass 40th of Hood Farm. This method of crossing with lines saves space by averting duplication, and at the same time shows the common ancestry of the different animals.

Below each animal entered in the Register of Merit will be found its record. The record of the bulls are designated by their total number of R. M. Daughters and the number having a certain record. The record of the cows is entered in pounds of 80% butter, except of the cows of the second column where both fat and butter records together with milk record is given.

Discussion of Families and Strains

Before studying the breeding of the leading cows, it is necessary to have a short discussion of the different families. According to Prof. Kildee there are several leading families in the Jersey breed. These are the St. Lambert, the Sophie Tormentor The Golden Lad, and several others of not as much importance.

The St. Lambert family originated from the bull Stoke Pogis, who was imported from the Dauncey Herd of Jersey Island to this country. This family is noted for high production, but is

somewhat coarse and never has made much progress in the show ring. They are somewhat larger than the Island Jersey.

The Sophie Tormentor family originated from the bull Khedive and cow Angella, both of which are Island animals. This family is noted for show ring type and high production.

The Golden Lad family originated from Golden Lad on the Island of Jersey. It is known for its show ring type. Numbers of this family having carried off many prizes in both this country and on the Island. It is not noted for high production.

In addition to these three families may be given:

The Coomassie family, originating from the cow Coomassie, who was imported from the Island.

The Combination family originating from the bull Combination. This family is one of the oldest of the Jersey families and was noted for production during the Butter Test Era about 1880.

The Landseer family is likewise an old family originating from the bull Landseer.

The Rose Hudson family originated from the cow Rose Hudson.

The Signal family originated from the bull Signal.

The Sayda family often referred to as a strain originated with the cow Sayda. It is one of the modern families.

These are what is considered the leading families of the breed. Often others are named, but are here considered strains out of some of these families.

Findings

From the blueprint it will be seen that out of the 36 cows whose pedigrees appear, there 35 have St. Lambert blood;

20, Sophie Tormentor; 16, Landseer; 12, Coomassie; 11, Golden Lad; 4, The Owl; 4, Combination; 3, Rose Hudson; 1, Interest and 1, Signal blood in their pedigrees.

The following table shows the number of cows having various numbers of families and strains in their pedigrees.

Table IV

No. of Cows	No. of Families.
4	5
10	4
14	3
6	2
2	1

It is found that the majority of cows have at least three families represented in their pedigrees. While several or more families were represented in the pedigrees, there were still considerable line breeding practiced in nearly all of the pedigrees and in many cases inbreeding. It is noteworthy that in nearly all of the pedigrees, there was some breeding which could not be attributed to any of these families.

It was found that only one of the 36 cows was imported, one had an imported sire, and four had imported ancestors in the second generation back, and all but one of them have ancestry tracing back at least ten generations of American breeding.

Summary of Findings

It was found from the study of the pedigrees of the leading cows that:

- (1). The St. Lambert family was the most frequently

found in the pedigrees, with the Sophie Tormentor next and Coomasie third.

(2). The breeding of the leading cows was not confined (as a whole) to any one family but to several families.

(3) American breeding is the most prominent in the leading cows.

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- 3 Jersey Bulletin and Dairy World, Vol. XXXVI pp. 122
- 4 Jersey Bulletin and Dairy World, Vol. XXXV pp. 1838
- 5 Eckles' "Dairy Cattle and Milk Production" pp. 153
- 6 Jersey Register of Merit, 1916 pp. 5
- 7 Advanced Register of Guernsey
- 8 Holstein Fresian Advanced Register Year Book Vol. 24 pp. 8
- 9 Eckles' "Dairy Cattle and Milk Production"

Table I

Showing the Average Production of 650 Mature Cows of the
1916 Register of Merit - Grouped according to Size.

Group	Range of Weights	No. of cows	Ave. Wt.	Ave. Lbs. Milk	Increase Per Cwt.	Ave. Lbs. Fat	Increase Per Cwt.	Ave. % Fat	Increase Per Cwt.
1	600 - 699	2	677	8174.8		441.76		5.440	
2	700 - 799	28	751	7847.9	-326.9	418.50	-23.26	5.340	-.10
3	800 - 899	165	832	8434.6	583.7	450.71	32.21	5.401	+.061
4	900 - 999	259	924	9021.6	587.0	473.78	23.07	5.285	-.116
5	1000 -1099	143	1013	9250.9	229.3	493.03	19.25	5.300	+.015
6	1100 -1199	45	1117	10170.0	919.1	526.72	33.69	5.233	-.066
7	1200 -1300	<u>8</u>	1222	10150.0	- 20.0	558.48	31.76	5.546	+.313
		650							

Table II

Classification of all Mature Cows of The 1916 Register of Merit
 Showing No. of Records in Each of Various Groups for Milk Production

Group	Size	No. of cows in Each Group	Milk in Thousands of Pounds									
			below 5	5	6	7	8	9	10	11	12	above 13
1	600	2				1	1					
2	700	28			9	7	8	2	1	1		
3	800	165			29	42	48	25	11	5	4	1
4	900	259		2	20	66	76	32	26	19	6	12
5	1000	143		1	15	22	38	27	16	11	7	6
6	1100	45			5	5	8	8	6	5	3	5
7	1200	8			2		1	2	1			2

Table III

Classification of all Mature Cows of The 1916 Register of Merit

Showing No. of Records in Each of Various Groups for Butter Fat Production

Group	Size	No. of Cows in Each Group	Butter Fat in Hundreds of Pounds							
			below 4	4	5	6	7	8	9	
1	600	2	1	1						
2	700	28	12	15	1					
3	800	165	46	84	26	6	2			1
4	900	259	66	121	45	18	7	1		1
5	1000	143	32	57	33	14	3	3		1
6	1100	45	11	10	13	4	6	1		
7	1200	8	2	2	2				2	

Table IV

Classification of all Mature Cows of The 1916 Register of Merit
Showing Percentage of Total No. of Records of Various Groups

Group	Size	No. of Cows in Each Group	Milk in Thousands of Pounds								
			6	7	8	9	10	11	12	above 13	
1	600	2		50.0%	50.0%						
2	700	28	32.1%	25.0	28.5	7.1%	3.5%	3.5%			
3	800	165	17.5	25.4	29.0	15.1	6.6	3.0	2.4%	0.6%	
4	900	259	8.4	25.4	29.3	16.9	10.0	7.3	1.9	1.5	
5	1000	143	11.0	15.3	26.5	18.8	11.1	7.7	4.8	4.1	
6	1100	45	11.1	11.1	17.7	17.7	13.3	11.1	6.6	11.1	
7	1200	8	25.0		12.5	25.0	12.25				25.0

Table V

Classification of all Mature Cows of The 1916 Register of Merit
 Showing Percentage of Total No. of Records of Various Groups

Group	Size	No. of Cows in Each Group	Butter Fat in Hundreds of Pounds						
			below 4	4	5	6	7	8	9
1	600	2	50.0%	50.0%					
2	700	28	42.8	53.5	3.5%				
3	800	165	27.8	50.9	15.1	3.6%	1.2%		0.6%
4	900	259	25.4	46.7	17.3	6.9	2.7	0.3%	0.3
5	1000	143	22.3	39.8	23.0	9.7	2.0	2.0	0.6
6	1100	45	24.4	22.2	28.8	8.8	13.3	2.2	
7	1200	8	25.0	25.0	25.0			25.0	

Table VI

Weight and Record of Five Leading Mature Jersey Cows

Name	Weight	Milk	Fat	% Fat
Sophie 19th of Hood Farm	1050	17,557	999.75	5.69
Spermfield Owls Eva	1025	16,457	993.25	6.03
Eminents Bess	1000	18,782	962.77	5.126
Dosoris Park Lily	950	16,728	957.43	5.72
Jacoba Irene	950	17,253	952.90	5.52

Lot I contains cows with three consecutive entries in the Register of Merit corresponding to the first, second and third Lactation Period.

Table VII

Showing in Detail the First Entry (First Lactation Period) of Lot I

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
1163	2	3	301.1	5494.6	5.47	900
1206	1	11	537.8	10644.8	5.05	800
1370	1	10	345.3	6466.6	5.33	700
1435	2	7	427.31	9492.8	4.50	850
1511	2	0	316.2	6385.1	4.95	600
1561	2	5	295.0	5756.5	5.13	700
1736	2	5	431.8	7844.0	5.50	1010
1737	2	1	428.1	6868.0	6.23	720
1781	2	11	318.0	6226.0	5.10	850
1808	2	3	272.25	4374.1	6.22	800
2730	2	8	360.72	7654.0	4.71	850
295	2	5	304.05	5743.0	5.29	600
931	2	8	377.9	6923.1	5.46	805
967	2	5	430.4	7333.0	5.86	931
952	1	8	463.01	7585.1	5.75	825
1101	2	0	405.6	7460.1	5.43	850
1384	2	1	435.5	7465.0	5.83	700
1479	2	0	255.3	4063.3	6.28	760
2085	2	1	312.1	4852.1	6.43	750
1738	2	1	400.18	7411.7	5.40	890
1811	2	1	332.82	6269.1	5.30	750
2086	2	0	323.69	5942.5	5.44	675
2184	2	5	403.61	8061.8	5.00	800
2271	2	6	349.51	6024.5	5.80	800
2309	1	8	435.4	8739.6	4.98	800
2327	2	1	308.1	5186.1	5.94	750
2403	2	4	357.23	6200.0	5.76	875
2644	2	4	305.7	5212.0	5.86	850
2676	2	2	303.8	5227.0	5.51	700
5101	2	7	299.08	6291.1	4.75	800
840	1	10	316.61	6927.8	4.57	800
697	2	4	514.6	10475.0	4.93	600
703	2	6	426.75	8313.0	5.13	700
793	2	5	426.1	7740.7	5.50	700
909	2	10	370.8	6284.2	5.90	935
1441	2	3	349.61	6295.0	5.59	840
813	2	5	426.1	7740.7	5.50	700
Average	2	3	384.3	6835.7	5.453	783

Table VIII

Showing in Detail the Second Entry (Second Lactation Period)
of Lot I

R.M.No.	Age		Fat	Milk.	% Fat	Weight
	Yrs.	Mos.				
1163	3	7	438.90	7932.7	5.53	900
1206	3	2	504.10	10049.7	5.01	950
1370	3	1	530.90	11012.3	4.82	750
1435	3	10	523.52	12563.0	4.16	950
1511	3	6	440.61	8944.9	4.86	800
1561	3	10	443.80	8549.7	5.19	950
1736	3	7	451.20	8637.4	5.22	1010
1737	3	4	625.70	10292.4	6.08	871
1781	3	11	431.80	8809.7	4.90	900
1808	3	3	312.40	5022.3	6.22	850
2730	3	11	521.51	10597.0	4.92	875
295	3	9	511.95	8927.0	5.73	1000
931	3	11	416.60	7722.7	5.39	940
967	3	11	551.50	8856.1	6.22	1175
952	2	10	548.20	8995.4	6.09	950
1101	3	3	462.40	8527.6	5.42	900
1384	3	4	585.20	10186.4	5.74	735
1479	3	0	326.18	5375.2	6.06	850
2085	3	2	547.28	8670.6	6.31	900
1738	4	0	515.80	10208.0	5.05	1090
1811	3	5	380.10	6860.0	5.54	850
2086	3	2	348.03	6370.0	5.46	850
2184	3	7	504.20	9916.3	5.08	900
2271	3	8	445.80	7661.2	5.81	900
2309	2	11	609.50	11891.1	5.12	1000
2327	3	2	400.10	7003.6	5.71	800
2403	3	7	362.25	6501.0	5.57	850
2644	3	4	344.60	6005.9	5.74	875
2676	3	2	356.10	6112.5	5.82	900
5101	3	11	459.73	9340.6	4.92	850
840	3	6	424.28	9930.9	4.27	900
697	3	7	747.30	15362.0	4.86	650
703	3	10	619.20	11596.0	5.33	750
793	4	0	383.30	7483.0	5.12	1000
909	3	11	443.48	8259.0	5.37	1020
1441	4	1	548.60	10345.6	5.30	900
813	4	0	383.30	7483.0	5.12	1000
Average	3	6	471.60	8862.1	5.38	875

Table IX

Showing in Detail the Third Entry (Third Lactation Period)
of Lot I

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
1163	4	8	430.26	7796.3	5.52	950
1206	4	3	506.25	10867.1	4.65	1050
1370	4	1	607.50	12065.6	5.03	750
1435	5	1	563.60	12246.4	4.59	950
1511	4	11	436.40	8728.7	4.99	900
1561	4	10	453.60	9457.0	4.77	900
1736	4	9	619.40	12525.0	4.95	1078
1737	4	6	696.50	11842.0	5.88	925
1781	5	0	504.60	10415.8	4.84	900
1808	4	3	350.20	5459.6	6.41	850
2730	5	1	690.90	14280.0	4.83	950
295	5	2	675.01	12131.0	5.56	900
931	5	4	517.02	8818.5	5.87	950
967	5	2	736.00	13174.0	5.58	1230
952	3	11	624.10	9696.0	6.43	1000
1101	4	5	590.50	11243.0	5.25	900
1384	4	8	708.54	12458.2	5.60	800
1479	4	2	380.50	5941.0	6.40	900
2085	4	4	617.80	10376.0	5.95	1050
1738	5	1	659.03	13601.1	4.85	1075
1811	4	9	445.00	8478.0	5.55	900
2086	4	2	446.17	7897.1	5.66	850
2184	5	5	644.99	13225.1	4.88	900
2271	5	2	504.31	9154.0	5.55	950
2309	4	3	653.48	12543.6	5.21	1100
2327	4	4	534.58	9451.4	5.66	900
2403	4	10	374.52	7052.3	5.31	900
2644	4	7	353.15	6261.4	5.62	850
2676	4	2	433.73	7462.9	5.81	1000
5101	5	2	571.63	11965.3	4.78	900
840	4	7	458.09	10864.7	4.21	950
697	5	10	854.80	18661.0	4.58	800
703	5	4	713.40	10621.0	4.83	850
793	4	11	681.75	12263.0	5.22	1100
909	5	2	600.50	10682.8	5.62	950
1441	5	8	586.90	10414.5	5.43	900
813	4	11	641.75	12263.0	5.22	1100
Average	4	9	566.63	10609.9	5.313	944

Table X
Showing in Detail the Increase of Second Entry
over First Entry of Lot I

R.M.No.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
1163	1	4	137.80	45.7	.06
1266	1	3	- 33.70	- 6.2	-.04
1370	1	3	185.60	53.7	-.51
1435	1	3	96.21	22.5	-.34
1511	1	6	124.41	39.0	-.09
1561	1	5	158.80	53.8	.06
1736	1	2	19.40	4.4	-.28
1737	1	3	197.60	46.0	-.15
1781	1	0	113.80	35.7	-.20
1808	1	0	40.15	14.7	.00
2730	1	2	154.79	42.2	.21
295	1	4	207.46	68.2	.44
931	1	2	38.70	10.2	-.07
967	1	6	121.10	28.1	.36
952	1	2	85.19	18.3	.34
1101	1	3	56.80	14.0	-.01
1384	1	3	149.20	34.3	-.09
1479	1	0	70.88	27.7	-.22
2085	1	1	235.18	75.3	-.12
1738	1	9	115.62	28.3	-.35
1811	1	4	47.28	14.2	.24
2086	1	2	24.34	7.2	.02
2184	1	2	100.60	24.9	.08
2271	1	2	96.29	27.5	.01
2309	1	3	174.10	39.9	.14
2327	1	1	92.00	29.8	-.23
2403	1	3	5.02	1.4	-.19
2644	1	0	38.90	12.7	-.12
2676	1	0	52.30	17.2	.01
5101	1	4	160.65	53.7	.67
840	1	8	107.67	34.0	-.20
697	1	3	232.70	45.2	-.07
703	1	4	192.45	45.1	.20
793	1	7	42.80	10.0	-.38
909	1	1	72.68	19.6	-.53
1441	1	10	198.99	56.9	-.29
813	1	7	- 42.80	-10.0	-.38
No. Showing Increase			35	35	14
No. showing Decrease			2	2	22
Average Increase	1	3	87.30	22.7	-.073
Maximum Increase			235.18	75.3	.67
Maximum Decrease			42.80	10.0	.53

Table XI

Showing in Detail the Increase of Third Entry
over First Entry of Lot I

R.M.No.	Age*		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
1163	2	5	129.16	42.8	-.19
1266	2	6	- 31.55	- 5.8	-.40
1370	1	3	262.20	79.3	-.30
1435	2	6	136.29	31.8	.09
1511	2	11	120.20	38.0	.04
1561	2	5	158.60	53.7	-.36
1736	2	4	187.60	43.2	-.55
1737	2	5	268.40	62.6	-.35
1781	2	1	186.60	58.6	-.26
1808	2	0	83.95	30.8	.21
2730	2	5	360.72	91.5	.12
295	2	9	304.05	81.9	.27
931	2	8	139.12	36.8	.41
967	2	9	305.60	70.1	-.28
952	2	3	161.09	34.7	.68
1101	2	5	184.90	45.5	-.18
1384	2	7	273.04	62.6	-.23
1479	2	2	125.20	49.0	.12
2085	2	3	305.70	97.9	-.48
1738	3	0	258.85	64.6	-.55
1811	2	8	112.18	33.7	.25
2086	2	2	233.69	52.3	.22
2189	3	0	241.38	59.8	-.12
2271	2	8	154.80	44.2	-.25
2309	2	7	218.48	50.0	.29
2327	2	3	226.08	73.5	-.28
2403	2	6	23.29	6.4	-.45
2644	2	3	46.45	15.1	-.24
2676	2	0	129.30	42.7	.00
5101	2	7	272.55	91.1	.03
840	2	9	141.48	30.8	-.36
697	3	6	340.20	66.1	-.35
703	2	10	286.65	67.1	-.29
793	2	6	255.65	59.9	-.28
909	2	2	229.70	61.9	-.28
1441	3	5	237.29	67.8	-.16
813	2	6	215.65	50.6	-.28
No. showing Increase			36	36	12
No. showing Decrease			1	1	24
Average Increase	2	6	182.33	47.4	-.14
Maximum Increase			340.20	97.9	.68
Maximum Decrease			31.55	5.8	.55

Lot II contains all cows with three consecutive entries in the Register of Merit corresponding to the second, third and fourth lactation periods.

Table XII

Showing In Detail First Entry (Second Lactation Period) of Lot II.

R.M.No.	Age		Fat	Milk	% Fat	Weight.
	Yrs.	Mo.				
2069	3	2	468.3	9027.0	5.18	950
1861	3	11	549.46	11101.1	4.94	900
2098	3	10	527.25	9274.5	5.68	1200
2136	3	9	346.27	6418.7	5.30	825
1165	3	7	428.80	7902.0	5.42	800
896	2	11	386.90	7357.0	5.26	840
2100	3	11	346.10	7553.0	4.58	950
2329	3	9	318.10	5992.6	5.30	950
2506	3	5	540.20	7821.0	6.90	1000
1065	3	10	346.70	6467.9	5.36	920
594	3	11	334.26	6630.9	5.04	810
934	3	11	402.40	7289.0	5.52	935
563	3	3	449.64	8159.0	5.51	780
1052	3	11	624.10	9696.0	6.43	1000
1101	3	3	462.40	8527.6	5.42	900
1384	3	4	585.20	10186.4	5.74	735
1479	3	0	326.18	5375.2	6.06	850
2085	3	2	547.28	8670.6	6.31	900
931	3	11	416.60	7722.7	5.39	940
1565	3	7	377.60	5843.8	6.46	980
1751	3	0	399.95	6831.8	5.85	950
2067	3	3	413.26	7089.7	5.82	800
572	3	9	428.76	9259.2	4.63	800
Average	3	6	435.90	7834.6	5.569	900.6

Table XIII

Showing in Detail Second Entry (Third Lactation Period) of Lot II

R.M.No.	Yrs.	Mos.	Fat	Milk	% Fat	Weight.
2069	4	4	461.10	9118.7	5.05	950
1861	5	2	664.60	13458.0	4.93	1050
2098	5	2	456.90	8015.3	5.07	1060
2136	4	10	467.80	8761.0	5.39	825
1165	4	11	503.60	9385.2	5.36	825
896	4	1	470.80	8862.0	5.31	900
2100	4	11	535.71	11947.9	4.48	1000
2329	5	0	489.95	9159.0	5.34	1000
2506	4	6	589.75	8544.5	6.90	1000
1065	5	0	428.66	8733.0	4.90	940
594	5	8	395.48	8774.2	4.50	820
934	5	0	570.40	10752.0	5.30	1000
563	4	6	533.00	10014.8	5.33	800
1052	5	1	659.35	10607.7	6.21	1000
1101	4	5	590.50	11243.0	5.25	900
1384	4	8	708.54	12582.0	5.60	800
1479	4	2	380.50	5941.0	6.40	900
2085	4	4	617.80	10376.0	5.95	1050
931	5	4	517.02	8818.5	5.87	950
1565	4	9	451.60	7033.10	6.42	980
1751	4	5	560.49	9106.7	6.15	1102
2067	4	3	445.60	7817.8	5.69	800
572	5	6	459.34	9523.0	4.82	980
Average	4	9	519.56	9503.2	5.487	940.5

Table XIV

Showing in Detail Third Entry (Fourth Lactation Period) of Lot II

R.M. No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
2069	5	6	416.20	8097.1	5.14	950
1861	6	5	614.57	11817.1	5.20	1100
2098	6	5	409.99	7747.8	5.29	1050
2136	6	0	380.04	7411.3	5.13	900
1165	6	2	478.30	8769.4	5.45	850
896	5	2	610.75	11412.0	5.35	900
2100	6	2	583.29	12791.5	4.56	1075
2329	6	3	581.96	10752.6	5.41	1100
2506	5	7	759.75	10641.8	7.14	1150
1065	6	3	429.43	8492.8	5.05	950
594	6	10	523.19	11318.4	4.62	825
934	6	4	544.00	10629.0	5.11	925
563	5	9	551.60	10015.0	5.58	875
1052	6	4	567.42	9827.0	5.77	1000
1101	5	9	486.70	9953.5	4.89	950
1384	5	10	755.26	12734.0	5.96	900
1479	5	11	396.85	7046.0	5.55	900
2085	5	5	587.33	9903.0	5.93	1095
931	6	7	597.20	10230.6	5.83	925
1565	5	9	543.70	8927.1	6.08	900
1751	6	2	711.80	11647.6	6.11	1030
2067	5	4	483.72	4647.6	5.59	800
572	6	8	516.65	10767.0	4.79	985
Average	6	0	544.88	9981.7	5.457	962.3

Table XV

Showing in Detail the Increase of Second Entry over First
of Lot II

R.M.No.	Age		Fat	% Increase % Fat	% Fat
	Yrs.	Mos.			
2069	1	2	- 7.20	- 1.7	-.13
1861	1	3	115.14	20.9	.01
2098	1	4	- 70.35	-13.3	-.61
2136	1	1	121.53	35.0	.09
1165	1	4	74.80	17.4	-.06
896	1	2	83.90	21.6	.05
2100	1	0	189.61	54.7	-.10
2329	1	3	171.85	54.0	.04
2506	1	1	49.55	9.0	.00
1065	1	2	81.96	23.6	-.46
594	1	9	61.22	18.3	-.54
934	1	1	168.00	41.7	-.22
563	1	3	80.36	17.7	.03
1052	1	2	35.25	5.6	-.22
1101	1	2	128.10	27.7	-.17
1384	1	4	123.34	21.2	-.14
1479	1	2	54.32	16.6	.34
2085	1	2	70.52	12.8	-.36
931	1	5	100.42	24.1	.48
1565	1	2	74.00	19.0	-.04
1751	1	5	100.54	40.1	.30
2067	1	0	32.34	7.8	-.13
572	1	9	30.58	7.0	.19
Number showing Increase			21	21	9
Number showing Decrease			2	2	13
Average Increase	1	3	83.66	21.2	.082
Maximum Increase			189.61	54.7	.480
Maximum Decrease			70.35	13.3	.61

Table XVI

Showing in Detail Increase of Third Entry over First of Lot II

R.M. No.	Age Yrs. Mos.	Fat	% Increase % Fat	% Fat
2069	2 4	-52.10	-11.1	-.04
1861	2 6	65.11	11.8	.26
2098	2 7	-117.51	-22.2	-.39
2136	2 3	33.77	9.7	.17
1165	2 7	49.80	11.6	.03
896	2 3	323.85	51.6	.09
2100	2 3	237.19	68.5	-.02
2329	2 6	263.86	82.9	.11
2506	2 2	219.55	40.6	.24
1065	2 5	82.73	23.8	-.31
594	2 11	188.93	56.5	-.42
934	2 5	141.60	35.1	-.41
563	2 6	101.96	22.6	.07
1052	2 5	-56.68	-9.0	-.76
1101	2 6	24.30	5.2	-.53
1384	2 6	170.06	29.0	.22
1479	2 11	70.67	21.4	-.51
2085	2 3	40.05	7.3	.62
931	2 8	180.60	43.3	.44
1565	2 2	166.10	43.9	-.38
1751	3 2	311.85	77.9	.26
2067	2 1	70.46	17.0	-.23
572	2 11	187.89	43.8	.16
Number Showing Increase		20	20	11
Number Showing Decrease		3	3	12
Average In- Crease	2 6	108.98	25.0	.112
Maximum Increase		263.86	82.9	.62
Maximum Decrease		117.51	22.2	.76

Lot III contains all cows with three consecutive entries in the Register of Merit, corresponding to third, fourth and fifth Lactation periods.

Table XVII

Showing in Detail First Entry (Third Lactation Period) of Lot III

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
2095	4	2	568.50	9664.0	5.88	900
2354	4	3	465.69	7983.5	5.83	800
770	4	6	528.38	10644.3	4.96	750
1216	4	5	586.80	10639.0	5.51	1000
896	4	1	470.80	8862.0	5.31	900
207	4	10	423.70	8871.0	4.77	800
2731	4	0	522.35	9197.0	5.68	800
Average	4	3.8	509.46	9408.6	5.42	850

Table XVIII
 Showing in Detail Second Entry (Fourth Lactation Period)
 of Lot III

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
2095	5	5	447.80	7613.0	5.88	950
2354	5	3	372.97	6354.8	5.87	800
770	5	11	473.55	9457.3	5.00	750
1216	5	6	636.10	12306.6	5.16	950
896	5	2	610.75	11412.0	5.35	900
207	5	11	464.60	9642.0	4.82	800
2731	5	1	699.60	12835.0	5.54	950
Average	5	5	529.33	9945.8	5.371	871.4

Table XIX

Showing in Detail Third Entry (Fifth Lactation Period) of Lot III

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
2095	6	7	402.58	7050.3	5.71	850
2354	6	2	370.62	6667.5	5.51	850
770	6	11	505.15	11174.7	4.52	850
1216	6	11	692.75	15156.2	4.57	950
896	6	6	656.10	12256.5	5.35	975
207	7	1	507.25	10196.0	4.97	925
2731	6	5	729.47	13376.0	5.45	1000
Average	6	7.9	551.98	10839.6	5.154	914.2

Table XX

Showing in Detail the Increase of Second Entry
over First Entry of Lot III

R.M.No.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
2095	1	3	-120.70	-21.2	.00
2354	1	0	- 92.72	-19.9	.04
770	1	5	- 54.83	-10.3	.04
1216	1	1	49.30	8.0	-.35
896	1	1	139.95	29.7	.04
207	1	1	40.90	9.6	.05
2731	1	1	177.25	33.9	-.14
No. showing Increase			4	4	4
No. showing Decrease			3	3	2
Average Increase			19.87	3.901	-.049
Maximum Increase			177.25	33.9	.05
Maximum Decrease			120.70	21.2	.35

Table XXI

Showing in Detail the Increase of Third Entry
over First Entry of Lot III

R.M.No.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
2095	2	5	-165.92	-29.0	-.07
2354	1	11	- 95.07	-20.4	-.32
770	2	5	- 23.23	- 4.3	-.44
1216	2	6	105.95	18.0	-.94
896	2	5	185.30	39.3	.04
207	2	3	83.55	19.7	.20
2731	2	5	207.12	39.6	-.23
No. showing Increase			4	4	2
No. showing Decrease			3	3	5
Average Increase			42.10	8.34	-.266
Maximum Increase			207.12	39.6	.20
Maximum Decrease			165.92	29.0	.94

Lot IV contains all cows with three consecutive entries in the Register of Merit, corresponding to fourth, fifth and sixth lactation periods.

Table XXII

Showing in Detail First Entry (Fourth Lactation Period) of Lot IV

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
3893	5	4	382.11	7740.9	4.93	1050
3892	5	6	547.57	11518.1	4.75	1000
1091	5	11	388.51	7517.0	5.16	920
1562	5	3	368.18	7014.6	5.25	748
490	5	11	631.65	11438.0	5.48	1000
2023	5	3	610.10	12357.0	4.93	1100
1440	5	10	360.60	8165.5	4.41	980
931	5	4	517.02	8816.5	5.87	950
Average	5	6	475.71	9321.2	5.09	968.5

Table XXIII

Showing in Detail Second Entry (Fifth Lactation Period) of Lot IV

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
3893	6	6	407.66	8409.9	4.81	1100
3892	6	6	663.10	13791.9	4.81	1000
1091	7	6	504.90	10043.5	5.02	925
1562	6	6	402.90	7954.0	5.06	750
490	7	0	620.90	11555.0	5.37	950
2023	6	6	770.80	15413.0	4.50	1145
1440	6	10	650.05	14606.0	4.45	980
931	6	7	597.20	10236.0	5.83	925
Average	6	8.9	577.18	11501.1	4.891	971.8

Table XXIV

Showing in Detail Third Entry (Sixth Lactation Period) of Lot IV

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
3893	8	1	393.74	8359.6	4.71	1100
3892	7	9	632.09	13316.8	4.75	1050
1091	8	9	513.26	10093.0	5.08	1000
1562	7	10	386.30	7814.0	4.94	800
490	8	2	566.05	10628.0	5.32	950
2023	7	10	511.19	10656.2	4.80	1150
1440	8	1	618.80	14659.0	4.22	975
931	7	9	549.42	9642.0	5.70	950
Average	8	0	521.35	10646.0	4.94	994.3

Table XXV
 Showing in Detail the Increase of Second Entry
 over First Entry of Lot IV

R.M.No.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
3893	1	2	25.55	6.6	-.12
3892	1	0	116.03	21.1	.06
1091	1	7	116.39	29.9	-.14
1562	1	3	34.72	9.4	-.19
490	1	1	10.75	1.7	-.11
2023	1	3	160.70	26.3	-.43
1440	1	0	289.99	80.5	-.04
931	1	3	80.18	15.6	-.04
No. showing Increase			8	8	1
No. Showing Decrease			0	0	7
Average Increase	1	2	101.47	21.3	-.199
Maximum Increase			289.99	80.5	.06
Maximum Decrease					.43

Table XXVI
Showing in Detail the Increase of Third Entry
over First Entry of Lot IV

R.M.No.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
3893	2	9	11.63	3.0	-.22
3892	2	3	84.52	15.4	.00
1091	2	10	134.75	34.6	-.04
1562	2	7	18.12	4.9	-.31
490	2	3	65.60	11.5	-.16
2023	2	7	98.91	16.2	-.13
1440	2	3	258.20	71.6	-.19
931	2	5	32.40	6.2	-.17
No. showing Increase			8	8	0
No. showing Decrease			0	0	7
Average Increase	2	6	45.64	9.59	-.146
Maximum Increase			258.20	71.6	
Maximum Decrease					.31

Lot V contains all cows with three consecutive entries in the Register of Merit, corresponding to fifth, sixth and seventh lactation periods.

Table XXVII

Showing in Detail First Entry (Fifth Lactation Period) of Lot V

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
763	6	7	590.18	11274.0	5.23	1000
1956	6	10	363.91	6808.5	5.34	1125
1440	6	10	650.05	14606.0	4.45	980
3893	6	6	407.66	8409.0	4.81	1100
1253	6	10	527.60	9989.0	5.28	950
470	7	4	597.10	10859.0	5.49	1000
1566	7	7	493.14	7958.0	6.19	940
38	8	11	497.50	10013.0	4.97	990
204	8	0	427.50	9125.0	4.68	1010
Average	7	3	505.97	9893.4	5.16	1010.5

Table XXVIII

Showing in Detail Second Entry (Sixth Lactation Period) of Lot V

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
763	7	11	816.08	15734.0	5.25	1000
1956	7	10	550.10	10617.0	5.18	900
1440	8	1	618.80	14659.0	4.22	975
3893	8	1	393.74	8359.0	4.71	1100
1253	8	0	627.40	11383.0	5.51	950
470	8	7	993.25	16457.0	6.03	1025
1566	8	11	508.70	8212.0	6.19	1000
38	10	1	626.20	12533.0	4.99	975
204	9	0	508.00	10875.0	4.67	850
Average	8	6	626.69	12092.1	5.193	975

Table XXIX

Showing in Detail Third Entry (Seventh Lactation Period) of Lot V

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
763	9	5	683.30	13991.0	4.88	1000
1956	9	3	556.53	11069.0	5.03	900
1440	9	6	450.65	10869.0	4.15	975
3893	9	2	455.42	9838.4	4.63	1100
1253	9	5	581.33	10335.0	5.62	900
470	10	1	709.61	11666.0	6.08	950
1566	10	6	590.64	10083.0	5.86	900
38	11	3	588.74	11624.0	5.06	1000
204	10	3	522.30	11105.0	4.70	900
Average	9	7	570.94	11175.6	5.112	958.3

Table XXX

Showing in Detail the Increase of Second Entry
over First Entry of Lot V

R.M.No.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
763	1	4	225.90	38.2	.02
1956	1	0	186.19	51.1	-.16
1440	1	3	- 31.25	- 4.8	-.23
3893	1	7	- 13.92	- 3.4	-.10
1253	1	2	99.80	18.9	.27
470	1	3	396.25	66.3	.54
1566	1	4	- 14.44	- 2.8	.00
38	1	2	164.70	33.1	.02
204	1	0	80.50	18.8	-.01
No. showing Increase			6	6	4
No. showing Decrease			3	3	4
Average Increase	1	3	120.72	23.85	.033
Maximum Increase			396.25	66.3	.54
Maximum Decrease			31.25	4.8	.23

Table XXXI

Showing in Detail the Increase of Third Entry
over First Entry of Lot V

R.M.No.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
763	2	10	93.12	15.7	-.35
1956	2	5	192.52	52.8	-.31
1440	2	8	-199.40	-30.6	-.30
3893	2	8	47.72	11.7	-.18
1253	2	7	53.73	10.1	.34
470	2	9	112.51	18.8	.59
1566	2	11	97.50	19.7	-.33
38	2	4	91.24	18.3	.09
204	2	3	94.80	22.1	.02
No. showing Increase			8	8	4
No. showing Decrease			1	1	5
Average Increase	2	4	64.97	12.83	-.05
Maximum Increase			192.52	52.8	.59
Maximum Decrease			199.40	30.6	.35

Lot VI contains all cows of the Register of Merit with two consecutive entries of the first and second lactation period and a third entry of about the fourth lactation period.

Table XXXII

Showing in Detail First Entry (First Lactation Period) of Lot VI

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
820	2	2	353.00	6622.0	5.33	700
1244	2	6	552.00	9231.0	5.97	800
2847	1	10	279.80	5490.0	5.08	820
461	2	3	411.40	8639.0	4.76	960
581	2	4	425.01	7442.0	5.71	800
623	2	3	349.90	6586.0	5.01	900
752	2	4	301.40	5724.0	5.26	740
792	2	8	403.00	8379.0	4.81	980
Average	2	3	384.51	7264.1	5.241	837

Table XXXIII

Showing in Detail Second Entry (Second Lactation Period) of Lot VI

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
820	4	1	488.04	9080.0	5.37	800
1244	3	9	685.80	11410.0	6.01	800
2847	3	11	401.40	7894.0	5.08	950
461	3	5	526.90	11767.3	4.48	950
581	3	8	636.60	10391.0	6.12	800
623	3	5	405.90	7956.0	5.10	900
752	3	5	361.75	7100.0	5.30	900
792	3	11	439.10	9078.0	4.83	990
Average	3	8	493.18	9334.5	5.287	886

Table XXXIV

Showing in Detail Third Entry (Fourth Lactation Period) of Lot VI

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
820	7	0	679.25	12540.0	5.41	800
1244	5	11	824.60	14861.0	5.54	1050
2847	6	2	497.64	9485.0	5.25	950
461	7	10	583.40	12308.0	4.74	1000
581	6	1	634.50	11371.9	5.57	850
623	6	6	393.80	7425.0	5.30	850
752	6	7	425.50	7878.0	5.40	850
792	6	6	590.50	11829.0	4.14	1000
Average	6	6	568.54	10962.2	5.169	919

Table XXXV

Showing in Detail the Increase of Second Entry
over First Entry of Lot VI

R.M.NO.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
820	1	11	135.04	38.2	.04
1244	1	3	113.18	20.6	.04
2847	2	1	121.60	43.4	.00
461	1	2	115.50	28.0	-.28
581	1	4	215.90	49.7	.41
623	1	3	56.00	16.0	.09
752	1	1	60.35	20.0	.04
792	1	3	36.10	8.9	.02
No. showing Increase			8	8	6
No. showing Decrease			0	0	1
Average Increase	1	5	108.67	28.6	.046
Maximum Increase			215.90	49.7	.41
Maximum Decrease					-.28

Table XXXVI

Showing in Detail the Increase of Third Entry
over First Entry of Lot VI

R.M.No.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
820	4	9	326.25	92.1	.08
1244	3	5	272.60	49.3	-.43
2847	4	4	217.84	77.8	.17
461	5	7	172.00	41.8	-.02
581	3	9	209.49	63.4	-.14
623	4	3	43.90	12.5	.29
752	4	3	124.10	41.1	.14
792	3	10	187.50	46.7	-.67
No. showing Increase			8	8	4
No. showing Decrease			0	0	4
Average Increase			184.03	47.8	-.72
Maximum Increase			326.25	92.1	.29
Maximum Decrease					-.67

Lot VII contains all cows having three entries in the Register of Merit, the first being of the first lactation period, the second entry of about the third lactation period and the third entry of about the fourth lactation period.

Table XXXVII

Showing in Detail First Entry (First Lactation Period) of Lot VII

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
1132	2	7	321.20	6253.0	5.13	875
792	2	8	403.70	8379.0	4.81	980
1064	2	4	271.21	5033.0	4.38	916
1939	2	11	405.67	7703.0	5.26	800
1953	2	3	374.15	6363.0	5.89	800
700	2	5	441.80	8563.0	5.15	700
845	1	10	387.40	6393.0	6.05	900
912	2	10	285.40	5910.0	4.83	900
Average	2	3	361.31	6824.6	5.312	858

Table XXXVIII

Showing in Detail Second Entry (Third Lactation Period) of Lot VII

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs	Mos.				
1132	4	10	359.98	7041.0	5.11	910
792	5	2	535.90	10943.0	4.89	900
1064	4	3	416.24	7888.0	5.27	950
1939	4	9	653.50	12737.0	5.11	900
1953	4	2	391.90	7434.0	5.27	1000
700	4	9	542.51	9576.0	5.66	850
845	4	3	371.90	6276.0	5.92	1000
912	5	1	444.20	9391.0	4.68	950
Average	4	8	464.51	8910.7	5.239	932

Table XXXIX

Showing in Detail Third Entry (Fourth Lactation Period) of Lot VII

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
1132	6	3	399.91	6936.0	5.77	1000
792	6	6	590.30	11829.0	4.14	1000
1064	5	4	436.21	8515.0	5.12	975
1939	6	0	666.76	13556.0	4.91	980
1953	5	2	367.12	6997.0	5.25	1000
700	6	1	786.70	15551.0	5.06	850
845	6	0	728.00	11887.0	6.12	1000
912	6	2	555.25	12480.0	4.47	950
Average	5	11	566.28	9334.5	5.105	969

Table XL
Showing in Detail the Increase of Second Entry
over First Entry of Lot VII

R.M.No.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
1132	2	3	38.78	12.0	-.02
792	2	6	132.20	32.7	.08
1064	1	11	145.03	53.4	-.11
1934	1	10	247.83	53.2	-.15
1953	1	11	17.75	4.7	-.62
700	2	4	100.71	22.7	.51
845	2	5	- 15.50	- 4.2	-.13
912	2	3	158.80	55.6	-.15
No. showing Increase			7	7	2
No. showing Decrease			1	1	6
Average Increase			103.20	28.5	-.073
Maximum Increase			247.83	55.6	.51
Maximum Decrease			15.50	4.2	.62

Table XLI
 Showing in Detail the Increase of Third Entry
 over First Entry of Lot VII

R.M.No.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
1132	3	8	78.71	24.5	.64
792	3	10	186.60	46.1	-.67
1064	3	0	165.00	60.8	-.26
1934	3	1	261.09	52.0	-.35
1953	2	11	- 7.03	- 1.8	-.64
700	3	8	344.90	75.7	-.09
845	4	2	340.60	87.9	.07
912	3	4	269.85	48.5	-.36
No. showing Increase			7	7	2
No. showing Decrease			1	1	6
Average Increase	3	8	204.97	56.7	.207
Maximum Increase			344.90	87.9	.64
Maximum Decrease			7.03	1.8	.67

Table XLV

Showing in Detail the Increase of Second Entry
over First Entry of Lot VIII

R.M.No.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
490	3	5	135.55	27.3	.32
347	5	9	603.85	152.5	.08
788	4	2	379.55	78.3	-.13
553	4	5	441.40	127.4	-.19
753	2	11	76.82	25.6	-.10
1074	3	7	107.50	32.4	.25
280	3	5	196.80	47.0	-.22
1253	4	5	128.00	32.0	-.85
38	6	0	55.40	12.5	-.75
204	5	3	119.20	38.6	.02
295	2	9	370.90	122.0	.27
931	2	8	139.12	36.8	.41
No. showing Increase			12	12	6
No. showing Decrease			0	0	6
Average Increase	4	0	229.50	59.8	-.074
Maximum Increase			603.85	152.5	.41
Maximum Decrease					.85

Table XLVI

Showing in Detail the Increase of Third Entry
over First Entry of Lot VIII

R.M.No.	Age		Fat	% Increase of Fat	% Fat
	Yrs.	Mos.			
490	4	6	124.80	25.1	.21
347	7	5	284.59	71.8	.10
788	5	4	357.27	73.7	-.07
553	5	9	444.74	128.3	-.91
753	5	0	68.04	22.7	-.20
1074	4	9	91.88	27.7	-.01
280	4	11	544.62	130.2	.07
1253	5	7	399.60	57.0	-.62
38	7	2	184.10	41.6	-.83
204	6	11	199.70	64.8	.01
295	5	6	230.80	75.7	-.01
931	5	1	171.00	45.3	.24
No. showing Increase			12	12	5
No. showing Decrease			0	0	7
Average Increase		5 7	244.19	63.6	-.168
Maximum Increase			544.62	130.2	.24
Maximum Decrease					.91

Table XLVII

Summary showing the Average Milk Production for Each Entry of Each Lot

Lot. No.	No. of Cows	Average Year's Production per Lactation Period						
		First	Second	Third	Fourth	Fifth	Sixth	Seventh
I	37	6835.7	8862.1	10604.9				
II	23		7834.6	9503.2	9981.7			
III	7			9408.6	9945.8	10839.6		
IV	8				9321.2	11501.1	10646.0	
V	9					9893.4	12092.1	11175.6
VI	8	7264.1	9334.5		10962.2			
VII	8	6824.6		8910.7	9334.5			
VIII	12	7197.0			11670.4		12079.0	
Average		7080.3						

Table XLVIII

Summary showing Average Increase of Milk over Preceding Entry

Lot No.	No. of cows	First	Second	Third	Fourth	Fifth	Sixth	Seventh
I	37		2026.4	1742.8				
II	23			1668.6	478.5			
III	7				537.2	893.8		
IV	8					2179.9	- 855.1	
V	9						2198.7	- 916.5
VI	8		2070.4		^a 1627.7			
VII	8			^a 2086.1	423.8			
VIII	12				^a 4479.4		^a 408.6	
Average Increase			2048.4	1705.7	479.8	1536.8	671.8	- 916.5
Average Increase over first Lactation Period			2048.4	3754.1	4233.9	5770.7	6442.5	5526.0
Average % Increase over first Lactation Period			28.9%	53.2%	59.8%	81.6%	90.9%	78.0%
Average Age		2y. 3m.	3y. 6m.	4y. 7m.	5y. 8m.	6y. 10m.	8y. 3m.	9y. 7m.

Footnote: a is the increase of second (or third) preceding entry and is not figured in the averages.

Table XLIX

Summary Showing Average Fat for Each Entry of Each Lot

Lot. No.	No. of Cows	Average Year's Production per Lactation Period						
		First	Second	Third	Fourth	Fifth	Sixth	Seventh
I	37	384.30	471.60	566.63				
II	23		435.90	519.56	544.88			
III	7			509.46	529.33	551.98		
IV	8				475.71	577.18	521.35	
V	9					505.97	626.69	570.94
VI	8	384.51	493.18		578.64			
VII	8	361.31		464.51	566.28			
VIII	<u>12</u>	383.60			613.10		627.79	
	<u>112</u>							
Average		378.43						

Lot VIII contains all cows having three Entries in the Register of Merit, the first entry being of the first lactation period, the second entry being made when about five years of age and the third entry of the next lactation period.

Table XLII

Showing in Detail the First Entry (First Lactation Period) of
Lot VIII

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
490	2	6	496.10	9606.0	5.16	920
347	2	2	395.90	7050.0	5.61	600
788	2	9	484.20	9319.0	5.19	950
553	2	0	346.40	5655.0	6.12	850
753	2	2	299.20	6027.0	4.96	755
1074	2	0	331.30	7191.0	4.60	870
280	2	3	418.20	8275.0	5.05	800
1253	2	5	399.60	6373.0	6.13	700
38	2	11	442.10	7591.0	5.82	850
204	2	9	308.30	6612.0	4.66	850
295	2	5	304.05	5743.0	5.29	600
931	2	8	377.90	6923.1	5.46	805
Average	2	5	383.60	7197.0	5.337	796.6

Table XLIII

Showing in Detail the Second Entry of Lot VIII

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
490	5	11	631.65	11438.0	5.48	1000
347	7	11	999.75	17557.0	5.69	1050
788	6	11	863.75	17056.0	5.06	950
553	6	5	787.80	14592.0	5.93	1050
753	5	1	376.02	7734.0	4.86	900
1074	5	7	438.80	8854.0	4.95	900
280	5	8	615.00	12738.0	4.83	920
1253	6	10	527.60	9989.0	5.28	950
38	8	11	497.50	10013.0	4.97	990
204	8	0	427.50	9125.0	4.68	1010
295	5	2	675.01	12131.0	5.56	900
931	5	4	517.02	8818.0	5.87	950
Average	6	5	613.10	11670.4	5.263	964.2

Table XLIV
 Showing in Detail the Third Entry of Lot VIII

R.M.No.	Age		Fat	Milk	% Fat	Weight
	Yrs.	Mos.				
490	7	0	620.90	11555.0	5.37	950
347	9	7	680.49	11915.0	5.71	1050
788	8	1	841.47	16236.0	5.12	950
553	7	9	791.14	14965.0	5.21	1100
753	7	2	367.24	7717.0	4.76	900
1074	6	9	423.18	9217.0	4.59	900
280	7	2	962.82	18782.0	5.12	1000
1253	8	0	627.40	11383.0	5.51	950
38	10	1	626.20	12533.0	4.99	975
204	9	0	508.00	10875.0	4.67	850
295	7	11	535.30	10135.0	5.28	980
931	7	9	549.42	9642.0	5.70	950
Average	8	0	627.79	12597.0	5.169	962.9

Table L

Summary showing Average Increase of Butterfat over Preceeding Lactation Period

Lot No.	No. of Cows	First	Second	Third	Fourth	Fifth	Sixth	Seventh
I	37		87.30	95.03				
II	23			83.66	25.32			
III	7				19.87	22.65		
IV	8					101.47	- 55.83	
V	9						120.72	- 55.75
VI	8		108.57		^a 85.13			
VII	8			^a 103.20	101.77			
VIII	12				^a 229.50		^a 14.69	
Average Increase			97.93	89.34	48.98	62.06	32.44	- 55.75
Average Increase over first Lactation Period			97.93	187.27	236.25	298.33	330.75	275.00
Average % Increase over first Lactation Period			25.8%	49.4%	62.4%	78.8%	87.4%	72.6%
Average Age		2y. 3m.	3y. 6m.	4y. 7m.	5y. 8m.	6y. 10m.	8y. 3m.	9y. 7m.

Footnote: a is the increase over second or third preceeding lactation period and is not figured in averages.

Table LI

Summary showing Average Per Cent Fat for Each Entry of Each Lot

Lot No.	No. of Cows	Per Cent Fat of Various Lactation Periods						
		First	Second	Third	Fourth	Fifth	Sixth	Seventh
I	37	5.453	5.380	5.313				
II	23		5.569	5.487	5.457			
III	7			5.420	5.371	5.154		
IV	8				5.090	4.891	4.940	
V	9					5.160	5.193	5.112
VI	8	5.241	5.287		5.169			
VII	8	5.312		5.238	5.105			
VIII	<u>12</u>	5.337			5.263		5.169	
	112							

Table LII

Summary showing Average Increase of Per Cent Fat over Preceding Entry

Lot No.	No. of Cows	First	Second	Third	Fourth	Fifth	Sixth	Seventh
I	37		-.073	-.067				
II	23			-.082	-.030			
III	7				-.049	-.117		
IV	8					-.199	.049	
V	9						.033	-.081
VI	8		.048		^a -.072			
VII	8			^a -.073	-.134			
VIII	12				^a -.074		^a .094	
Total	112							
Average Increase			-.013	-.074	-.070	-.158	.040	-.081
Average Decrease over first Lactation Period			.013	.087	.157	.315	.275	.356
Average Age		2y. 3m.	3y. 6m.	4y. 7m.	5y. 8m.	6y. 10m.	8y. 3m.	9y. 3m.

Footnote: ^a is the increase over the second previous lactation period and is not figured in the totals.

Table LIII

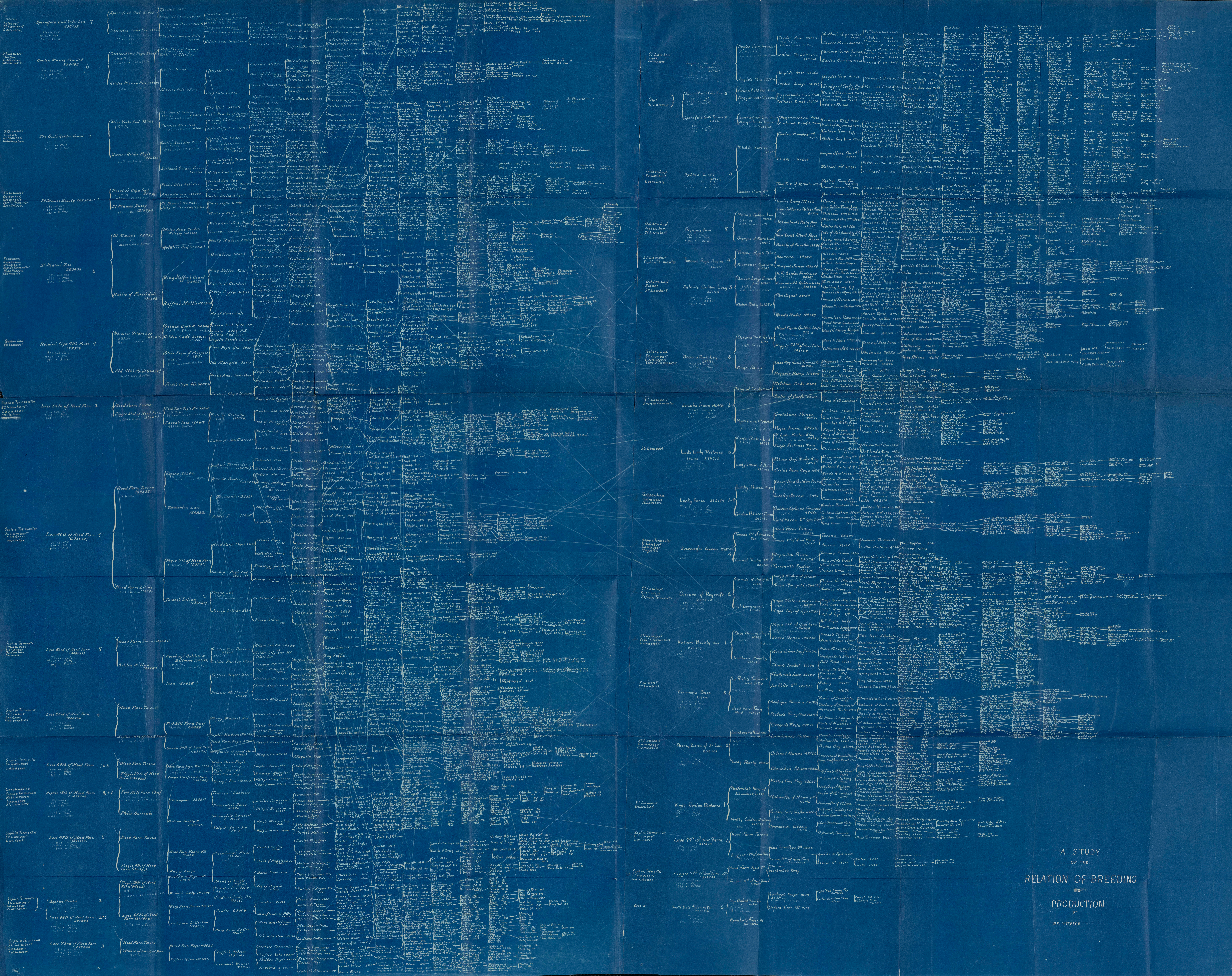
Classification of Imported Bulls with Fifteen or More Register of Merit Daughters
Showing Number of Daughters Classified as to Records in Hundreds of Pounds of Butter

	Total R.M. Daughters	below 500	500	600	700	800	900	1000	1100
Interested Prince 58224	39	17	5	12	2	2	1		
Raleigh's Fairy Boy 83767	39	22	10	3	3	1			
Gamboge's Knight 95698	34	13	16	2	2	1			
Noble of Oaklands 95100	33	26	6	1					
Royal Majesty 79313	32	8	8	5	7	3	1		
Eminent 69631	29	14	13	2					
Eminent's Raleigh 69011	27	13	7	5	2				
Golden Maid's Prince 93588	26	15	3	6	2				
Gedney Farm Oxford Lad 71238	23	11	8	3	1				
The Imported Jap 75265	20	14	2	4					
Combination of St. Savior's 88245	16	7	4	3	1				
Fairy Glen's Raleigh 79438	16	9	5	1	1				
Fontaine's Chieftain 97158	16	10	2	3	1				
Imp. Oxford You'll Do 111860	16	12	2		1		1		
Flying Fox's Victor 84768	15	9	3	3					
King Fox 64667	15	12	3						
Totals 16	396	213	97	53	23	7	3		
Averages	24.7	13.3	6.0	3.3	1.4	.4	.19		

Table LIV

Classification of American Bulls with Fifteen or More Register of Merit Daughters
Showing Number of Daughters Classified as to Records in Hundreds of Pounds of Butter

	Total R.M. Daughters	below 500	500	600	700	800	900	1000	1100	
Hood Farm Pogis 9th 55552	78	48	19	7	2	1	1			
Hood Farm Torono 60326	71	22	14	18	8	5	1	3		
Spermfield Owl 57088	48	10	14	12	7	1	2	1	1	
Loretta's King 65050	40	30	6	3	1					
Sayda's Heir 3rd 74817	33	13	11	7	2					
Hector Marigold 59121	33	25	5	2	1					
Irene's King Pogis 73182	29	15	7	4	2	1				
The Warden 77615	28	27	1							
Lady Letty's Victor 65020	27	14	9	3	1					
King Sappho King 65262	24	19	4			1				
Rioter's Jersey Lad 58001	23	9	7	5	1	1				
Lookout Torono 78593	21	21								
Hood Farm Torono 20th 82854	20	20								
Sultan of Oakland's 74475	20	11	7	1	1					
Valentine's Oonan 58076	20	12	8							
Oonan's Count 57470	19	16	3							
Foxhall's Jubilee 76944	18	7	3	3	3	2				
Torono 25204	18	7	8	1	2					
Tormentor of Kawkawlin 42880	17	8	6	3						
Golden Glow's Chief 61460	17	8	5	1	2	1				
Gedney Farm Girl's Oxford 75938	17	9	6	1	1					
Rosaires Olga Lad 87498	17	11	3	3						
Pogis 99th of Hood Farm 94502	16	5	5	4	1		1			
Brown Lassie's Compass 71626	15	15								
Totals	24	679	392	151	78	35	13	5	4	1
Averages		28.2	16.3	6.2	3.2	1.4	.5	.2	.16	.04



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W. E. PETERSON