

## VIRGINIA

DAIRY SPECIALIST  
and Dairy Manufacturers

ANNUAL REPORT

1928

F. A. Buchanan

H. G. Liddings

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COOPERATIVE EXTENSION WORK  
IN  
AGRICULTURE AND HOME ECONOMICS  
STATE OF VIRGINIA

VIRGINIA AGRICULTURAL AND MECHANICAL  
COLLEGE AND POLYTECHNIC INSTITUTE  
AND UNITED STATES DEPARTMENT OF  
AGRICULTURE, COOPERATING

EXTENSION SERVICE

Blacksburg, Va.  
December 18, 1925

Director, John E. Hutcheson,  
V. P. I. Extension Service,  
Blacksburg, Va.

Dear Director Hutcheson :

I here-with respectfully  
transmit to you the Annual Report of Extension  
Work in Dairying, Project Eight, for the activities  
and results of this work during the year beginning  
December 1, 1924, and ending November 30, 1925.

Yours respectfully,

*Frank A. Buchanan*  
Dairy Extension

DAIRY EXTENSION OFFICE

FAB.9

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December 1, 1934 - November 30, 1935

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REPORT OF  
EXTENSION WORK IN DAIRYING  
PROJECT 8

V.P.I. EXTENSION SERVICE

December 1, 1924 - November 30, 1925

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Introduction.

A - Needs in Virginia for the Development of Dairying.

The need in Virginia for the improvement and development of the dairy industry is best set forth with facts revealed in the 1920 census report, supplemented by facts which have been estimated by the observation of field workers.

First Need - Higher Producing Dairy Herds.

Present Annual Production - 2,511 pounds of milk with less than 100 pounds of butter fat is the annual production of the average Virginia milking cow.

Second Need - More and Better Pure Bred Dairy Bulls.

Few Pure Bred Dairy Bulls - Only one pure bred dairy bull for each sixty-four farms with dairy cattle. For every 159 dairy cows there is only one pure bred dairy bull.

Third Need - Increased Consumption of Dairy Products in Virginia.

There is actually produced in the State for consumption 90,000 gallons of milk daily. If the average consumption of milk per capita in Virginia equalled that of the United States, there would need to be a daily production of 243,000 gallons of milk.

The amount of butter produced in the state amounts to approximately 25,000,000 pounds yearly. To equal the average per capita consumption of butter in the U. S., Virginia should consume 25,550,000 pounds annually.

**Fourth Need - Better Methods of Handling and Manufacturing Dairy Products.**

It has been estimated that at least 75% of all the butter produced in the state is sold in other states, particularly in the large butter markets, such as Philadelphia, New York, etc. Yet thousands of pounds of butter are imported into the state from other dairying centers.

What is the reason for this?

There is an almost unanimous reply from all workers connected with the dairy industry of the state. The dire lack of quality in the butter manufactured by the creameries of the state. This lack of quality begins with the handling of the milk and cream by the farmer, and the creameries are often not able to grade the cream so as to produce a uniform butter of high quality.

**B - Personnel and Co-operation with Other Departments and Agencies.**

With these four important problems or needs of the dairy industry in Virginia ever in mind, the Dairy Department of the V. P. I. Extension Service set forth at the beginning of the year 1925 to outline such projects as would in some way benefit these needs.

The personnel of the Dairy Department of the V. P. I. Extension Service for the period between December 1, 1924 and November 30, 1925, consisted of the following staff:

Professor G. W. Holdaway, Subject-matter  
Head of the Dairy Department,

Frank A. Buchanan, Dairy Husbandman of the  
V. P. I. Extension Service,  
(1/3 of time in service to Extension Projects).

L. P. Emerick, Assistant Dairy Husbandman,  
(Resigned April 30, 1925).

George H. Carey, Jr., Assistant Dairy  
Husbandman,  
(Appointed May 1, 1925).

H. C. Iddings, Dairy Manufacturing Specialist,  
W. D. Saunders (Part Time) Cheese Specialist.

By means of the cooperation brought about by the develop-  
ment of a "Five Year Agricultural Program in Virginia,"  
the V. P. I. Dairy Department has secured much splendid  
help from other agencies who have programs relating to  
the development of the dairy industry of the state.  
Chief among these agencies the State Dairy and Food Divi-  
sion, through its able Dairy Director, Mr. C. L. Stahl,  
has rendered splendid help in carrying out the projects  
as were outlined.

The Division of Markets whose agent, Mr. H. A. Loucks,  
has ably assisted our staff in bringing about results  
with some of our projects.

Other agencies which have been a part to the development  
of the year's program of this Department are:

The Virginia State Dairymen's Association,  
The Virginia Dairy Products Association,  
The Virginia State Fair Association.

#### C - Assignment of Projects.

For the purpose of giving logical order to the projects  
as outlined in the 1925 Program of Work of this Depart-  
ment, we will divide them into three sections as follows:

Section A - Dairy Production,  
Section B - Dairy Marketing,  
Section C - Dairy Manufacturing.

Under Section A - will be included those projects which  
deal with the development of better dairy herds and gen-  
eral dairy cattle production. The projects which were  
planned and developed under this section of our work  
have for their goal the first and second great needs of  
the dairy industry in the state, namely:

Higher Producing Dairy Herds,  
More and Better Pure Bred Dairy Bulls.

The three projects included in this section are as follows:

- Project 1 - Virginia Co-operative Cow Testing Associations.
- Project 2 - Better Dairy Bull Campaign.
- Project 3 - General Dairy Development.

The Assistant Dairy Husbandman of the Extension Staff, Mr. L. P. Emerick and George H. Carey, Jr., respectively, is given full charge of the organization and development of Project 1. This work of organizing, developing, and supervising co-operative Cow Testing Associations in the State is recognized as the most valuable project on our program. The results show for themselves as will be revealed on following pages of this report. The Assistant Dairy Husbandman also devoted some of his time to Projects 2 and 3.

Under Section 3 - Dairy Marketing, are included such projects as deal with the more orderly selling of dairy products between producer and dealer and the projects for the increasing of consumption of dairy products. These projects have as the goal, the third important need of the dairy industry, namely: Increased Consumption of Dairy Products in Virginia.

There are two projects outlined -

- Project 4 - Co-operative M. P. A. +
- Project 5 - The Virginia State Dairy Council.

All members of the dairy extension staff have worked to some extent on Project 4, Co-operative Marketing.

Since Project 5 <sup>is</sup> chiefly a project promoted by the Virginia State Dairymen's Association, F. A. Buchanan, of the dairy extension staff was in charge of its organization and development.

Under Section 6 - Dairy Manufacturing, are included such projects as have as their goal the fourth important need of the dairy industry of the state, namely:

- Better Methods of Handling and Manufacturing Dairy Products.

Three projects were developed under this section of the dairy extension program:

- Project 6 - Cream and Milk Improvement Contest.
- Project 7 - Farm Butter Contest.
- Project 8 - Improved Creamery Management.

Mr. H. G. Iddings, Dairy Manufacturing Specialist, was in direct supervision of organizing and developing these projects.

Professor W. D. Saunders, working part time as Cheese Specialist, renders a separate and individual report of the results of his work in the development of the cheese industry of the state.

SECTION A

- Dairy Production -

Including:

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**Project 1 - Virginia Co-operative Cow Testing Associations.**

1. Supervision of Active Associations,
2. Organization of New Associations,
3. Publicity,
4. The Virginia Registry of Production,
5. Cow Testers Efficiency Contest,
6. Summary of Results in Virginia Cow Testing Associations.

**Project 2 - Better Dairy Bull Campaign.**

1. State Better Sires Campaign.

**Project 3 - General Dairy Development.**

1. Dairy Breed Associations,
  2. Boy's and Girl's Dairy Calf Clubs,
  3. Virginia State Dairymen's Association,
  4. Agricultural Fairs.
-

**Project I - Virginia Co-operative Cow Testing Associations.**

**1. Supervision of Active Associations.**

**Association I - Albemarle County C. T. A.**

This Association suffered from having rather inefficient testers during the year, but is in the charge of a very capable tester at the present time and good results are being obtained. Some of the herd books were lost and a good deal of time was spent instructing new testers and straightening out work. Five changes in testers occurred, January 1st, June 1st, October 22d, November 1st, and November 18th.

**Co-operators:** Mr. S. S. Teel, County Agent,  
Mr. C. H. Beck,  
Mr. A. F. Howard, President,  
Monticello Dairy.

**Enrollment:** Herds 19, Cows 365.

**Field work:** Four trips were necessary to instruct and start new testers, and four trips were made to supervise work and assist in securing membership.

**Results:** (November 1924 - October 1925)

Average number herds tested for year -	19
Average number cows tested for year -	365
Average milk production per cow -	6502.0 lbs.
Average butter fat production per cow -	256.8 lbs.
Average number records over 40 pounds per month -	31
Average number records over 50 pounds per month -	8
Average number cows dry each month -	50
Number unprofitable cows sold -	141
Number pure bred bulls purchased by members -	6
Number pure bred cows purchased by members -	3
Highest herd average production for one month -	44.15 lbs. B.Fat
Highest individual producer for one month -	80.5 " "

Association 2 - Augusta-Rockbridge Co. E. A.

This Association has had very good testers, only one change being made during the year when Mr. Fenne was appointed County Agent and whose place was taken by Mr. Bird, who is doing excellent work.

Co-operators: Mr. T. J. Thompson, County Agent,  
Mr. S. B. Fenne, County Agent,  
Mr. H. E. Roller, President of Association,  
Mr. H. M. McManaway, Secretary of Association.

Enrollment: Herds 22, Cows 455.

Field Work: One trip of two days was made to reorganise the Association, one trip to instruct new tester, and one to supervise, both of one day each.

Results: (November 1924 - October 1925)

Average number herds tested for year -	22
Average number cows tested for year -	455
Average milk production per cow - -	5909 lbs.
Average butter fat production per cow	261.0 lbs.
Average number records of 40 pounds for month - - - - -	32
Average number records of 50 pounds for month - - - - -	8
Average number cows dry each month -	58
Number of unprofitable cows sold during year - - - - -	98
Number of purebred bulls purchased by members - - - - -	11
Number of purebred cows purchased by members - - - - -	42
Highest average herd production for one month - - - - -	58.2 lbs. B. fat.
Highest individual producer for one month - - - - -	98.0 " "

Association 3 - Bristol C. T. A.

This Association suffered from dry weather, low milk prices, dairymen underselling each other on milk routes, and selling a great many car loads of cows out of the Association which were good cows, because of lack of feed. It is not expected that this Association will be reorganized again at the end of this year. It is possible, however, that work will be continued next spring.

Co-operators: E. B. Bird, County Agent, Sullivan County,  
Tennessee,  
E. F. Hyes, Secretary,  
Lee McChesney.

Enrollment: Herds 18, Cows 586.

Field Work: None by writer.

Results: (November 1924 - October 1925)

Average number herds tested for year -	18
Average number cows tested for year -	586
Average milk production per cow -	586 lbs.
Average butter fat production per cow	256 lbs.
Average number records over 40 pounds each month -	24
Average number records over 50 pounds each month -	4
Average number cows dry each month -	82
Number of unprofitable cows sold during year -	78
Number of pure bred bulls purchased by members during year -	2
Number of pure bred cows purchased by members during year -	0
Highest average herd production for one month -	30.6 lbs. B. Fat.
Highest individual cows production for one month -	61.9 " "

Association 4 - Chesterfield County C. F. A.

This Association has been working steadily and was reorganized in November for another years work with the same tester, Mr. C. O. Smith, employed for another year. Mr. T. G. Balfour, the new County Agent, is taking a great interest in the work, which has not been the case prior to his appointment.

Co-operators: T. G. Balfour, County Agent,  
J. O. McKeason, President,  
C. O. Smith, Tester,

Enrollment: Herds 12, Cows 454.

Field Work: One trip of three days was made to re-organise Association, two trips, a total of five days, were made to supervise work and assist County Agent in membership sign-up, and one trip was made to assist tester in finishing years work.

Results: (November 1924 - October 1925)

Average number herds tested for year -	12
Average number cows tested for year -	454
Average milk production per cow - - -	6902 lbs.
Average butter fat production per cow - - - - -	281.8 lbs.
Average number records over 40 pounds each month - - - - -	49
Average number records over 50 pounds each month - - - - -	14
Average number cows dry each month -	59
Number unprofitable cows sold during year - - - - -	119
Number purebred bulls purchased by members - - - - -	0
Number purebred cows purchased by members - - - - -	28
Highest average herd production for one month - - - - -	35.3 lbs. B. fat.
Highest individual cows production for one month - - - - -	89.1 " "

Association 5 - Calaveras County C. F. A.

This Association was reorganized in November 1925 and a new tester will be employed in December as the old tester is leaving the work upon completion of the November month's work.

Co-operators: Mr. R. R. Morrison, County Agent.  
Mr. J. O. Sullivan, Secretary.

Enrollment: Herds 12, Cows 644.

Field Work: Two days were spent in reorganising work and one day to supervise work.

Results: (November 1924 - October 1925)

Average number herds tested for year -	12
Average number cows tested for year -	644
Average milk production per cow - -	5876 lbs.
Average butter fat production per cow - - - - -	228.6 lbs.
Average number records over 40 pounds each month - - - - -	30
Average number records over 50 pounds each month - - - - -	5
Average number cows dry each month -	116
Number of unprofitable cows sold during year - - - - -	98
Number pure bred bulls purchased by members during year - - - - -	2
Number pure bred cows purchased by members during year - - - - -	9
Highest average herd production for one month - - - - -	41.1 lbs.
	B. fat.
Highest individual cows production for one month - - - - -	64.9 " "

Association 6 - Fairfax No. 1 C. F. A.

This Association was reorganized in December 1924 with the same tester, Mr. G. E. Snell, in charge. There have been no changes in testers during the year and this is one of the best Associations in the state.

Co-operators: Mr. E. B. Derr, County Agent.  
Mr. B. W. Middleton, Secretary.

Enrollment: Hards 28, Cows 655.

Field Work: No work by the writer was necessary in this Association from May to December 1st, 1925.

Results: (November 1924 - October 1925)

Average number hards tested for year -	28
Average number cows tested for year -	655
Average milk production per cow -	-7710 lbs.
Average butter fat production per cow	306 lbs.
Average number records over 40 pounds	
fat each month -	85
Average number records over 50 pounds	
fat each month -	23½
Average number open dry each month -	80
Number unprofitable cows sold during	
year -	114
Number pure bred bulls purchased by	
members during year -	6
Number pure bred cows purchased by	
members during year -	11
Highest average herd production for	
one month (July) -	48.1 lbs.
	B.Fat.
Highest individual cows production	
one month (May) -	-101.5 " "

Association 7 - Fairfax Co., S. C., E. A.

This Association was reorganized in February 1925 with the same tester, Mr. H. H. Ankers, in charge. Good work is being done by Mr. Ankers and we will regret his loss in December when Mr. W. G. Merritt takes charge of the work.

Co-operators: Mr. H. B. Derr, County Agent,  
Mr. C. T. Rice, President.

Enrollment: Herts 18, Cows 475.

Field Work: One trip of two days was made in supervision of the work.

Results: (November 1924 - October 1925)

Average number herds tested for year -	18
Average number cows tested for year -	475
Average milk production per cow - -	6748 lbs.
Average butter fat production per cow - - - - -	279.5 lbs.
Average number records over 40 pounds fat each month - - - - -	46
Average number records over 50 pounds fat each month - - - - -	15
Average number cows dry each month -	57
Number unprofitable cows sold during year - - - - -	124
Number pure bred bulls purchased by members during year - - - - -	4
Number pure bred cows purchased by members during year - - - - -	20
Highest average herd production for one month (May) - - - - -	41.4 lbs. B.Fat.
Highest individual cows production one month (August) - - - - -	84.1 " "

Association 8 - Henrico County C. T. A.

This Association was divided in November 1934, and the members located in Chesterfield County were formed into the Chesterfield County Cow Testing Association. A change in testers took place in February 1935 when the present tester, Mr. R. S. Boss, took charge.

Co-operators: Mr. W. L. Kirby, County Agent.  
Mr. George L. Oliver,  
Mr. R. S. Boss, Tester.

Enrollment: Herds 16, Cows 637.

Field Work: Three trips of one day each were made to supervise the work. Instructed tester with working up yearly summaries.

Results: (November 1934 - October 1935)

Average number herds tested for year	- 16
Average number cows tested for year	- 637
Average milk production per cow	- -7472 lbs.
Average butter fat production per cow	322 lbs.
Average number records over 40 pounds fat each month	- - - - - 68
Average number records over 50 pounds fat each month	- - - - - 20
Average number dry cows each month	- - 94
Number unprofitable cows sold during year	- - - - - 100
Number pure bred bulls purchased by members during year	- - - - - 0
Number pure bred cows purchased by members during year	- - - - - 3
Highest average herd production for one month (August)	- - - - - 58.0 lbs.
	B.Fat.
Highest individual cows production one month (September)	- - - - - 85.0 " "

Association 9 - Loudoun Valley No. I C. T. A.

This is the oldest Association in the State and it was reorganized April 1st, 1925, the tester being re-employed for another year. Excellent work has been done in this Association, which is evidenced by the fact that at the start of the year's work it was comprised of 14 herds, containing 527 cows, while at the completion of the year's work the records show an enrollment of 25 herds, containing 690 cows. This is the result of persistent efforts on the part of the County Agent, Mr. J. R. Lintner, and the Tester, Mr. G. H. Asay.

Co-operators: Mr. J. R. Lintner, County Agent,  
Mr. G. H. Asay, Tester.

Enrollment: Herds 21, Cows 622.

Field Work: No field work has been necessary, other than reorganization meeting in March.

Results: (November 1924 - October 1925)

Average number herds tested for year -	21
Average number cows tested for year -	622
Average milk produced per cow - - -	6295 lbs.
Average butter fat produced per cow	275 lbs.
Average number records over 40 pounds	
fat each month - - - - -	52
Average number records over 50 pounds	
fat each month - - - - -	15
Average number dry cows each month -	65
Number unprofitable cows sold during	
year - - - - -	31
Number pure bred bulls purchased by	
members during year - - - - -	3
Number pure bred cows purchased by	
members during year - - - - -	25
Highest average herd production for	
one month (June) - - - - -	42.5 lbs. B. Fat.
Highest individual cows production	
one month (November) - - - - -	31.6 " "

Association 10 - Loudoun Valley No. 2 C. T. A.

This Association was organized in December 1924 to start work January 1, 1925. It has been in continuous operation since that date under the capable supervision of the present tester, Mr. Stewart Rivers, who will continue the work for another year. This is the largest Association in the State, testing over 700 cows every month.

Co-operators: Mr. J. R. Lintner, County Agent,  
Mr. Stewart Rivers, Tester.

Enrollment: Herds 18, Cows 701.

Field Work: One trip of one day to supervise work.

Results: (January 1, 1925 - November 1, 1925)

	<u>10 months</u>	<u>Years Average Estimated.</u>
Average number herds tested	18	15
Average number cows tested	701	701
Average milk production per cow - - - - -	5023 lbs.	6069 lbs.
Average butter fat production per cow - - - - -	215 lbs.	258 lbs.
Average number records over 40 pounds fat - - - - -	54	54
Average number records over 50 pounds fat - - - - -	15	15
Average number dry cows per month - - - - -	114	114
Number unprofitable cows sold	75	90
Number pure bred bulls bought	4	5
Number pure bred cows bought	1	1
Highest average herd production for one month - - - - -	59.2 lbs.	59.2 lbs. B. Fat B. Fat
Highest individual cows produc- tion for one month - - - - -	95.0	" " 95.0 " "

Association 11 - Lynchburg Co-operative C. F. A.

This Association was reorganized October 1st with the tester for the past year, Mr. W. A. Cocks, employed for another year. The dairy business in this section has been very discouraging during the past year on account of the drought and several members having sold out.

Co-operators: Mr. Bruce Anderson, County Agent,  
Mr. E. M. Blair, Service Creamery,  
Mr. Adams, President,  
Mr. W. A. Cocks, Tester.

Enrollment: Herds 18, Cows 538.

Field Work: One trip of one day was made to reorganize work. Two trips, a total of five days, were made to supervise work and assist with new membership sign up.

Results: (November 1924 - October 1925)

Average number herds tested for year -	18
Average number cows tested for year -	538
Average milk production per cow - - -	4996 lbs.
Average butter fat production per cow	212.5 lbs.
Average number records over 40 pounds fat each month - - - - -	15
Average number records over 50 pounds fat each month - - - - -	8
Average number dry cows per month - -	78
Number unprofitable cows sold - - - -	25
Number pure bred bulls purchased by members during year - - - - -	2
Number pure bred cows purchased by members during year - - - - -	6
Highest average herd production for one month - - - - -	30.8 lbs. B. Fat.
Highest individual cows production for one month - - - - -	67.6

Association 12 - Northern Valley C. F. A.

(Shenandoah, Warren, Clarke, and  
Frederick Counties).

This Association is widely scattered and contains very small herds, which makes it difficult to work. Good results have been obtained by Mr. J. H. Wayman, the tester. This Association was not reorganized in November, but some of the members who wish to continue the work for the coming year will have the services of the Rockingham tester.

Co-operators: Mr. G. G. Dickinson, County Agent,  
Mr. H. L. Moore, County Agent.

Enrollment: Herds 20, Cows 260.

Field Work: Two trips of one day each to supervise work.

Results: (November 1924 - October 1925).

Average number herds tested for year	- 20
Average number cows tested for year	- 260
Average milk production per cow	- -6840 lbs.
Average butter fat production per cow	274.1 lbs.
Average number records over 40 pounds fat each month	- - - - - 20
Average number records over 50 pounds fat each month	- - - - - 5 $\frac{1}{2}$
Average number dry cows each month	- - 26
Number of unprofitable cows sold during year	- - - - - 45
Number of pure bred bulls purchased by members during year	- - - - - 1
Number of pure bred cows purchased by members during year	- - - - - 8
Highest average herd production for one month (May)	- - - - - 38.1 lbs. B. Fat.
Highest individual cows production for one month ( May)	- - - - - 80.8 " "

Association 13 - Orange County C. F. A.

This Association was reorganized April 1, 1925, and the tester re-employed for another year, unfortunately for the Association, a very poor substitute tester was secured during the months of August, September and October when Mr. Bremer, the regular tester was on the show circuit with the Orange County Jersey Breeders herd. However, Mr. Bremer is getting the Association straightened out again.

Co-operators: Mr. E. Y. Bredan, County Agent,  
Mr. W. L. Broadway, Secretary,  
Mr. F. G. Bremer, Tester.

Enrollment: Herds 16, Cows 410.

Field Work: Three trips, a total of five days, were made in supervising the work, instructing new tester, and assisting County Agent with membership campaign.

Results: (November 1924 - October 1925)

Average number herds tested for year	-- 16
Average number cows tested for year	-- 410
Average milk production per cow	--- 6275 lbs.
Average butter fat production per cow	287 lbs.
Average number records over 40 pounds fat each month	--- 39
Average number records over 50 pounds fat each month	--- 11½
Average cows dry each month	--- 37
Number unprofitable cows sold during year	--- 27
Number pure bred bulls purchased by members during year	--- 2
Number pure bred cows purchased by members during year	--- 8
Highest average herd production for one month (May)	--- 41.0 lbs. B. Fat.
Highest individual cows production for one month (June)	--- 89.6 " "

Association 14 - Prince William County C. T. A.

This Association was reorganized September 1st, 1925. Mr. Ray H. Peterson, the tester, being employed for another year. Three changes in testers took place during the year, December 1st, June 1st, and July 1st, Mr. Peterson taking charge of the work on July 1st.

Co-operators : Mr. T. T. Curtis, County Agent,  
Mr. W. M. Johnson, President,  
Mr. Ray H. Peterson, Tester.

Enrollment: Herds 26, Cows 567.

Field Work: Two trips, a total of three days, were made in supervising work and instructing new tester.

Results: (November 1924 - October 1925)

Average number herds tested for year	- - 26
Average number cows tested for year	- - 567
Average milk production per cow	- - - 7630 lbs.
Average butter fat production per cow	286.3 lbs.
Average number of records above 40 pounds fat each month	- - - - - 86
Average number of records above 50 pounds fat each month	- - - - - 21½
Average number dry cows each month	- - - - - 73
Number of unprofitable cows sold during year	- - - - - 165
Number of pure bred bulls purchased by members during year	- - - - - 6
Number of pure bred cows purchased by members during year	- - - - - 2
Highest average herd production for one month (January)	- - - - - 42.3
Highest individual cow production for one month (March)	- - - - - 95.1

Association 15 - Rockingham County C. T. A.

This Association was reorganized on January 1, 1925, and the present tester, Mr. Frank H. Heatwole, employed. Very good results have been secured from this year's work. Two members, Messrs. J. S. Roller & Son, and D. F. Roller held a sale in July and good prices were obtained from judicial use of C. T. A. Records. Endless Caverns Farm also sold a part of their herd and used the C. T. A. Records in their sale to good advantage.

Co-operators: Mr. C. W. Wampler, County Agent,  
Mr. F. H. Heatwole, Tester.

Enrollment: Herds 15, Cows 186.

Field Work: One trip of one day to supervise work.

Results: (November 1924 - October 1925)

Average number herds tested for year	-- 15
Average number cows tested for year	-- 186
Average milk production per cow	-- 6456 lbs.
Average butter fat production per cow	-- 291.3 lbs.
Average number of records above 40 pounds fat each month	-- 24
Average number of records above 50 pounds fat each month	-- 8
Average number dry cows each month	-- 20
Number of unprofitable cows sold during year	-- 22
Number of pure bred bulls purchased during year	-- 5
Number of pure bred cows purchased during year	-- 9
Highest average herd production for one month (January)	-- 45.7 lbs. B. Fat.
Highest individual cows production for one month (December)	-- 86.4 " "

Association 16 - South Side Virginia C. T. A.

(Hottoway and Amelia Counties)

This Association was reorganized November 1, 1925 with the old tester re-employed for another year. No changes in testers took place in this Association, except when the present tester took charge at the first of the year.

Co-operators: Mr. C. W. Richards, County Agent,  
Mr. R. B. Oliver, County Agent,  
Mr. Alfred Anderson, Tester.

Enrollment: Herds 20, Cows 434.

Field Work: Two trips of one day each were made to supervise work.

Results: (November 1924 - October 1925)

Average number herds tested for year	- - - 20
Average number cows tested for year	- - 434
Average milk production per cow	- - - 5496 lbs.
Average butter fat production per cow	- 245.6 lbs.
Average number records over 40 pounds fat each month	- - - - - 24 1/2
Average number records over 50 pounds fat each month	- - - - - 5
Average number dry cows each month	- - - 22
Number of unprofitable cows sold by members during year	- - - - - 20
Number of pure bred bulls purchased by members during year	- - - - - 4
Number of pure bred cows purchased by members during year	- - - - - 9
Highest average herd production for one month	- - - - - 42.6 lbs.
	R. Fat.
Highest individual cows production for one month	- - - - - 98.1 " "

Association IV - Botetourt County C. F. A.

This is a new Association which was organized July 1st, 1925, and work was started July 24 by H. G. Corwin, tester. A lot of hard work was done by Mr. J. S. Wills, County Agent, Dr. H. C. Givens of the Roanoke Health Office, and the Dairy Extension Office, in order to get this Association started, as the dairymen were very much discouraged over dry weather, and low milk prices received in Roanoke for their products.

Co-operators: Mr. J. S. Wills, County Agent,  
Dr. H. C. Givens, Roanoke Health Officer,  
Mr. H. G. Corwin, Tester.

Enrollment: Herds 26, Cows 519.

Field Work: Nine trips, a total of 19 days, were spent in organizing, instructing tester, and supervising work.

Result: (July 1925 - October 1925)

	<u>4 Months</u>	<u>Estimate for 1 year</u>
Average number herds tested	26	26
Average number cows tested	519	519
Average milk production per cow - - - - -	2077 lbs.	2077 lbs.
Average butter fat production per cow - - - - -	31.2 lbs.	245.6 lbs.
Average number records over 40 pounds fat per month - -	27	27
Average number records over 50 pounds fat per month - -	5	5
Average number dry cows each month - - - - -	86	86
Number unprofitable cows sold	32	32
Number purebred bulls purchased	0	3
Number purebred cows purchased	0	6
Highest average herd production for one month - - - - -	31.3 lbs. B.F.	31.3 B. Fat.
Highest individual cows production for one month - - - - -	71.6 lbs. B.F.	71.6 B. Fat.

Association 18 - Fauquier County C. T. A.

This Association was organized July 1st, 1925, through the efforts of this office. Excellent help was given by Mr. Fred Driver of the Dairy and Food Division through the courtesy of Mr. Stahl. As there is no County Agent in this County, transportation was furnished by Mr. Driver and the banks of Warrenton. Advertising was furnished free by Mr. C. L. Tiffany, of the Fauquier National Bank, who was an excellent cooperator. A. S. Oathart, tester, commenced work, July 2, and has been in charge since that date.

Co-operators: Mr. Fred Driver, Dairy & Food Inspector,  
Mr. C. L. Tiffany, President,  
Fauquier National Bank.  
Mr. R. R. Turner,  
Mr. W. P. Sadler,

Enrollment: Herds 23, Cows 507.

Field Work: Two trips, a total of ten days, were necessary in organizing Association. One trip of three days spent instructing new tester. Two trips, a total of four days, were made in supervising work.

Results: (July 1925 - October 1925)

	<u>4 Months</u>	<u>Estimate for 1 year.</u>
Average number herds tested - -	25	25
Average number cows tested - --	507	507
Average milk production per cow	1225 lbs.	5475 lbs.
Average butter fat production per cow - - - - -	75.8 lbs.	227.4 lbs.
Average number records over 40 pounds fat each month - - - -	20	20
Average number records over 50 pounds fat each month - - - -	5	5
Average number dry cows each month - - - - -	90	90
Number of unprofitable cows sold	15	45
Number of pure bred bulls pur- chased by members - - - - -	1	5
Number of pure bred cows purchas- ed by members - - - - -	4	12
Highest average herd production for one month - - - - -	2325 lbs. B.F.	325 lbs. B.F.
Highest individual cows production for one month - - - - -	32.5	32.5

## 2. Organization of New Associations.

During the period of this report three new Associations have been organized. These Associations are as follows:

1. Loudoun Valley Association No. 2  
Number members - 18  
Number cows - - 701
2. Botetourt County Association  
Number members - 25  
Number cows - - 519
3. Fauquier County Association  
Number members - 25  
Number cows - - 507

For details and results of these Associations see Associations 10, 17, and 18, under Supervision of Active Associations.

## 3. Publicity for Cow Testing Associations.

Annual Printed Reports - This is one of the best means of advertising the value of Cow Testing Association work to the dairymen and breeders. During the year from December 1, 1924 to November 30, 1925, the following Associations printed reports which were sent out to dairymen over this and other states, from this office, from the office of the Larrow Milling Company, from the office of the Chestnut Farms Dairy in Washington, and from the local Associations by the tester:

Copies distributed  
in Virginia.

Fairfax County No. 1 -  
Number of reports printed  
25,000, which were distributed  
over the entire United States - 1,000

Augusta Association  
Number of reports printed  
1,000 - 800

Prince William Association  
Number of reports printed  
1,000 - 800

The following Associations are compiling data  
and are expecting to publish reports this year:

Fairfax No. 1 Association	-	800	copies
Angusta-Rockbridge	- - - - -	500	"
Rockingham	- - - - -	400	"
Loudoun No. 2 Association	-	400	"
Prince William Association	-	500	"

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**Extract Pages from Annual Reports of  
Virginia Cow Testing Associations.**

**Summary Page from the Third Annual Report of  
Fairfax Association No. 1.**

**Summary**

538 Cow years.  
7,745 pounds—average milk production  
308.8 pounds—average butterfat production  
77 cows sold for beef  
83 cows sold for dairy purposes  
80 cows bought  
83 heifers freshened  
100 per cent T. B. tested  
0 reactors  
7 cows died miscellaneous causes  
100 per cent purebred sires  
47 silos  
14 barns have electric lights  
14 barns have drinking cups  
11 cows over 500 pounds of butterfat  
50 cows over 400 pounds of butterfat  
116 cows over 350 pounds of butterfat  
210 cows over 300 pounds of butterfat  
59 cows over 10,000 pounds of milk  
10,913 pounds high herd in milk  
395.0 pounds high herd in butterfat  
50.0 per cent Grade Holsteins  
9.5 per cent Purebred Holsteins  
21.0 per cent Grade Guernseys  
3 per cent Purebred Guernseys  
11.3 per cent Grade Jerseys  
5 per cent Purebred Jerseys  
2.1 per cent Grade Shorthorns  
2.5 per cent Purebred Milking Shorthorns  
2.8 per cent Grade Ayrshires

Every member has a modern dairy house  
Every member uses a cooler to cool milk.  
Every member uses steam sterilization.  
Every member clips his cows udders, tails and flanks.  
Every member uses butter instead of oleomargarine.

# Marshall Creamery Company

MARSHALL, VIRGINIA

WE CONGRATULATE THE MEMBERS OF  
THIS ASSOCIATION ON THE SPLENDID  
WORK THEY ARE DOING.

WE WILL BE GLAD TO HANDLE YOUR  
SHIPMENTS OF CREAM EITHER SWEET  
OR SOUR.

WE REMIT FOR EACH CAN AS RECEIVED IN  
OUR PLANT PAYING THE HIGHEST PRICE  
THE MARKET WILL JUSTIFY.

SHIP US YOUR CREAM<sup>®</sup>

USE OUR SUPREME BRAND BUTTER  
ON YOUR TABLE

TABLE NO. 1

The following table gives the average per cow in the various herds for the year of 1923-24.

Herd No.	No. of Cow Years	Milk Prod. Lbs.	Butterfat Prod. Lbs.	Value of Prod.	Lbs. of Grain	Cost of Roughage and Pasture	Cost of Grain	Total Cost of Feed	Value of Prod. Above Cost of feed	Returns per \$1 Expended for Feed	Feed Cost per Lb. Butterfat	Feed Cost 100 Lbs. Milk
1	19 2	9,472	342.7	\$288.37	2,942	\$29.93	\$71.59	\$101.52	\$186.85	\$2.85	\$9.296	\$1.07
2	21 3	7,526	246.5	221.76	1,805	30.30	33.39	63.69	158.07	3.48	.258	.84
3	14 1	9,152	347.3	292.93	2,565	42.87	59.10	101.97	190.96	2.87	.288	1.11
4	24 4	9,873	384.6	354.52	2,792	30.93	70.65	101.58	252.94	3.47	.264	1.02
5	12 5	9,477	342.0	290.43	2,929	39.38	70.53	109.91	180.52	2.64	.321	1.16
6	14 9	8,945	304.1	273.51	2,776	36.94	54.56	91.51	181.90	2.98	.301	1.02
7	11 7	7,296	284.4	228.60	2,725	32.04	62.36	94.40	134.20	2.42	.332	1.29
8	13 3	8,081	335.1	268.19	2,322	37.97	38.34	76.31	171.88	2.78	.287	1.19
9	18 8	8,114	293.6	249.65	2,305	32.12	55.83	87.95	161.70	2.84	.299	1.10
10	15 4	5,033	218.1	93.60	797	31.50	14.87	46.37	47.24	2.01	.212	.92
11	15 3	6,374	224.3	184.08	2,473	33.65	51.62	85.27	98.81	2.15	.380	1.33
12	20 0	8,015	283.7	251.69	2,458	36.19	53.59	89.78	161.91	2.80	.316	1.12
13	21 0	6,637	275.0	218.74	2,322	35.28	56.19	91.47	127.27	2.39	.332	1.37
14	17 5	8,342	319.9	270.78	3,095	36.48	54.82	91.30	189.48	2.96	.285	1.09
15	35 4	6,439	233.8	199.53	2,308	39.18	54.91	94.09	105.44	2.12	.402	1.46
16	26 5	5,874	243.5	285.91	3,385	42.10	69.05	111.15	174.76	2.57	.329	1.09
17	34 2	5,531	252.3	193.30	2,183	40.22	47.40	87.62	105.76	2.20	.347	1.38
18	22 5	7,128	248.7	211.61	1,920	36.52	45.56	82.08	129.53	2.57	.329	1.15
19	11 6	5,702	273.1	160.01	1,130	27.78	24.89	52.67	107.34	3.03	.193	.92
20	25 4	9,652	307.0	262.24	2,677	35.91	53.75	89.66	172.58	2.92	.292	1.30
21	28 8	8,143	279.8	243.15	2,352	35.48	50.10	85.58	187.57	2.84	.305	1.05
22	26 7	5,993	236.8	196.86	1,560	30.82	35.80	66.62	180.24	2.95	.281	1.11
23	18 0	8,209	286.9	246.78	2,114	36.61	45.53	82.14	164.64	3.00	.280	1.00
24	54 3	7,016	252.1	211.63	2,417	40.63	51.17	91.80	119.83	2.30	.364	1.30
Average	520	7,414	277.4	223.58	2,360	36.12	52.29	88.32	135.26			

**Table of Herd Averages from  
the 1923 - 1924 Report of the Prince William  
Cow Testing Association.**

**TABLE NO. 2**  
The following table gives the average per cow in the various herds for the year of 1923-23

Herd No.	No. of Cow Years	Milk Prod. Lbs.	Butterfat, % of Prod.	Vols. of Prod.	Lbs. of Grain	Amount of Paid Pasture	Cost of Grain	Total Cost of Prod.	No. of Pounds Above Point	No. of Pounds per Lb. Fat	Prod. Cost per Lb. Fat	Prod. Cost per Lb. Milk
1	21.4	8,692	309.7	8271.21	2,623	818.37	\$64.97	\$98.24	\$172.97	\$2.75	\$6.217	\$1.13
2	18.4	7,216	284.9	2111.43	1,975	31.03	42.80	73.83	135.00	7.80	20.31	1.02
3	29.7	9,239	327.6	278.90	2,168	38.78	52.69	91.43	187.47	3.03	28.1	.99
4	14.7	8,930	316.7	269.52	2,120	30.44	43.00	101.64	167.88	2.63	23.9	1.14
5	19.2	9,134	312.8	270.88	2,187	30.18	51.30	81.48	165.00	3.21	28.0	1.09
6	17.1	8,218	299.6	238.37	2,140	31.15	51.72	84.64	141.54	2.69	20.1	1.18
7	11.4	7,218	280.6	246.57	2,140	31.15	55.93	89.08	157.49	2.77	29.0	1.11
8	19.0	8,624	299.6	269.56	2,037	30.77	52.92	91.69	138.47	2.73	20.1	1.12
9	23.5	8,132	301.8	259.56	2,037	30.77	52.92	91.69	138.47	2.73	20.1	1.12
10	19.4	7,946	292.8	246.57	2,140	31.15	55.93	89.08	157.49	2.77	29.0	1.11
11	19.4	7,946	292.8	246.57	2,140	31.15	55.93	89.08	157.49	2.77	29.0	1.11
12	11.4	7,218	280.6	246.57	2,140	31.15	55.93	89.08	157.49	2.77	29.0	1.11
13	13.0	8,596	292.8	188.15	2,037	32.29	58.18	90.13	97.62	2.64	18.0	1.13
14	19.4	7,135	273.7	239.24	2,037	31.13	42.25	73.38	143.50	2.92	27.0	1.06
15	18.4	6,083	213.3	169.26	2,128	31.33	57.31	88.64	111.42	2.93	40.0	1.43
16	38.4	8,519	317.4	271.95	2,140	31.15	55.93	89.08	157.49	2.77	29.0	1.11
17	31.9	8,519	317.4	271.95	2,140	31.15	55.93	89.08	157.49	2.77	29.0	1.11
18	31.9	7,013	253.6	212.45	2,144	31.52	50.87	82.39	130.06	2.31	23.1	1.17
19	9.0	5,880	264.8	145.08	1,217	29.60	36.39	66.19	77.34	2.11	23.0	1.12
20	29.0	8,268	308.6	279.18	2,148	31.16	58.82	102.49	176.80	2.78	20.1	1.10
21	27.7	8,268	308.6	279.18	2,148	31.16	58.82	102.49	176.80	2.78	20.1	1.10
22	27.0	6,335	243.1	196.96	1,609	32.11	50.77	82.88	144.88	2.37	14.1	1.07
23	17.2	8,109	286.7	256.46	2,045	31.52	55.15	87.17	169.29	2.94	20.1	1.07

Summary Page of the 1924 Report  
of  
Augusta County Cow Testing Association.

R. F. THOMPSON  
President

E. M. COINER  
Vice Pres.

H. H. ROLLER  
Secretary

The Augusta County  
Guernsey Breeders Association

PUREBRED GUERNSEYS

Males and Females for sale at all times,  
representing some of the best blood of  
the breed.

PRODUCTION

The high cow for the past 3 years.  
The high herd for butterfat in 1923.  
The 2nd, 3rd, 4th and 6th high herds in 1924.  
The 1st and 2nd high cows for 1924.  
Also the high Guernsey herd for the State in 1924.  
The high cow for all breeds in the State for November  
and December, 1924, were all held by Guernseys  
in the Augusta County Cow Testing Association.

TYPE

Augusta County Guernseys won 1st county herd  
in Guernsey class at the Virginia State Fair. Augusta  
County Guernseys only lost twelve blue ribbons at  
seven fairs all over the State, including the Virginia  
State Fair.

**Summary Page of the 1934 Report  
of  
Augusta County Cow Testing Association.**

**YEARS SUMMARY  
AUGUSTA COUNTY**

Number of Cow Years .....	212
Average Milk Produced .....	6773
Average Butterfat Produced .....	292.1
Number of Cows sold for Meat .....	43
Number of Cows sold for Dairy Purposes .....	41
Number of Cows Bought .....	49
Number Heifers Freshened .....	56
*Number Herds T. B. Tested .....	(All except three)
Number of Heaters .....	9
Number of Cows died of Miscellaneous causes .....	11
Number Herds using Pure bred Sire .....	100 per cent
Number of Sires used .....	23
Number Cows over 300 lb butterfat .....	117
Number Cows over 350 lb butterfat .....	62
Number Cows over 400 lb butterfat .....	27
Number Cows over 450 lb butterfat .....	5
Number Cows over 500 lb butterfat .....	5

\*These 3 Herds T. B. Tested in March 1935—O.K.

**AN APPRECIATION**

The object of this report is to give publicity to the Cow Testing Work of Augusta County and to show its importance to the Dairy business of the State. It is hoped that by reading these pages, farmers will be encouraged to follow more efficient methods of dairying.

The Tester takes this opportunity to thank the advertisers who have made this report possible.

I wish to express my appreciation to the County Agent—and The Virginia Polytechnic Institute Extension Division for their assistance in carrying on this work.

I wish to thank the members of the Association for their kind hospitality during the six months I have been here, and wish them much success.

S. B. Fenne, Tester.

Marion B.  
Swoop, F.  
Ph. & Gr.

J. A.  
Reed  
Pure

O. C. Flor  
Stuart D.  
Grade Gu

W. I.  
Mt.  
Gr. I

Lawrence  
Stanton,  
Ph. and Gr

W. W.  
Swoop  
Gr. G

Va. School  
Deaf and B.  
Stanton,  
Purebred I

# ROLL CALL



Martin Brown,  
Swoope, R. 1.  
Ph. & Gr. Jerseys

E. M. Cotner  
Staunton, R. 2  
Purebred Guernseys.

E. N. Cox,  
Staunton, R. 6  
Gr. H. F. & Jerseys

J. Abney Clarkson,  
Brookwood,  
Purebred & Gr. H. F.

J. R. Driver,  
Waynesboro, R. 1  
Grade Guernseys

O. C. Flory,  
Stuarts Draft,  
Grade Guernseys

J. N. Jackson,  
Montezy, Star Rt.  
Ph. & Gr. Guernseys

M. H. McComb,  
Stuarts Draft,  
Ph. & Gr. Guernseys.

W. H. Michael,  
Mt. Solon,  
Gr. H. F. & Jerseys. o

W. A. Quick,  
Staunton, R. 6  
Purebred Jerseys.

Hawlings & Rolbr,  
Staunton, R. 2  
Ph. and Gr. Guernseys.

J. R. Rohr,  
Staunton, R.  
Ph. H. F. & Ayrshires.

Amos Showalter,  
Waynesboro, R. 2  
Ph. & Gr. Guernseys.

W. W. Trimble,  
Swoope, R. 1  
Gr. Guern. & Jerseys.

R. F. Thompson,  
Fishersville,  
Ph. and Gr. Guernseys

Va. School for  
Deaf and Blind,  
Staunton, E. Main St.  
Purebred H. F.

F. A. Wright,  
Staunton, R. 1,  
Purebred and Grade H. F.

Webb and Gish,  
Mt. Sidney,  
Gr. Guernseys & Jerseys.



**Newspaper Publicity** - In addition to the page allotted to this Department in the Extension News Letter each month, news items are sent to different leading newspapers in this state, different breed journals, agricultural journals, and dairy publications.

**4. Supervision and Reorganization of the Virginia Register of Production.**

Due to the fact that the old Register of Production was conflicting with the Advanced Registry of the different Pure Bred Cattle Clubs and the fact that this work could not be carried on with the office help allowed, the rules and regulations and whole system were changed to suit existing conditions. A copy of the revised rules are attached below:

2-10

## Rules for the Virginia Register of Production

(Effective Jan. 1, 1932)

V. F. I. Dairy Extension Office  
and  
The Virginia State Dairymen's  
Association, Cooperating

1. The Virginia Cow Testing Association Register of Production shall be considered a part of the cooperative project of the Virginia Cow Testing Associations and the Virginia State Dairymen's Association. The supervision and control of the Register of Production shall be vested in the Dairy Husbandry Department, Virginia Polytechnic Institute, Blacksburg, Va., and its decision will be final in all matters pertaining to the work. It will control the Register of Production and will authenticate all records.

2. Entering the Register of Production is a privilege and not a right. The V. F. I. Dairy Husbandry Department, at its discretion, may refuse to enter a cow in the Register of Production, or to issue a certificate provided it is convinced that fraud has been resorted to by the owner, herdsman, or tester.

### 5. Cow Testers Efficiency Contest.

The Project began in January 1924 to promote efficiency in the work of the cow testers and stimulate interest in the work, and has been continued again in 1925 with excellent results. Every month a different tester has placed first with one exception, when the Augusta tester, Mr. S. B. Fenne, placed first in the February Contest and again in April. At the end of this year's work it has been decided to change these rules slightly to give more emphasis to the most important points and be fairer to the testers who are testing in the old, filled up Associations which are doing good work.

The results of the 1924 year's work are as follows:

Sterling Simpson, Henrico Tester, First.  
 O. E. Snell, Fairfax No. 1. Tester, Second.  
 T. T. Curtis, Prince William Tester, Third.

### 6. Summary of Results in Virginia Cow Testing Associations. November 1924 - October 1925.

Ass'n.	No. Cows.	Avg. Yearly Milk Prod. Lbs.	Avg. Yearly B. Fat Prod. Lbs.
Albemarle	385	6302.0	258.8
Augusta-Rockbridge	455	5909.0	251.0
Bristol	508	5854.0	255.0
Botetourt	519	6251.0	Estimated 245.6
Chesterfield	454	6902.0	Estimated 261.8
Culpeper	544	5875.0	228.6
Fairfax No. 1	655	7710.0	306.0
Fairfax No. 2	473	5748.0	279.5
Fauquier	507	5475.0	Estimated 227.4
Henrico	657	7472.0	Estimated 282.0
Loudoun Valley I	622	6293.0	275.0
Loudoun Valley 2	701	6069.0	Estimated 252.0
Lynchburg	553	4998.0	212.5
Northern Valley	260	4840.0	274.1
Orange	410	6275.0	287.0
Prince William	567	7630.0	286.3
Rockingham	188	6456.0	291.5
South Side	454	5496.0	245.6

The High Herd.

Virginia Cow Testing Associations 1924 - 1925

Not often is it that the rich man's hobby is an outstanding success, so it is to Mr. Shedd, Manager, for Mirador Farms, the estate of Mr. Ronald Tree, Greenwood, Albemarle County, Virginia, that most of the credit is due for developing the highest producing herd in Virginia C. T. A. work for the year of November 1924 - October 1925. The remainder of the credit should be given to Sailor Lad 5th of the Fontaines R. A. A. S. 295 P. S., who is the sire of ten of the best heifers in this herd. It is also worthy of mention that this herd is comprised entirely of two year old heifers with their first calf which makes their five years record all the more creditable. Although there are nineteen heifers in milk at the present time, the average for the year is as follows:

Cow Years	Average Milk Prod. Lbs.	Average B. Fat Prod. Lbs.
14.6	5759.7	428.96

The High Cow.

1924 - 1925

The highest individual production record completed during the period of this report in a regularly organized Cow Testing Association, was made by Naomi Veeman Rag Apple Kornlyke 549106, a four year old pure bred Holstein, owned by Mr. Frank S. Walker of Woodberry Forest, Va. In twelve months ending with April 1925, this cow produced:

Lbs. Milk	Lbs. Butter Fat	% Average Test
20,063	749.3	3.6

This great cow was bred and raised by Mr. Walker. Her sire is V. P. I. Kornlyke Veeman 216851, who was sired by Virginia Kornlyke Butter Boy. The dam of this cow was Mutual Rag Apple Soldene 406186, who was sired by Jenningshurst Mutual Rag Apple 150690, and out of Gertrude Soldene 5th 168557.

High Herd Average Each Month

November 1934 - October 1935

Month	Ass'n.	Owner	No. Cows	Breed	Milk Prod. Lbs.	B.Fat Prod. Lbs.
Nov.	Culpeper	H.L. Butler & Sons	10	P.B.H.	1146	41.1
Dec.	Fairfax I	H. Perkins	21	Gr.H.	1122	41.2
Jan.	Rockingham	J.S. Roller & Sons	15	P.B.J.	791	45.7
Feb.	Rockingham	J.S. Roller & Sons	15	P.B.J.	667	59.1
March	Albemarle	Ronald Tree	15	P.B.G.	873	41.8
April	South Side	Oliver Moyer	22	Reg. & Gr.H.	1149	45.5
May	Albemarle	W.B. Colthurst	9	Gr.G.	925	44.1
June	Loudoun I	H. G. Rogers	22	Reg. & Gr.G.	1065	42.5
July	Fairfax I	R.L. Harrison & Sons	18	Gr.H.	1165	48.1
Aug.	Fairfax I	R.L. Harrison & Sons	20	Gr.H.	1117	46.7
Sept.	Fairfax I	R.L. Harrison & Sons	22	Gr.H.	941	41.5
Oct.	Fairfax I	Frank Peck	25	Gr.H & G.	915	56.9

High Cow Each Month

November 1934 - October 1935

Month	Ass'n.	Owner	Cow Name	Breed	Milk Prod. Lbs.	B.Fat Prod. Lbs.
Nov.	Augusta	E. M. Coiner	Myrtle	P.B.G.	1424	88.1
Dec.	Augusta	E. M. Coiner	Myrtle	P.B.G.	1550	98.0
Jan.	Loudoun 2	Mrs. J.H. Carter	Spot	P.B.G.	1285	95.0
Feb.	Prince	F. A. Lewis	Homestead	P.B.H.	1785	88.9
March	Prince	J. J. Conner	Segis Queen No. 9	Gr.H.	1942	95.1
April	South Side	Oliver Moyer	Midway	P.B.H.	2394	98.1
May	Fairfax I	Ben Middleton	M. Artis	Gr.H.	2672	101.5
June	Orange	F.S. Walker	Fietje	Gr.H.	1795	89.6
July	Loudoun 2	Mrs. J.H. Carter	R. Cow	Gr.G.	1656	77.9
Aug.	Augusta	W. S.D. & E.	Cremelle	Reg.H.	2730	95.6
Sept.	Fairfax I	Ben Middleton	Flora	Gr.H.	2510	96.6
Oct.	Fairfax I	Ben Middleton	Flora	Gr.H.	2594	83.6

Location and Enrollment of Associations

<u>Name of Ass'n.</u>	<u>Location</u>	<u>No. of Herds</u>	<u>No. Cows on Test</u>
Albemarle	Albemarle County	19	385
Augusta-Rockbridge	Augusta and Rockbridge Counties	22	455
Bristol	Washington County	18	385
Botetourt	Botetourt County	26	519
Chesterfield	Chesterfield County	12	454
Culpeper	Culpeper County	12	544
Fairfax No. 1	Fairfax County	28	655
Fairfax No. 2	Fairfax County	18	475
Fauquier	Fauquier County	25	507
Henrico	Henrico and Hanover Counties	16	637
Loudoun Valley 1	Loudoun County	21	622
Loudoun Valley 2	Loudoun County	18	701
Lynchburg	Campbell and Bedford Counties	18	385
Northern Valley	Shenandoah, Frederick, Clarke and Warren Cos.	20	360
Orange	Orange County	16	410
Prince William	Prince William County	26	567
Rockingham	Rockingham County	15	188
South Side	Fottoway and Amelia Counties	20	454
Total - - - - -	- - - - -	346	9010

**Summary of Results  
in  
Virginia Cow Testing Associations.**

	(1922)	(1923)	(1924)	(1925)
Number of Associations - - - - -	12	14	15	18
Number old Associations re- organized - - - - -	0	4	12	14
Number new Associations reorganized - - - - -	0	2	5	4
Number members in all Associations	215	267	281	342
Number cows in all Associations	3150	4376	4544	5010
Average yearly milk production -			6740	6562
Average yearly butter fat production - - - - -			279.2	265.5
Average number cows producing over 40 pounds fat each month --		455	502	696
Average number cows producing over 50 pounds fat each month --		113	163	183
Average number dry cows each month				1137
Number unprofitable cows sold during year - - - - -		728	1044	1566
Number pure bred bulls purchased during year - - - - -		44	55	70
Number pure bred cows purchased during year - - - - -		81	205	206

High herd - Ronald Tree, Greenwood, Va.  
P. B. Guernseys - - - - - 8,769.7 lbs. milk.  
429.96 lbs. fat.

High cow - Frank S. Walker, Woodberry Forest, Va.  
P. B. Holsteins - - - - - 2006.5 lbs. milk.  
749.5 lbs. fat.

**Project 2 - Better Dairy Bull Campaign.**

**1. State Better Sires Campaign.**

As in the previous year the Dairy Department co-operated with the Animal Husbandry Department in holding a State Contest among the County Agents for the replacing of "scrub" sires with pure-bred sires. The results of the 1935 Contest were as follows:

Agent	Beef bulls	Dairy bulls	Hans	Bears	Replace- ments	Credit
1. W. L. Browning	15	1	15	3	24	247
2. S. D. Preston	11	2	15	11	37	259
3. D. T. Painter	16	0	5	5	25	195
4. W. O. Martin	11	0	12	2	25	178
5. H. G. Lewis	2	2	9	0	14	95
6. H. V. Brocken	0	2	10	0	12	70
7. Bruce Anderson	0	6	0	0	6	60
8. H. P. Marshall	2	0	0	0	2	20
9. H. B. McSwain	0	1	0	0	1	10
<b>Total</b> - - - - -	<b>56</b>	<b>15</b>	<b>64</b>	<b>21</b>	<b>165</b>	<b>1114</b>

Note - 14 other agents who were enrolled in this project, reported no replacements.

Probably the best means of developing this project is through the Virginia Cow Testing Associations. We note from the summary of Project I that in 1935, a total of 70 pure bred dairy bulls were bought by members of Cow Testing Associations. Not all of these replaced "scrub" sires, but our experience has shown us that the Cow Testing Association member will buy a higher class dairy bull and use great care in selecting one whose ancestry have high records of production. Thus better bulls are being brought into use, which is a result greatly desired.

**Project 5 - General Dairy Development.**

**1. Dairy Breed Associations.**

- (a) The three active dairy breed Associations in the state are as follows:

The Virginia Guernsey Cattle Club,  
Mr. C. T. Rice, Secretary,  
Oakton, Va.

The Virginia Jersey Cattle Club,  
Miss V. L. Bishop, Secretary,  
Fredericksburg, Va.

The Virginia Holstein-Friesian Breeders Club,  
Mr. C. H. Crabbill, Secretary,  
Drewry's Bluff, Va.

These Associations all have an annual meeting at the time of the annual Virginia Dairymen's Convention. Each of these state dairy cattle clubs have a more or less extensive program of activity for the year. For example, they all appropriate to the prize list of the Boys' and Girls' Dairy Calf Club Exhibit at the Virginia State Fair. Some of them have consignment sales or assist in the organizing and exhibiting of County Herds.

- (b) **Consignment Sales.**

On November 4, 1925, the Virginia Holstein Breeders Club held a consignment sale at Orange, Va., Mr. F. S. Walker, as manager of the sale. The V. P. I. Extension Service cooperated with Mr. E. V. Bredon, local County Agent, assisting materially with local arrangements for the sale, Mr. W. L. Kirby, County Agent, and F. A. Buchanan, Dairy Husbandman, serving on the Sales Committee. The following statistics of the sale show some of the results:

65 head sold at an average of \$178.50 each,  
20 consignors to the sale.

Distribution of Sale as follows:

	<u>No. Head Purchased</u>
Fairfax County - - - - -	11
James City County - - - - -	12
Augusta County - - - - -	1
Fauquier County - - - - -	8

Albemarle County	- - - - -	6
Henrico County	- - - - -	3
Orange County	- - - - -	2
Rockingham County	- - - - -	1
North Carolina	- - - - -	6
West Virginia	- - - - -	6
Maryland	- - - - -	2

Other Sales attended by members of this department as assistance rendered to the sellers or to prospective buyers of pure bred dairy cattle were:

D. F. Roller, Dispersal Sale	- May 26, 1925
Endless Caverns Farms, Jersey Sale	- June 16, 1925
Tiverton Farm, Jersey Sale	- June 17, 1925
G. H. Gardner, Holstein Dispersal Sale	- Nov. 5, 1925

**(c) County Herds.**

The County Herd project has had for its purpose the securing of greater interest among the owners of pure bred dairy cattle in the showing of their cattle at the various County Fairs and the State Fair. The County Herd plan allows the owners in any one county to group their animals so that a single herd may be represented by at least three, or as many as ten owners.

At the Virginia State Fair, these County Herds usually meet for final competition. The results of the 1925 exhibition are as follows:

**1. Orange County Jersey Herd -**

Represented by :

Seven owners,  
Ten head of Jersey cattle.

Exhibited at the following Virginia Fairs:

Staunton Virginia Fair, Staunton,  
Shenandoah County Fair, Woodstock,  
Rockingham County Fair, Harrisonburg,  
Albemarle County Fair, Charlottesville,  
Lynchburg Fair, Lynchburg,  
Virginia State Fair, Richmond,  
Petersburg Virginia Fair, Petersburg.

**2. Spotsylvania County Jersey Herd -**

Represented by:

Ten head of cattle,  
Owned by seven exhibitors.

Exhibited at the following Virginia Fairs:

Fredericksburg Virginia Fair, Fredericksburg,  
Virginia State Fair, Richmond.

**3. Augusta County Guernsey Herd -**

Represented by:

Eight head of cattle,  
Owned by three exhibitors.

Exhibited at the following Virginia Fairs:

Stanton Virginia Fair, Stanton,  
Shenandoah County Fair, Woodstock,  
Rockingham County Fair, Harrisonburg,  
Virginia State Fair, Richmond,  
Petersburg Virginia Fair, Petersburg.

**4. Stafford County Guernsey Herd -**

Represented by:

Eight head of cattle,  
Owned by three exhibitors.

Exhibited at the following Virginia Fairs:

Fredericksburg Virginia Fair, Fredericksburg,  
Virginia State Fair, Richmond,  
Petersburg Fair, Petersburg.

**5. Loudoun County Guernsey Herd -**

Represented by:

Eight head of cattle,  
Owned by five exhibitors.

Exhibited at the following Virginia Fairs:

Loudoun County Fair, Purcellville,  
Virginia State Fair, Richmond,  
Petersburg Fair, Petersburg.

**6. Augusta County Holstein Herd -**

Represented by:

Two head of cattle,  
Owned by three exhibitors.

Exhibited at the following Virginia Fairs:

Staunton Virginia Fair,	Staunton,
Rockingham County Fair,	Harrisonburg,
Shenandoah County Fair,	Woodstock,
Albemarle County Fair,	Charlottesville,
Lynchburg Fair,	Lynchburg,
Virginia State Fair,	Richmond.

The results in competition of these County Herds at the Virginia State Fair were as follows:

First Prize Jersey Herd - Orange County Herd,  
First Prize Guernsey Herd - Augusta County Herd,  
First Prize Holstein Herd - Augusta County Herd.

**8. Boys' and Girls' Dairy Calf Clubs.**

Following the policy of the past few years the Dairy Department of the Extension Service rendered service to the Club Department in any matters pertaining to the subject-matter of Dairy Calf Club work. During the period of this report assistance was given by members of the staff of the Dairy Department as follows:

	No. of Club Members.
1. Instruction, by means of lectures and demonstrations at the Fredericksburg District Short Course. - - - -	65
2. Instruction, by means of lectures and demonstrations at the Fredericksburg District Short Course. - - - -	150
3. Instruction, at the State Short Course	200
Visits to club member's projects with County Agents:	
Rockingham County - - - -	19
King George County - - - -	10
Westmoreland County - - - -	5
Stafford County - - - - -	6

There were no changes in club record books for dairy club members, and the bulletin, "Twenty Lessons on Dairying," as revised in 1924 continues to be the chief source of subject-matter instruction.

### **5. Virginia State Dairymen's Association.**

For the past five years, F. A. Buchanan, Dairy Husbandman of the Extension Service has been serving also as, Secretary-Treasurer of the Virginia State Dairymen's Association. This organization has as its object the bringing together of the dairymen of the state for the purpose of disseminating educational matter, for helpful and protective legislation and the development of programs to aid in the progress of the dairy industry of the state.

#### **(a) The Annual Convention.**

As has always been customary an Annual Convention of dairymen, of two days duration, was staged. The 18th Convention being held on January 22 and 23 at Roanoke, Va. An attempt was made at this Convention to hold joint meetings with the Virginia Crop Improvement Association.

The Dairy Convention for 1925 at Roanoke was declared to be a decided success. The average attendance at the various sessions was estimated to be over 500 representative dairymen from every section of the state.

#### **(b) Development of a State Program and the Virginia State Dairy Council.**

In addition to having a splendid program of addresses and exhibitions at the 1925 Convention, a program of activity for the Association was planned and begun by the Board of Directors. This was the formulating of plans for the organization of the Virginia State Dairy Council. A joint meeting of the Board of Directors of the Virginia State Dairymen's Association and the Virginia Dairy Products Association, which was addressed by Miss Jessie M. Hoover, of the U. S. Bureau of Dairying, resulted in action by these directors which began the work toward organizing this State Dairy Council.

The plans, purposes and results already secured toward perfecting this new organization will be set forth farther in this report.

#### 4. Agricultural Fairs.

##### (a) Judging at County Fairs.

The usual number of requests from various county and community fairs, for judging dairy cattle or dairy products were received. The following is a summary of the fairs at which judging was done by the various members of this staff:

Name of Fair	County Agent	Staff Member		
		Shubman	Carey	Idings
Rockingham Co.	: G.W. Wampler	: Cattle	:	:
Albemarle Co.	: S.E. Teal	: Cattle	:	:
Orange County.	: R.V. Brocken	:	: Cattle	: Products
Hokeville-Community	:	:	: Cattle	:
Aldie-Community	: T.F. Curtis	:	: Cattle	:
Florida-Community	: J.R. Lintner	: Cattle	:	:
Fairfax County	: E.R. Derr	: Cattle	:	:
Mecklenburg Co.	: E.R. Derr	: Cattle	:	:
Caroline County	: W.H. Williams	:	: Cattle	:
Essex County	: Dougan McKinsey	:	: Cattle	:
Westmoreland County	: D.H. Crosby	:	: Cattle	:
Petersburg Fair	: S.G. Chase	:	: Cattle	:
Suffolk Virginia:	: Southside	:	: Cattle	:
Fair	: Virginia Agts.	:	: Cattle	:
	: P.C. Blanford	:	:	: Cattle

Total Fairs 15 - Agents 17

##### (b) Virginia State Fair.

The work of staff members at the 1925 Virginia State Fair consisted of the following activities:

1. Planning and erecting our exhibit on dairying. See picture of this exhibit used as frontispiece for this report.
2. Directing and assisting in the handling of the Dairy Calf Club exhibits.
3. Assisting as clerks in the judging ring during the judging of the dairy breeds of cattle.

SECTION B

**- Dairy Marketing -**

**Including:**

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**Project 4 - Cooperative Milk Producers Associations.**

- (a) Valley of Virginia Milk Producers Association.
- (b) Maryland-Virginia Milk Producers Association.

**Project 5 - The Virginia State Dairy Council.**

- (a) Plan and Purpose.
  - (b) Contract Sign-up Campaign.
  - (c) Plan of Operation.
-

**Project 4 - Cooperative Milk Producers Associations.**

**(a) Valley of Virginia Milk Producers Association.**

The Valley of Virginia Milk Producers Association, as organized by members of the V. P. I. Extension Service during the year 1922, continues to progress under the able management of Mr. D. E. Shank, who became general manager in June 1924. This Association has a membership of over 500 dairy farmers and operate a plant at Harrisonburg. All milk and cream is paid for by a pool price. During 1925, the average price for Grade A milk to the farmers was \$2.50 per cwt. This Association provides a better market for milk and cream than any other milk plant in the Shenandoah Valley. Members of the dairy extension staff have given assistance to this Association on request.

**(b) The Maryland-Virginia Milk Producers Association.**

This Association operates in Washington City as its market and has about one half of its producer members in the northern counties of Virginia with the other half of its membership located in the southern counties of Maryland. During 1925 the Board of Directors of the Association adopted a revised membership contract, based on the "bargaining" plan of operation with a maximum brokerage of 1¢ per gallon. A "sign-up" campaign was launched during the summer of 1925 and various members of the dairy extension staff assisted in the Virginia Counties during this campaign.

Service rendered the Maryland-Virginia Milk Producers Association was as follows:

<u>County</u>	<u>Cooperator</u>	<u>Agent</u>	<u>Staff Member</u>		
			<u>Buchanan</u>	<u>Caray</u>	<u>Idings</u>
Fairfax	W.E. McHair	H.B. Derr		5	1
Fairfax	Dallas Berry	H.B. Derr	6		1
Loudoun	H.T. Hancock	J.R. Lintner	2		5
	J.V. Nichols				
Fauquier	P. S. Walker		1		
<b>Total days in fall - - - - -</b>			<b>19</b>		

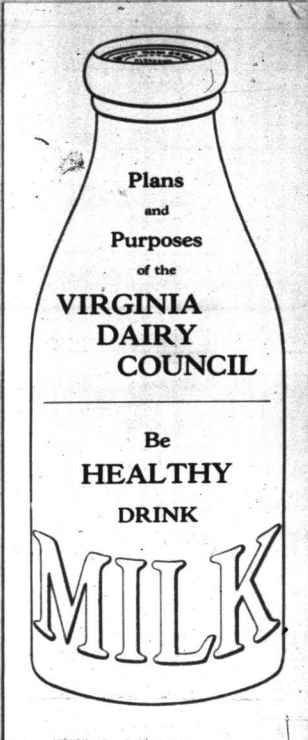
**Project 5 - The Virginia State Dairy Council.**

**(a) Plan and Purpose.**

The plan of having a State organization for the purpose of "teaching" the people of Virginia the real health and food value of dairy products resulted after studies had been made by the Dairy Committee of the Virginia Agricultural Advisory Council in the formulating of a "Five Year Program for the Development of Virginia's Agriculture." These studies revealed such startling facts regarding the present low consumption of dairy products, that Mr. J. V. Nichols of Purcellville, Va., a member of the Dairying Committee and President of the Virginia State Dairymen's Association, brought together at their last Annual Convention the directors of the two organizations, which represent the Dairy Industry of Virginia; namely, the Virginia State Dairymen's Association and the Virginia Dairy Products Association.

From this original joint meeting of directors of these Associations there was elected an "organization" committee for the Virginia State Dairy Council. Information was secured from other states as to the operation of other State Dairy Councils.

At a meeting of the Organization Committee at Charlottesville in May 1925, a definite plan was adopted. These plans and purposes of the Virginia State Dairy Council are set forth in the following circular:



Plans  
and  
Purposes  
of the  
**VIRGINIA  
DAIRY  
COUNCIL**

---

Be  
**HEALTHY  
DRINK**

**MILK**

## THE VIRGINIA DAIRY COUNCIL

### The Need

The dairy industry in Virginia, through the officers and directors of the Virginia State Dairymen's Association (representing the producers), and the Virginia Dairy Products Association (representing the dealers), realizes that more information about the food value of milk and dairy products and their relation to health, should be brought to the people of Virginia.

Through the work of an efficient Dairy Council in this state these five conditions, essential for the welfare of the people of Virginia and the dairy industry, can be improved:

#### First—Improvement of the Health

School statistics show us that from 10 to 40% of the school children are under-nourished.

#### Second—Increasing the Consumption of Dairy Products

Census reports reveal the fact that the average per capita consumption of milk in our Virginia cities is less than one-half a pint daily. The U. S. average daily per capita consumption is nearly one pint. Thus, we can double our per capita consumption and yet not equal that of the U. S. average.

#### Third—Improvement of Quality of Dairy Products

Through council work a full realization on the part of producers and dealers as to the necessity for maintaining high quality in their products will be obtained.

#### Fourth—Dairy Council Work

Dairy council work will bring about a closer relationship between producers and dealers and all other branches of this great industry.

#### Fifth

Through dairy council work the public will learn to appreciate the relatively low price of dairy products, and will thus re-adjust food programs to include a greater use of these products.

#### The Purpose

The purpose of the Virginia Dairy Council will be to have the dairy industry in Virginia support a program for teaching the people of Virginia the real health and food value of dairy products.

### Work of the Council

The Dairy Council of Virginia will carry on its work through state and local civic organizations, such as the schools, the women's clubs, the public press, the movies, factories, play grounds, radios, and exhibits, and other means of reaching the people of Virginia with a "Milk-for-Health" message.

The work will be directed by at least one nutritional specialist, who shall be employed to give full time to the organization of definite programs and putting on campaigns throughout the state.

It will be the object of the Council to include in its activities the whole program of health and nutrition. By doing this, the work of the Council will be welcomed in every school and by all civic organizations for the uplift of the people of Virginia.

### Funds for the Council

Since the dairy industry will be commercially benefited by any increase in the use of its products, it is only fair that it should support the financial budget for this work.

The finances are to be pledged equally by the milk producers and the milk dealers of this state.

As a logical means of pro-rating this expense, the producers will be asked to contribute one cent per 100 lbs. for all fluid milk delivered, and the dealers will contribute an equal sum. Collections will be made by the Council from the milk dealers; the milk dealers deducting the producer's contribution from his monthly milk check.

All contributions will be voluntary, but it is not expected that any milk producer or dealer will fail to realize the importance of this work for the advancement of the industry in Virginia.

### Membership

The Council will have its membership composed of representatives of the state organizations that deal with the public welfare of Virginia, such as: The State Department of Health, The State Board of Education, The State Parent-Teachers' Association, The Virginia Cooperative Education Association, and other institutions of like nature. The milk dealers and producers will also be represented by membership. The Council will be governed by a board of directors, so that its work will be directed in an efficient manner.

(b) Contract Sign-up.

At the second meeting of the Organization Committee for the State Dairy Council held at Richmond, Va., July 2, 1925, the Virginia State Dairy Council was duly organized with the following officers and directors:

J. V. Nichols, President,  
W. M. Cense, Vice-President,  
E. M. Blair, Treasurer,  
F. A. Buchanan, Secretary.

Directors:

A. F. Howard,  
W. L. Kirby,  
G. C. Coleman.

Also at this meeting contracts between the milk dealers, milk producers, creamery operators and the Virginia Dairy Council were adopted. Following this organization meeting of the Virginia State Dairy Council the work of having these contracts signed was begun.

By means of the very splendid help of Mr. G. L. Stahl, of the Dairy and Food Division and through the efforts of Mr. F. A. Buchanan, of the V. P. I. Dairy Extension Staff, the results of the sign-up work for the Virginia State Dairy Council are very encouraging. These results are as follows:

<u>Trade Territory</u>	<u>Contributing Members</u>			<u>Annual Income</u>
	<u>Dealers</u>	<u>Producers</u>	<u>Producer Income Distributors</u>	
Norfolk and Portsmouth	3	127	8	\$3,000.00
Lynchburg	2	29		388.70
Charlottesville	1	38	2	472.18
Fredericksburg	1	12		178.00
Roanoke	3	60		1,996.62
Petersburg and Hopewell	3	12	7	1,000.00
Danville	1	2	16	489.85
Bristol	0	0	6	160.00
Richmond	0	250	0	3,000.00

Total Annual Income from Milk Dealers and  
Producers ----- \$10,855.33

Brought forward - - - - -	\$10,656.33
Creamery Operators:	
Total number of creameries - 25	
Annual Income - - - - -	<u>5,099.00</u>
Total Income for Virginia State Dairy Council from all sources - - - - -	\$15,944.33

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**Field Summary of F. A. Buchanan for the  
Organization of the Virginia State Dairy Council.**

Number of milk dealers visited - - - - -	19
Number of creameries visited - - - - -	5
Number of meetings of Milk Producers - - - - -	7
Attendance at meetings of Milk Producers - - - - -	158
Number of farms visited - - - - -	86
Number of days in field - - - - -	25

**(c) Plan of Operation.**

It is the purpose of the Virginia State Dairy Council to use what funds seem necessary for the payment of salary and travel expenses of a full-time expert, who is well qualified in milk campaign work. Such a specialist to be added to the staff of the V. P. I. Extension Service.

The program of work of such a specialist will be planned so as to secure the greatest possible cooperation of the Home Demonstration Staff of the V. P. I. Extension Service.

It is expected that this specialist in the Utilization of Dairy Products can be employed to begin work not later than February 1, 1926.

SECTION 3

- Dairy Manufacturing -

Including:

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~~Project 6~~ - Cream and Milk Improvement  
Contest.

Project 7 - Farm Butter Making.

Project 8 - Improved Creamery Management.

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### Dairy Manufactures

The chief problem of the Dairy Manufactures Specialist is to get in contact with the persons to whom the most information should be given. There are two groups of people with whom it is necessary to deal. The largest group, and possibly the most important, is the producer, especially the producer of cream for butter making. On account of the large number of these and the wide territory covered, it has not been possible for the specialist to reach more than a very small percentage. The other group consists of the creamery and milk plant operators. It is easy to visit a large percentage of these. Help has been given to many of them.

The objectives of the Dairy Committee of the Five Year Program for the Development of Virginia's Agriculture have been considered at all times. There is naturally no distinct separation of the interest of the producer and the manufacturer, and the manufacturer's specialist has had to consider problems of production as well as those of manufacture.

The chief problems of the manufacturer are: Seasonal production, poor quality of raw material, securing competent trained operators, and selling to receive the best price for all the product throughout the year.

In order to solve the problems of season production and poor quality of raw material, it is necessary to reach the producers. Three problems are especially serious with the creameries making butter. The solution lies in educating the producer in the economical production of, and proper care of cream throughout the year. This calls for education in the production of crops, care of soil, care of pasture, and sanitation in the care of milk. There is ample room for active cooperation between the Dairy Department and Agronomy Departments in this work.

### **Project 6 - Cream and Milk Improvement Contest.**

A Cream and Milk Improvement Contest has been outlined and offered to the creameries for the improvement of the quality of the raw material. This project has been accepted by the Richmond Dairy Company at Staunton, Va. Considerable interest is being shown by the contestants and some improved practices are being introduced. One dairyman said that he did not know washing the cows udder made so much difference until after he had tried it. Many of the farm women are well pleased with the use of washing soda and a brush in washing utensils in place of the old soap and dish cloth method. The use of the sediment tester is giving good results in showing the producers the amount of dirt in their milk. The contest is aiding in securing the use of approved method of cooling milk and cream. It has also been instrumental in getting dairymen to keep records.

Pictures of some of the typical stables used by contestants are shown below:



**Stable observed in connection with Milk Improvement Contest.**



Stable observed in connection with Milk Improvement Contest.

The aim is to have at least two more of these contests running through the next year. All possible information is being given to encourage year around production and the score card used in the contest helps this question constantly before the contestants.

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**Project V - Farm Butter Making.**

Additional work has been done in improving the quality of butter through Project S - "Farm Butter Making." Approximately four weeks of time in the spring was given to this project. The Farm Butter Contest held by the State Dairymen's Association in connection with their Annual Convention showed that serious defect in farm butter was caused by churning too warm. Another defect was caused by handling the product in unsanitary manner. These points were especially emphasized in the Farm Butter work. Excellent cooperation was received from the Home Demonstration Agents in this work. Another point which was given special stress was that most farmers can secure more money for their cream than they can secure from the butter made from the cream.

Concerning the farm butter work one lady said, "I cannot make enough butter to supply my customers since using the parchment paper and paraffined carton, before I could sell only about half that I made."

During the month of January considerable time was given to the Annual Farm Butter Contest conducted by the Virginia State Dairymen's Association. There were 216 entries received in this contest. Each pound of this butter was scored and defects noted. The contestants were notified of their scores and were told how to remedy the defects noted.

### Project 3 - Improved Creamery Management.

While the improvement of the raw material is very important and much time was given to this phase of the work, it has seemed that the manufactures specialist's work should be more with the factory operators. There is much evidence that many operators would make a poor product out of the best of material. For this reason much time has been given to Project 2, "Improved Creamery Management." The month of February was given entirely to this project in the short course at the college. There were five students in the manufactures section of the dairy short course and each of these were actively engaged in factories in the state.

Thirty-six creameries, milk plants and ice cream factories were visited and help was given many of these. This help was given by instructing the workmen in sanitation and in approved methods of handling dairy products.

Special emphasis was given the following: Sanitation about the plant, proper neutralization of sour cream, uniformity of moisture, and color in butter, also mix and over-run in ice cream, and improvement of package of pound prints of butter.

Very little progress was made on the grading of cream. This is considered a very important phase of dairy development, but there are many difficulties in the way of its execution. Most creameries in the state are grading and paying according to grade, to some extent. Each operator has his own standard and there is no uniformity throughout the state. The result is dissatisfaction and friction among the creameries. A movement has been started to formulate specifications for uniform grades of cream throughout the state. The Dairy Manufacture Specialist has been active in this movement.

Assistance was given Mr. H. E. Williams, County Agent, Chase City, in establishing cream stations in Mecklenburg County. The first shipment of cream from the county in June consisted of fourteen gallons. During the months of July, August, and September 1,995 pounds of butter fat were shipped from the two stations established.

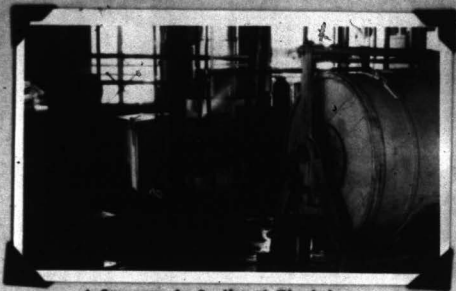
About two weeks were used in preparation of exhibits for State Farmer's Institute, held at the State College of Agriculture, and for the State Fair.

Work of minor importance consisted of judging at County fairs and inspection of cattle for sale in Southwest Virginia.

Emergency assistance was given in Cow Testing Association. One week was given to assisting the Maryland-Virginia Milk Producers Association in securing contract sign-up.

The general outline of work for 1925 will be followed for 1926.

It is extremely difficult to place a money value on most of the work done. One piece of work on which a partial estimate can be made of its value is that of estimating cream stations in Mecklenburg County. During the months of July, August, and September these stations collected and shipped 1,985 pounds of fat. This is equivalent of 2,394 pounds of butter. As sold this butter fat returned \$212.07 to the county. If it had been sold as farm butter at 25 cents per pound, as had been the custom, it would have returned \$598.50. This is the equivalent of \$386.57 in favor of the station in a period of three months. Taking this as an average for the year, it is equivalent to \$364.28 for a years time.



A Creamery in Southwest Virginia.



Produces 50,000 pounds butter annually.  
Where Service was Rendered by the Dairy Manu-  
facturing Specialist - 1925 -

SECTION B

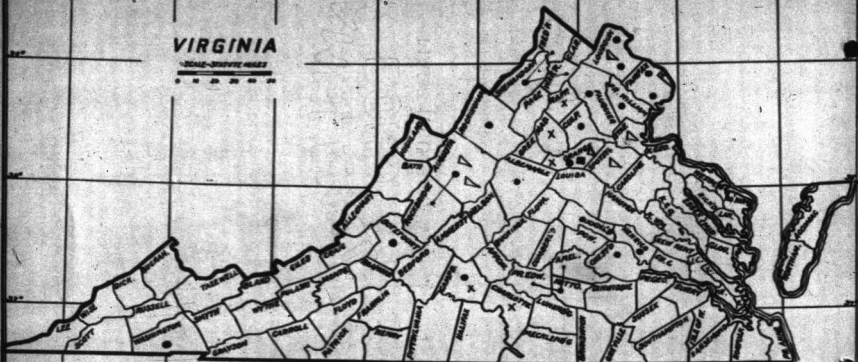
- Summary -

Including:

1. Maps showing location and nature of work done,
2. Field Summary.
3. Office Summary.

# VIRGINIA

SCALE - STATUTE MILES  
0 10 20 30 40



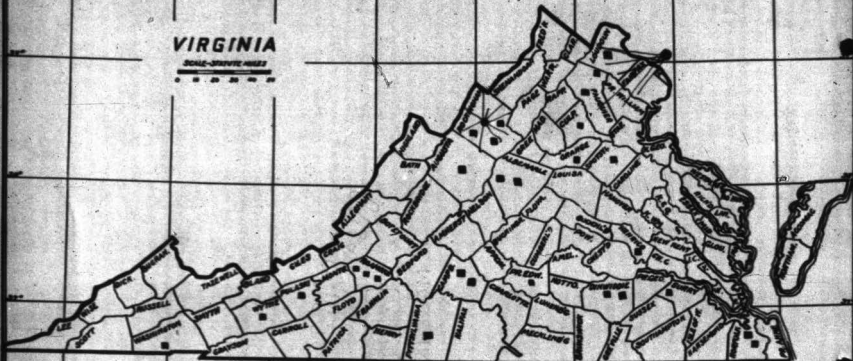
## Section A - Dairy Production

- Project I - Va. Cow Testing Assoc. ●
- Project II - Better Sires Campaign - X
- Project III - General Dairy Development
- Consignment Sale - ■
- County Heads - ▴

VIRGINIA

SCALE - STATUTE MILES

0 10 20 30 40



Section - B - Dairy Marketing -

Project IV - Cooperative M.P.A. - Assisted -

Project V - The Va. State Dairy Council.

Contributing Members -  
M.P.A. Dealers or Creameries -

80°

82°

84°

86°

88°

90°

92°

94°

96°

W.M.S.



Field Summary

	<u>Staff Member</u>				<u>Totals</u>
	<u>F. A. Buchanan</u>	<u>L. P. Emerick</u> (part yr.)	<u>G. H. Carry, Jr.</u> (part yr.)	<u>H. G. Iddings</u>	
1. Number of miles traveled:					
Railroad	10,355	6,365	11,700	12,718	41,088
Automobile	640	1,375	2,001	5,347	9,363
2. Number of visits to Counties :	54	37	77	35	203
3. Number of different Counties visited:	25	25	30	21	99
4. Number of meetings or conferences with:					
a. County Agents,	47	37	41	18	143
b. Home Demonstration Agents,	0	0	0	9	9
c. District Agents,	0	0	0	0	0
d. U.S. Dairy Bureau Workers,	3	3	2	0	8
e. Agricultural College workers,	4	6	2	8	20
f. Cow Testers,	3	26	34	0	67
g. Creamery Managers or Operators,	22	0	2	56	82
h. Creameries visited,	25	0	0	14	37
5. Number of Farm Visits,	105	35	75	122	345
6. Number of Speeches Made,	22	6	15	29	72
7. Number of people addressed,	855	111	705	917	2664
8. Number of Fairs judged,	5	0	7	3	15

Office Summary

	F. A.	L.P.	Staff Members		Totals
	<u>Buchanan</u> 1/2 time	<u>Emerick</u> part time	<u>S. H. Carey, Jr.</u> part time	<u>H.C. Iddings</u>	
1. Number of days in office,	211	42	41	102	396
2. Number of days in field,	90	64	140	191	485
3. Number Extension Committee Meetings.	26	2	1	1	40
Attendance,	206	20	8	20	254
4. Number letters written	1,448	200	277	256	2,181
5. Number different circular letters written,	10	5	4	7	26
6. Number circular letters sent out,	1,120	84	66	460	1,730
7. Number bulletins sent out,	65	120	796	229	1,200
8. Number days annual leave,	9	20	6	5	50
9. Number days sick leave,	3	0	2	0	5

VIRGINIA

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2  
CHEESE SPECIALIST

ANNUAL REPORT

1925

W. D. Saunders

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2.

REPORT

OF

EXTENSION WORK IN CHEESE MAKING

PROJECT 5

NOVEMBER 30, 1924 to DECEMBER 1, 1925.

W. D. Saunders, Dairy Specialist.



REPORT OF  
W. B. SAUNDERS, DAIRY SPECIALIST  
V.F.I. Extension Division  
1925

During the year 1925 efforts have been directed principally along lines looking to improvement in the quality of the cheese made at the different factories in the State. The severe drought throughout the State during the past season has made it impossible to interest farmers in any line of work that required good pastures for its development. It has also been difficult to interest the farmers around the cheese factories in increased milk production.

We have found in the past that our cheese makers have been making at times what is termed an acid cheese on the market, which is regarded as an undesirable quality in cheese. Considerable effort has been directed in correcting this trouble in our cheese and with a certain degree of success.

Milk brought to the factories has not been kept as well as it might have been, and the result is that the acid in the milk, as shown by the acid test, frequently ranges as high as .22% to .34%, and at times even higher than that, while the cheese maker wants the milk to be around .10% to .20% to make a high class cheese. In Virginia we have had these troubles, but they have had the same difficulties to contend with in Wisconsin and other States where cheese has been made and have had to find out means of successfully contending with such conditions as they may have arisen.

Of course the effort has been made to get milk brought to the factories in good condition for cheese making and with a certain degree of success, but at times the cheese maker has had to contend with high acid milk.

In order to deal successfully with milk of this kind the temperature at which it is set is somewhat lower than with a normal milk. The curd is cut finer and

heated faster and to a higher temperature, all of which is done with the idea of completing the cooking or firming of the curd by the time the acid rises in the whey to .18%. It has been found that if the acid in the whey gets much above this amount that the curd is injured and a poor quality of cheese is the result.

With a high acid milk at times the cheese maker may not be able to complete the cooking of his curd before the danger point is reached, and in such cases it is necessary to add water in sufficient quantity to maintain the acid content in the whey from .17% to .18% until the curd is sufficiently cooked.

Emphasis has been laid on this at all the factories and the cheese makers for the most part have watched carefully the acid in their whey and have made cheese this season with little or none of this acid condition, which has damaged so much cheese in the past all over the cheese making sections of the country.

Summer before last, quite a considerable amount of cheese at one factory was practically ruined by not giving the proper attention to the acid in the whey. The writer happened to know at the time how they were processing this cheese and warned them that if they continued to make cheese as they were making it that they would certainly find that the cheese would be of poor quality, but they were evidently being advised by some one else as to methods and continued to make it as they had been doing. The manager of this factory told me recently about what I had already had reason to suspect, that this cheese all turned out badly, and that with difficulty they sold some at a reduced price, but that it gave poor satisfaction to the trade and that finally a considerable amount of it proved to be a total loss.

The handling of the curd in the vat after drawing the whey also has a lot to do with the quality of the cheese made out of it. Assuming that the acid content is right when the whey is drawn and the proper degree of firmness or cook has been accomplished, the further handling or maturing of the curd in the vat has a great

deal to do with the quality of the product, both as to flavor as well as texture and body.

The proper texture and body are due largely to how the curd is handled after the whey is drawn, and the time that it is matured in the vat has a lot to do with how it shows up later on. The disposition to hurry the process at this stage has injured a great deal of cheese. The maturing of the cheese is indicated by the changed condition of the curd, reaching finally a mealy condition and the whey showing an acid content of 1% or more. If the whey cannot be obtained, as is often the case, then this condition can be determined by the hot iron test and this should show strings an inch and a half long or longer. When these conditions develop then the curd should be put to press. The disposition, however, to get through and get away has resulted in a great many cheese makers putting their curd in the press before it has reached the point in maturity that indicates it is ready to be pressed. This is not the case in Virginia alone, but all over the country where cheese is made, the disposition has been to hurry along too much and the result has been lack of quality in the finished product.

Continued advising and warning, however, has resulted in getting our cheese makers to take more time at this end of the process and it has been gratifying to note that the quality of the cheese, especially the texture and body, has been improved.

Another trouble all cheese makers have had to contend with at times, and in some cases to a considerable extent, has also given us more or less trouble at all of the factories. I refer to gas organisms in the milk which develop gas in the curd sometimes to an extent while it is in the whey that causes it to float on the surface, but it gives most trouble probably by appearing in the curd after the whey is drawn and causing a spongy condition and pinhole appearance as it is called, and at times small round cavities in the curd, more or less extensive. In cases

where milk is properly cared for this trouble is not apt to appear. The introduction of these organisms in the milk is due to dirt and small amounts of fecal matter from the surface of the udder and flanks of the cows, dropping into the milk. These organisms are associated with filth. Where the milk cannot be gotten free from, or reasonably free from such organisms, then it becomes a matter for the cheese maker to contend with in the vat and he can only contend with it by endeavoring to assist the lactic acid organisms by the introduction of smaller organisms and in a condition of great activity, the purpose being to have the lactic fermentation development so active that it will in a short time displace as it were all other fermentations and the gas fermentations along with the rest. This has been done in the use of what we call starter and with very gratifying results. We find, though, that even with the use of starter we have not been able at all times to altogether control the gas development in the curd. When this is the case, to correct the condition in the curd requires additional time in the vat and packing of the curd so as to get a final condition in the curd when all the appearance due to the gas in the curd disappears, if this is not corrected in the vat, then this condition shows in the finished product, which injures the body of the cheese, preventing that close compact condition of body which is desirable and which prevents the cheese from scoring high so far as body is concerned if placed on exhibition.

Instructions in the preparation and use of starter has been given in all the factories operating in the State and the control of the gas fermentations has been accomplished to a more or less extent. In some cases since the use of starter has been introduced in the factories the condition we usually term, a gassy curd, has disappeared entirely and cheese with a good compact body has been made. The use of starter will be emphasized more another season and it is hoped that gassy curds can be controlled entirely by its use.

Mr. Kasper of Bear Creek, Wisconsin, told me when in his factory in December last, that he had had no trouble with gas in his curd for a long time and he ascribed the freedom from gas in his curd as due to the use of a good active starter which caused an active development of the lactic fermentation which tended to exclude all others. Mr. Kasper also stated that the starter he was using had been carried continually for several years from the same original propagation. Some of the best starters, in fact, are those carried for a long time.

As quality in the cheese improves, difficulties in marketing are not so great. Some of the factories have gotten business with dealers and are supplying them with all the cheese they use and the price paid is the market price or the same price that dealers were asking for Wisconsin cheese.

For instance the Spring Valley Factory has several customers here at Blackburg who are getting their entire supply from them, the W. P. I. Dining Hall being one of them.

The placing of the cheese in cold storage as it is made is being done to a more or less extent and with a considerable degree of satisfaction. For instance this last summer cheese put in storage has advanced some four cents, which will be that much added to the profits of the factories with cheese in storage. The thing about it is that when sales are made from time to time the cheese shows up in prime condition, it is firm as a rule and clean, free from moulds, and otherwise attractive in appearance.

An interesting sale was made recently of cheese made at the Peshkhan Factory and which had been in cold storage in Richmond since summer. They sold a large Norfolk distributing concern some ten thousand pounds of cheese. The Wisconsin price at the present time is about 25½ cents f. o. b. Wisconsin points, the freight is about one cent, the Peshkhan Factory sold this cheese for 24½ cents f. o. b. Richmond and the sale was made after submitting a sample for inspection.

When I was at the factory at Powhatan recently several cheeses were sold from the shelves at the factory for 27 cents, and to customers who had made purchases before at the factory. One store in Powhatan selling the Powhatan Cheese states that they have sold as much as three cheeses (60 lbs.) to their retail trade a week. The factory at McNewell in Highland County, while they were unable to get any great amount of milk due to the dry summer, have made cheese that they have also sold for the most part at satisfactory prices and are confident their season's work making cheese will pay. One cheese they sent in here recently at my request was sold to one of the merchants at 27 cents, about the price the jobbers are selling for, or a little more, and this cheese was sold on its merits as the buyer examined it carefully before taking it, and was satisfied the quality was O. K.

Cheese was exhibited at the Rossmore Fair and also at the State Fair at Richmond. Fairly good scores were made at both places and the cheese shown was in line with similar products brought in the State from elsewhere.

A placard in Richmond at the Fair to the effect that it required 400 dairy farms in Wisconsin to supply the cheese consumed in Virginia attracted a great deal of attention. One person has already written in who was attracted by the thought thrown out and has already made an engagement to go to the factory at Powhatan and will look fully into what they have done and what he thinks can be done in his community. One of the things which might be done to help along with this work would be to have cheese made at the college during the summer and offer instructions at any time to prospective cheese makers. At present the only thing that can be done is to go to the factory and spend a sufficient time with a man who may offer to make cheese to teach him how to handle a normal milk; the difficulties he may have to contend with cannot likely be taken up and only at subsequent visits can this be done, and not then satisfactorily except when he may be contending with such conditions.

The importance of making cheese in out of the way places in the country cannot be emphasized too much. In such communities cheese would supply nourishment to those people of a character that is lacking to a more or less extent in their diet.

A sufficient amount of protein which would be supplied in a cheese diet would tend to develop better men and women in those communities where it was made available. Milk, of course, might be available in summer in ample quantities and would supply proper nourishment at that time and made into cheese would supply equally important nourishment in winter and to such persons who might prefer it at all times.

Respectfully submitted,

W. D. Saunders.