

VIRGINIA

DAIRY SPECIALIST:-

F. A. Buchanan.

1926

CHEESE MAKING

W. D. Saunders.

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Blacksburg, Va.,

December 15, 1926.

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

Dear Director Hutcheson:

I respectfully transmit to you the following report of Extension Work in Dairying, Project Eight, including the activities and results of this work during the year beginning December 1, 1925 and ending November 30, 1926.

Yours very truly,

Frank A. Buchanan
DAIRY MANAGER

FAB/30

DAIRY EXTENSION OFFICE

REPORT OF EXTENSION WORK IN DAIRYING

December 1, 1925 - November 30, 1926.

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REPORT OF
EXTENSION WORK IN DAIRYING
PROJECT 8
V. I. L. EXTENSION SERVICE
December 1, 1925 - November 30, 1926.

Introduction.

A - The Foundations for More Profitable Dairying in Virginia.

Successful dairying from the standpoint of the dairy farmer is built on four fundamentals as follows:

Foundation No. 1 - A higher per cow average yearly production of the herd.

Foundation No. 2 - A dairy type cow for producing dairy products.

Foundation No. 3 - A Quality Product delivered to the market.

Foundation No. 4 - Increasing the Use of More Dairy Products.

It has been the objective of the Dairy Extension Office to promote such projects as would reach the goals as suggested in these four fundamentals for successful dairy farming.

B - The Personnel for Dairy Extension work and The Relation of This Office to other State Agencies.

The personnel of the Dairy Department of the V. I. L. Extension Service for the period between December 1, 1925 and November 30, 1926, consisted of the following staff:

Professor C. W. Holdaway, Subject-Matter
Head of the Dairy Department.

Frank A. Buchanan, Dairy Husbandman of the
V. S. I. Extension Service.
(1/3 of time basis, between December 1, 1925
and July 1, 1926. On 1/3 of time basis,
between July 1, 1926 and November 30, 1926.)

George H. Carey, Assistant Dairy Husbandman.

(Miss) Eleanor Spright, Specialist in the
Utilization of Dairy Products.

Harry C. Jeddings, Dairy Manufacturing
Specialist. (resigned September 30, 1926.)

W. J. Coalfield, Dairy Manufacturing
Specialist. (appointed October 1, 1926.)

W. D. Saunders, (part time) Cheese Specialist.

During the period of this report there has been a
most helpful cooperative relation between this
office and the State Division of Markets and the
State Dairy and Food Division. The outstanding
project of the year on which the three state
agencies cooperated most successfully was the
Quality Green project. The relation of these
agencies will be further outlined under this
project.

Other agencies which have assisted in the develop-
ment of the year's program of work for this office
are:

The Virginia State Dairyman's Association
The Virginia Dairy Products Association
The Virginia State Fair Association.

C - The Division of the Work.

In order that there might be system and organized
effort on the part of the members of the depart-
ment in securing results in the field of dairy
extension, the projects were grouped and assigned
to the several members as follows:

Section A - Dairy Production

Assignment of field work to:

F. A. Buchanan, Dairy Husbandman
Geo. H. Carey, Jr., Assistant Dairy
Husbandman.

Projects included:

1. Virginia Cow Testing Association
 2. Improving the Type of Dairy Cattle
- 4

Section B - Dairy Marketing

Assignment of field work to:
Eleanor Wright, Specialist in
the Utilization of Dairy
Products.

F. A. Buchanan, Dairy Husbandman.

Projects included:
a. The Virginia State Dairy Council.

Section C - Dairy Manufacturing

Assignment of field work to:
H. C. Iddings, Dairy Manufacturing
Specialist.
W. J. Caulfield, Dairy Manufacturing
Specialist.
F. A. Buchanan, Dairy Husbandman

W. D. Saunders, (part time) Cheese
Specialist.

(His work and projects included
as a separate report).

Projects included:
5. Quality Cream
6. Efficient and Economical
Manufacturing and Marketing.

Of course, there would occasionally be some over-
lapping of field work among the members, but a
definite assignment and responsibility for the
various projects was made as above indicated.

SECTION A

-Dairy Production-

Including:

Project 1 - Virginia Cow Testing Associations

1. Supervision of Active Associations.
2. Organization of New Associations.
3. Publicity.
4. Cow Testers Efficiency Contest.
5. Summary of Results in the Virginia Cow Testing Associations.

Project 2 - Improving the Type of Dairy Cattle

1. Better Dairy Sires.
2. Better Dairy Cattle.

Project 3 - General Dairy Development

1. Dairy Breed Associations.
 2. Boys' and Girls' Dairy Galf Clubs.
 3. Virginia State Dairymen's Association.
 4. Agricultural Fairs.
-

Project 1 - Virginia Co-operative Cow Testing Associations.

1. Supervision of Active Associations.

Association 1 - Albemarle County Co. T. A.

This association has been most fortunate in having the services of one of the best testers in the state this year. Very little supervision has been necessary and the association has grown from 360 cows to 429 cows in the period of this report. A most remarkable increase is shown in the average production of this association for the year's work. Figures for 1925 show averages of 6302 pounds milk and 258.8 pounds butter fat per cow, while the figures for 1926 as shown below, average 7385 pounds milk and 297.4 butter fat per cow, which is 16.6% increase in milk production and 14.9% increase in butter fat production.

Co-operators:

Mr. C. E. Duck
Mr. A. F. Howard
Mr. T. O. Scott, Cow Tester

Enrollment: Herds 20 Cows 429

Field Work: Three days work to assist tester with the completion of year's work and making up yearly report.

Results: (November 1925 - October 1926)

Average number herds tested for year ---	20
Average number cows tested for year ----	365
Average milk production per cow-----	7385 lbs.
Average butter fat production per cow--	297.4 lbs.
Average number records over 40 lbs.	
per month-----	48
Average number records over 50 lbs, per	
month-----	12
Average number cows dry each month----	52
Number unprofitable cows sold during year	96
Number pure-bred bulls purchased -----	3
Number pure-bred cows purchased-----	29
Highest herd average production for	
one month-----	44.15 lbs.
	B. P.
Highest individual producer for one month	80.3 lbs.
	B.P.

Association 2 - Augusta-Hookbridge C. F. A.

This association is well organized and was getting excellent results up to June 1, 1925, when Mr. Bird resigned as tester. Mr. Pangborn, who took his place, was highly recommended by the Michigan State College but he failed miserably to live up to his recommendations. Mr. Kerr followed Mr. Pangborn, who was discharged the second month of his stay here. The association was reorganized January 1, 1926 and a change is expected at the same time next year.

Co-operators: Mr. A. E. Fenno, County Agent.
Mr. E. H. Rolley, President of Association
Mr. H. M. McManaway, Secretary of Association.

Enrollment: Herds 24 Cows 552

Field Work: Six trips, a total of seven days were spent in reorganization, instructing new testers, membership campaigns and supervising the work.

Results: (November 1925 - October 1926)

Average number herds tested for year-----	24
Average number cows tested for year-----	520
Average milk production per cow-----	557 lbs.
Average butter fat production per cow-----	275.6 lbs.
Average number records over 60 lbs. per month	48
Average number records over 90 lbs. per month	10
Average number cows dry each month-----	75
Number of unprofitable cows sold during year-----	105
Number of pure-bred bulls purchased by members-----	3
Number of pure-bred cows purchased by members-----	7
Highest herd average production for one month-----	29.7 lbs. 2.8
Highest individual producer for one month---	72.4 lbs. 2.3

Association 2 - Holsteins C. F. A.

This association completed its first year's work July 1, 1936, and was reorganized in June with eleven members dropping out. Several new ones have been secured from time to time until there is nearly a filled up membership at the present time. With one exception, this association has had very good testers and the increase of 1569 pounds of milk and 52 pounds of butter fat per cow over the average production of last year is a definite result showing the value of cow testing work inculcating the boarder cows and feeding the good cows better.

Co-operators: J. S. Mills, County Agent
J. B. Schaffer, Cow Tester

Enrollment: Herds 27 Cows 342

Field Work: Eight trips, a total of ten days were spent in reorganizing, instructing new testers and supervising the work.

Results: (November 1935 - October 1936.)

Average number herds tested for year ---	23
Average number cows tested for year ---	461
Average milk production per cow ---	7600 lbs.
Average butter fat production per cow ---	295.6 lbs.
Average number records over 40 pounds each month -----	68
Average number records over 50 pounds each month -----	22
Average number dry cows each month ---	59
Number of unprofitable cows sold during each year -----	95
Number of pure-bred bulls purchased by members during year -----	6
Number of pure-bred cows purchased by members during year -----	0
Highest herd average production for one month -----	49.1 lbs. B.F.
Highest individual cow production for one month -----	93.8 lbs. B.F.

Association 4 - Chesterfield County C. F. A.

This association was reorganized in November to start a new year's work December 1st. G. O. Smith has been the tentor for the past two years and has secured excellent results. By taking in more territory he has added nine new members to his Association this year which brings his association up from twelve herds and four hundred and one cows to twenty-one herds and five hundred and seventy-four cows at the present time. A large increase in production is in evidence in the results of this year's work. From 6902 pounds of milk and 381.8 pounds of butter fat on 454 cow years to 7763 pounds of milk and 318.0 pounds of butter fat on 535 cow years in one year's time should be considered as an excellent achievement for any association.

Co-operators: Mr. T. A. Halfour, County Agent,
Mr. J. C. McKeeen, President
Mr. R. C. Fraze, Secretary
Mr. G. O. Smith, Tentor.

Enrollment: Herds 21 Cows 574

Field Work: Three trips, a total of four days were spent to complete the operations of this association for the year.

Results: (November 1925 - October 1926)

Average number herds tested for year-----	19
Average number cows tested for year-----	535
Average milk production per cow-----	7763 lbs.
Average butter fat production per cow-----	318.0 lbs.
Average number records over 40 pounds each month-----	85
Average number records over 50 pounds each month-----	32
Average number cows dry each month-----	71
Number unprofitable cows sold during year---	144
Number pure-bred milks purchased by members--	3
Number pure-bred cows purchased by members--	6
Highest Average herd production for one month-----	41.3 lbs. B.F.
Highest individual cow production for one month-----	127.0 lbs. B.F.

association 5 - Sulphur County C. F. A.

H. G. Lanfear resigned as tester for this association December 1, 1925 and no tester could be secured during the month of December, but records have been kept continuously since January 1926 by the present tester, Maxwell Covington, who took the cow testers short course last winter. 206 cows have been added since January 1st and the increase of 719 pounds milk and 27.5 pounds fat over last year's average. This clearly indicates that the dairymen in this association have profited by belonging to the organization in more than one way.

Co-operators: Mr. J. G. Sullivan, Secretary-Treasurer
Mr. J. C. Miller, President
Mr. Maxwell Covington, Cow Tester

Enrollment: Herds 12 Cows 676

Field Work: Six trips, a total of nine days, were required to reorganize, instruct new tester and supervise his work during the year.

Results: (November 1925 - October 1926)

Average number herds tested for year-----	11
Average number cows tested for year-----	600
Average milk production per cow-----	6595 lbs.
Average butter fat production per cow-----	256.1 lbs.
Average number records over 40 pounds each month-----	35
Average number records over 50 pounds each month-----	7
Average number cows dry each month-----	90
Number of unprofitable cows sold during year-	59
Number pure-bred bulls purchased by members during year-----	0
Number pure-bred cows purchased by members during year-----	0
Highest average herd production for one month-----	21.2 lbs. B.F.
Highest individual cow production for one month-----	69.5 lbs. B.F.

Association 6 - Fairfax No. 1 G. T. A.

This association was reorganized on December 1st and Mr. Small was reemployed for another year, but stopped working in January to go into the dairy business for himself. Mr. John Sandag was employed then to do the testing. He has done very efficient work and has been the means of maintaining the standard set by previous testers. This association shows a small increase of 29.5 pounds of milk and 10.6 pounds of butter fat over last year. This is an excellent showing since their last year's production was already at a very high point.

Co-operators: Mr. S. W. Middleton
Mr. John Middleton
Mr. Harry Bready
Mr. John Sandag, Cow Tester

Enrollment: Herds 25 Cows 605

Field Work: Six trips, a total of nine days, were spent in supervising, instructing and reorganizing the association and work of the testers.

Results: (November 1925 - October 1926)

Average number herds tested for year-----	24
Average number cows tested for year-----	597
Average milk production per cow-----	8005 lbs.
Average butter fat production per cow-----	536.6 lbs.
Average number records over 40 pounds each month-----	89
Average number records over 50 pounds each month-----	26
Average number cows dry each month-----	76
Number unprofitable cows sold during year-----	145
Number pure-bred bulls purchased by members during year-----	9
Number pure-bred cows purchased by members during year-----	10
Highest average herd production for one month-----	46.7 lbs. S.F.
Highest individual cow production one month-----	103.6 lbs. S.F.

Association 7 - Fairfax No. 2 C. T. A.

Mr. W. G. Merritt, tester for this association for the year, has done a great deal to build up the membership. Starting with 18 herds and 558 cows last December, he has steadily built up this association, with the help of the county agent and this office, until at the present time he has a membership of 23 herds and 659 cows, which is an increase of 5 herds and 107 cows for the year. One hundred and seventy-nine unprofitable cows have been sold to the butchers or stock yards during the year, which is strong evidence of use the members are putting their records to.

Co-operators: Mr. H. B. Derr, County Agent
Mr. E. T. Rice, President
Mr. W. G. Merritt, Cow Tester

Enrollment: Herds 23 Cows 659

Field Work: Four trips, a total of five days, were necessary to instruct cow tester, supervise the work and assist with membership work.

Results: (November 1925 - October 1926)

Average number herds tested for year-----	21
Average number cows tested for year-----	600
Average milk production per cow-----	6783 lbs.
Average butter fat production per cow-----	275.3 lbs.
Average number records over 40 pounds each month-----	48
Average number records over 50 pounds each month-----	17
Average number cows dry each month-----	100
Number unprofitable cows sold during year-----	179
Number pure-bred bulls purchased by members during year-----	4
Number pure-bred cows purchased by members during year-----	2
Highest average herd production for one month-----	37.8 lbs. S.F.
Highest individual cow production one month-----	88.5 lbs. S.F.

Association 8 - Panquier County C. F. A.

This association started operation on July 2, 1925 and has been in continuous operation ever since in the charge of Mr. A. B. Cathcart, cow tester. Re-organization took place in July this year with only a few members dropping out. Others have taken their places so that the association is on a sound basis at the present time. Excellent results have been obtained through use of the records, which is clearly shown by the increase in production of this year's work over the part time records of last year.

Co-operators: Mr. D. L. Tiffany
Mr. W. P. Sadler
Mr. A. B. Cathcart, Cow Tester

Enrollment: Herds 21 Cows 504

Field Work: Five trips, a total of six days, were necessary for reorganization, supervision and membership work.

Results: (November 1925 - October 1926)

Average number herds tested for year-----	21
Average number cows tested for year-----	451
Average milk production per cow-----	6152 lbs.
Average butter fat production per cow-----	255.6 lbs.
Average number records over 40 pounds each month-----	55
Average number records over 50 pounds each month-----	9
Average number cows dry each month-----	76
Number unprofitable cows sold during year-----	67
Number pure-bred bulls purchased by members during year-----	3
Number pure-bred cows purchased by members during year-----	34
Highest average herd production for one month-----	39.5 lbs. B.F.
Highest individual cow production one month-----	72.5 lbs. B.F.

Association F - Henrico County C. T. A.

The records in this association are fairly complete but the last month the tester, R. S. Soss, was discharged so this month's work was averaged. This office asked the officers of this association to discharge this tester because of lax methods, irregular testing and tardiness. The lens said about this, the better it will be for all concerned. A slight decrease was made in the average milk production of 117 lbs. per cow, while a small increase was observed in the fat production of 15.8 lbs. per cow.

Co-operators: Mr. W. L. Kirby, County Agent
Mr. Sterling Simpson

Enrollment: Herds 16 Cows 626

Field Work: Three trips, a total of three days, were taken to conduct the affairs of this association during the year.

Results: (November 1925 - October 1926)

Average number herds tested for year-----	16
Average number cows tested for year-----	626
Average milk production per cow-----	7555 lbs.
Average butter fat production per cow-----	295.8 lbs.
Average number records over 40 pounds each month-----	67
Average number records over 50 pounds each month-----	25
Average number dry cows each month-----	95
Number unprofitable cows sold during year-----	119
Number pure-bred bulls purchased by members during year-----	0
Number pure-bred cows purchased by members during year-----	0
Highest average herd production for one month-----	41.5 lbs. 3.8
Highest individual cow production one month-----	85.0 lbs. 3.8

Association 10 - Loudoun Valley No. 1 C. T. A.

The oldest association in Virginia is still operating at the present time. It is the second largest with 787 cows. In January 1925, Loudoun County reorganized its cow testing associations, in this month the third association started operating and the whole county was re-districted to make better itineraries for the three testers. During the year seventy-eight unprofitable cows were sold. The number of herds remained even but the number of cows increased one-hundred and two which shows that the members of this association added one hundred and eighty milking cows to their herds which were profitable in twelve months. Excellent results are being obtained by the members of this association through the diligent efforts of its tester, Lyman Champney.

Co-operators: Mr. J. A. Lintner, County Agent
Mr. Lyman Champney, Cow Tester

Enrollment: Herds 21 Cows 727

Field work: Three trips, a total of four days, were taken to instruct tester and supervise work during year.

Results: (November 1925 - 1926)

Average number herds tested for year-----	21
Average number cows tested for year-----	662
Average milk produced per year-----	6276 lbs.
Average butter fat produced per cow-----	276.5 lbs.
Average number records over 40 pounds each month-----	62
Average number records over 50 pounds each month-----	13
Average number dry cows each month-----	85
Number unprofitable cows sold during year-----	78
Number pure-bred bulls purchased by members during year-----	8
Number pure-bred cows purchased by members during year-----	2
Highest average herd production for one month-----	27.5 lbs. S.F.
Highest individual cow production one mo. month-----	27.1 lbs. S.F.

Association 11 - Loudoun Valley No. 20, F. A.

It has been fortunate for this association that it has been able to retain the services of Mr. Stewart Rivers for another year. Culling out the boarder cows and feeding the good cows better has not been preached by Mr. Rivers for twelve months without results. Eighty-two scrubs have been sold to the butcher. Nine high class purebred bulls have been purchased by the members and the association average production has been raised from 280 pounds of fat to 290.6 pounds of fat in one year's time. What more definite results could be asked?

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

Enrollment: Herds 20 Cows 681

Field Work: Two trips, a total of four days, were necessary to supervise the work.

Results: (November 1925 - October 1926)

Average number herds tested for year-----	20
Average number cows tested for year-----	596
Average milk produced per cow-----	6608 lbs.
Average butter fat produced per cow-----	290.6 lbs.
Average number records over 40 pounds fat each month-----	90
Average number records over 50 pounds fat each month-----	24
Average number dry cows each month-----	91
Number unprofitable cows sold during year-----	82
Number pure-bred bulls purchased by members during year-----	9
Number pure-bred cows purchased by members during year-----	5
Highest average herd production for one month-----	45.0 lbs. F. F.
Highest individual cow production one month-----	85.9 lbs. F. F.

Association 12 - Loudoun Valley No. 2 C. T. A.

Starting in January 1926 with seventeen herds and five hundred and ninety-three cows, Abner Myers, tester for this association, has by hard work built up the membership of his association until at the present time it comprises twenty-two herds and seven hundred and twenty-nine cows. This is the largest enrollment of cows in any association in the state. 6664 pounds of milk containing 281.6 pounds of fat is a very good average for the first year of an association, especially one of such large size. The results at the bottom of this page show more clearly than words can tell of the excellent work being done in this association.

Co-operators: Mr. J. R. Lintner, County Agent
Mr. Abner Myers, Cow Tester

Enrollment: Herds 22 Cows 729

Field Work: Three trips, a total of five days, were necessary to instruct new tester and supervise work.

Results: (January 1926 - October 1926)

10 months - 2 months estimated.

Average number herds tested-----	20
Average number cows tested-----	633
Average milk production per cow-----	6664 lbs.
Average butter fat production per cow-----	281.6 lbs.
Average number records over 40 pounds fat each month-----	67
Average number records over 50 pounds fat each month-----	18
Average number dry cows per month-----	80
Number unprofitable cows sold-----	73
Number pure-bred bulls bought-----	2
Number pure-bred cows bought-----	16
Highest average herd production for one month-----	40.3 lbs. B.F.
Highest individual cow production for one month-----	82.3 lbs. B.F.

Association 13 - Lynchburg S. F. A.

This association under the supervision of W. A. Cooke for some cause or other dwindled from five hundred and forty cows to three hundred and fifty-two at which point it was impossible to maintain a full time tester in this association. Mr. Schaffer, the Sotacourt association tester, helped us out by completing the year's work for this association which ended in October 1935. It was not reorganized due to the fact that only ten members wished to continue for another year, which makes it impossible to secure a competent man with the income derived from so few members.

Co-operators: Mr. Philip Lawson, secretary
Dr. E. K. Terrell
Mr. J. H. Schaffer, tester

Enrollment: Herds 16 Cows 448

Field Work: Twelve trips, a total of nineteen days, were necessary to instruct new testers, supervise the work and visit dairymen in an effort to secure new members.

Results: (November 1935 - October 1936)

Average number herds tested for year-----	15
Average number cows tested for year-----	410
Average milk production per cow-----	5400 lbs.
Average butter fat production per cow-----	221.1 lbs.
Average number records over 40 pounds fat each month-----	23
Average number records over 50 pounds fat each month-----	5
Average number dry cows per month-----	44
Number unprofitable cows sold-----	90
Number pure-bred bulls purchased by members during year-----	0
Number pure-bred cows purchased by members during year-----	4
Highest average herd production for one month-----	35.8 lbs. S.F.
Highest individual cow production for one month-----	83.5 lbs. S.F.



Association 14 - Northern Valley C. F. A.

(Shepherdson, Warren, Clarke and
Frederick Counties)

Last year when Mr. Wayman resigned as tester for this association, so few of the members would sign up for another year that it was not reorganized with a full time tester in charge. But the few faithful ones who realized the benefits of the work by using the records and recommendations of the tester secured the services of the Rockingham tester, Mr. Frank Heatwole, who has tested every month for this small but very select association. Just to prove that the best dairymen realize the advantages of testing their cows, attention is called to the average production of 519.8 pounds of fat against that of 274.1 pounds last year.

Co-operators: Frank Heatwole, Tester

Enrollment: Herds 7 Cows 145

Field Work: None has been necessary as the affairs of the Association have been well managed by the tester.

Results: (November 1925 - October 1926)

Average number herds tested for year-----	6
Average number cows tested for year-----	118
Average milk production per cow-----	7244
Average butter fat production per cow-----	519.8 lbs.
Average number records over 40 pounds fat each month-----	17
Average number records over 50 pounds fat each month-----	6
Average number dry cows each month-----	3
Number unprofitable cows sold during year-----	8
Number of pure-bred bulls purchased by members during year-----	2
Number of pure-bred cows purchased by members during year-----	4
Highest average herd production for one month-----	52.5 lbs. B.F.
Highest individual cow production for one month-----	104.7 lbs. B.F.

Association 15 - Orange County C. F. A.

Last November Mr. F. C. Brewer resigned as tester for this association and Mr. Wood, of the Orange Creamery, did the testing for two months, Mr. Scott, the Albemarle tester, did the testing in February at which time Mr. Showalter took charge permanently and has shown remarkable ability in building up the association and has given Orange County a decided boost along the road to success. An increase from two hundred and ninety-nine cows in February to four hundred and seven in October is certainly a decidedly healthy condition.

Cooperators: E. V. Broden, County Agent
J. A. Hill
W. W. Sanford
W. L. Bradbury
Harry Showalter, Cow Tester

Enrollment: Herds 15 Cows 407

Field Work: Seven trips, a total of twelve days, were necessary to instruct new testers, supervise the work and secure new membership.

Results: (November 1925 - October 1926)

Average number herds tested for year-----	15
Average number cows tested for year-----	360
Average milk production per cow-----	\$226
Average butter fat production per cow-----	226.0
Average number records over 40 pounds for each month-----	51
Average number records over 50 pounds for each month-----	14
Average number dry cows each month-----	56
Number unprofitable cows sold during year-----	30
Number pure-bred bulls purchased by mem- bers during year-----	2
Number pure-bred cows purchased by mem- bers during year-----	10
Highest average herd production for one month-----	39.1 lbs. B.F.
Highest individual cow production for one month-----	99.1 lbs. B.F.

Association 16 - Prince William County, G. T. A.

Three months of the association work was done by I. H. Petersen who resigned the end of January. Clyde Maddiman took charge in February and has proved to be an efficient worker although lacking somewhat in experience. Local supervision is always the key to success for almost all enterprises and had it not been for the guiding hand of Mr. Curtie, the county agent, it is quite probable that this association would have been in very bad shape at different times during the year. This association has been able to put out a printed annual report for three years which is a splendid means of publicity for the work.

Co-operators: Mr. T. T. Curtie, County agent,
Mr. W. H. Johnson, President
Mr. R. H. Petersen, Pastors
Mr. Clyde Maddiman

Enrollment: Herds 26 Cows 609

Field Work: Five trips, a total of ten days, were necessary for reorganization, instructing new tester, supervising work and membership work.

Results: {November 1925 - October 1926}

Average number herds tested for year-----	25
Average number cows tested for year-----	575
Average milk production per cow-----	7450 lbs.
Average butter fat production per cow-----	222.4 lbs.
Average number of records above 40 pounds fat each month-----	63
Average number of records above 50 pounds fat each month-----	21
Average number dry cows each month-----	25
Number of unprofitable cows sold during year-----	41
Number of pure-bred bulls purchased by members during year-----	3
Number of pure-bred cows purchased by members during year-----	24
Highest average herd production for one month-----	29.2 lbs. B.F.
Highest individual cow production for one month-----	34.5 lbs. B.F.

Association IV - Rockingham County, N. C.

To clearly illustrate what can be accomplished by continued cow testing, culling, good feeding and breeding, attention is called to the exceptionally high association average of 334.1 lbs. of fat for the year. The National Dairy Show Association awards a diploma to owners of herds which are able to make an average of 300 pounds of butter fat or over in one year and it is considered quite an achievement to win this diploma. For a whole association to average 34.1 pounds of fat above these requirements is certainly a distinction. Much of the credit for the success of this association is due to the continued efforts of Mr. Frank Heatwole, cow tester, and Mr. Charles Wampler, county agent. Mr. Heatwole won first prize in the Cow Testers Efficiency Contest for 1925.

Co-operators: Mr. J. W. Wampler, County Agent
Mr. F. K. Heatwole, Cow Tester

Enrollment: Herds 14 Cows 164

Field Work: Five trips, a total of eight days, were necessary to supervise the work and assist tester secure additional membership.

Results: (November 1924 - October 1926)

Average number herds tested for year-----	12
Average number cows tested for year-----	152
Average milk production per cow-----	7517 lbs.
Average butter fat production per cow-----	334.1 lbs.
Average number of records over 40 pounds fat each month-----	33
Average number of records over 50 pounds fat each month-----	12
Average number dry cows each month-----	19
Number of unprofitable cows sold during year-----	14
Number of pure-bred bulls purchased during year-----	0
Number of pure-bred cows purchased during year-----	2
Highest average herd production for one month-----	45.2 lbs. 2.F.
Highest individual cow production for one month-----	87.6 lbs. 2.F.

Association 18 - Southside Co., Va., Ar.

There is hardly anything that is more discouraging to the dairy farmer than a severe drought. Two consecutive ones have almost broken up this association, which is shown by the fact that out of a total enrollment of twenty-one members and four hundred and eighty-seven cows only thirteen members are testing two hundred and seventy-eight cows at the present time. Mr. Alfred Anderson tested for one-half the year and was relieved by Mr. E. W. Barnard, a University of Minnesota man, who is doing the testing at the present time. It is expected that increased interest will be shown in this section as a result of the Dairyman's Association meeting at Parvillie in January. Three herds in Charlotte County were taken into this association this summer.

Co-operators: Mr. H. S. Crawford, County Agent
Mr. Alfred Anderson, Testers
Mr. E. W. Barnard

Enrollment: Herds 21 Cows 487

Field Work: Two trips, a total of four days, were made in order to reorganize and supervise the work.

Results: (November 1925 - October 1926)

Average number herds tested for year-----	14
Average number cows tested for year-----	293
Average milk production per cow-----	\$656 lbs.
Average butter fat production per cow-----	267.1 lbs.
Average number records over 40 pounds fat each month-----	18
Average number records over 50 pounds fat each month-----	4
Average number dry cows each month-----	50
Number of unprofitable cows sold by members during year-----	15
Number of pure-bred bulls purchased by members during year-----	3
Number of pure-bred cows purchased by members during year-----	6
Highest average herd production for one month-----	85.5 lbs. S.F.
Highest individual cow production for one month-----	72.5 lbs. S.F.

2. - Organization of New Associations

During the period of this report, one new association was organized and an old one started again after a few months.

New Association

Loudoun Valley No. 111

Number of members - 28

Number of cows-----722

Details and results of this association will be found under supervision of active associations, Association No. 12 in this report.

3. - Publicity for Cow Testing Associations.

Annual printed reports have been the main systems of advertising cow testing work and, although it takes a large sum of money to print these reports, three associations have been able to publish reports this year with the assistance of this office. The method of distribution is mainly as follows; one copy to every member of a Cow Testing Association in this state, one to every prospective member or one who has been a member but is not testing at the present time, county agents, Smith Hughes teachers, milk plant operators, veterinarians, R.R. agricultural agents and individual copies are sent out upon receipt of written request to anyone.

Copies distributed in Virginia

Rockingham County

Number of Reports
printed----1100

850

Augusta County

Number of Reports
printed-----1000

650

Prince William County

Number of reports
printed-----800

600

The difference between the number printed and the number distributed in Virginia is the approximate number which we have in this office still available for distribution upon request.

This office expects to be able to help the following associations to publish an annual report of their work for this year:

Rockingham-----	1000	copies
Prince William-----	500-1000	"
Fairfax Co., 1-----	1000	"
Albemarle-----	1000	"

Extract pages from Annual Reports
of Virginia Cow Testing Associations.

Page from Augusta County Annual
Report, accomplishments from continued
testing and efficient herd management.

HIGH HERD—FAT

Owned by E. M. COINER, Staunton, Virginia



Milk 8251.1 Lbs.—Fat 382.3 Lbs.

Of primary interest in the feeding of this herd is the fact that alfalfa hay was fed to these cows in large quantities nearly all the year. Mr. Coiner believes in good feeding, and besides keeping his cows highly fitted for the show ring, which is sometimes expensive from a production point of view, they returned \$155 per cow above feed cost on a grade "A" basis. The roughage and pasture amounted to \$66 and the grain \$75, making a total feed cost of \$141—with increased production and feed cost the per cent profit increases.

E. M. COINER

Mr. Coiner has been a Guernsey man now for seven years, changing from Holsteins, which he owned twelve years previously. The present herd has been accredited six years and was second high last year in fat production. An increase of 37.9 pounds fat per cow places it first this year.

The herd is also well known for its show record, altogether winning 120 firsts and 30 seconds at the ten Fairs in the circuit this year. Pink, his outstanding show cow as well as good producer, won 30 of 31 championships and grand championships since shown. Her real worth is proven by the fact that she transmits her type to her progeny. Her daughter won first at the State Fair as a three-year-old and a granddaughter won a championship. Also, her son won first and Junior Championship at same Fair as a senior yearling. Mr. Coiner also had five head in the County Herd that won first at the State Fair.

Twenty-five acres of alfalfa were cut for hay and also 25 acres of mixed alfalfa and clovers. 37 acres were limed with crushed rock during the association year. There is one silo on the farm.

Mr. Coiner retails Quality milk and cream in Staunton.

Page from Primm Willing Association Report.

A tabulation according to butter fat production with relation to other factors.

TABLE NO. 1

The following table gives the average per cow in the various herds for the year 1924-25

Herd No.	No. 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 Feed	Return per \$1 Expended for Feed	Food Cost per Lb. Butterfat	Food Cost per 100 Lbs. Milk
1	20	6,090	384.6	\$255.00	3,680	\$41.00	\$76.00	\$117.00	\$138.00	\$2.17	\$.304	\$1.93
2	24.4	10,948	868.6	\$612.00	2,790	\$4.30	\$1.80	\$106.10	\$54.90	2.46	\$.288	\$.97
3	18.9	9,900	247.0	\$24.00	2,320	\$0.90	\$5.40	\$6.30	\$44.30	2.66	\$.189	\$.87
4	11.5	8,274	324.9	\$15.00	2,510	\$4.10	\$5.10	\$9.20	\$105.80	2.16	\$.303	1.19
5	16.6	9,300	318.0	\$30.00	1,934	\$5.00	\$3.60	\$8.60	\$43.40	2.65	\$.272	\$.93
6	16.6	9,100	312.0	\$28.80	2,868	\$7.05	\$7.94	\$14.99	\$25.81	2.42	\$.304	\$.99
7	12.0	7,900	308.8	\$39.00	2,530	\$0.60	\$4.50	\$5.10	\$13.90	2.18	\$.307	1.19
8	22.5	8,899	302.0	\$3.28	2,728	\$7.30	\$3.00	\$10.30	\$21.70	2.51	\$.261	\$.90
9	16.6	7,790	291.0	\$28.00	2,130	\$1.70	\$1.70	\$3.40	\$27.60	2.64	\$.266	1.00
10	10.9	7,070	284.0	\$94.00	2,020	\$8.90	\$5.20	\$14.10	\$119.00	2.52	\$.279	1.13
11	17.0	8,400	283.0	\$95.00	2,240	\$7.30	\$3.00	\$10.30	\$114.70	2.42	\$.283	\$.95
12	17.5	8,100	282.0	\$89.00	2,820	\$0.90	\$8.00	\$8.90	\$8.10	1.73	\$.386	1.36
13	9.3	5,530	277.0	\$72.30	1,300	\$6.00	\$2.30	\$8.30	\$13.00	2.92	\$.212	1.04
14	21.7	7,480	272.7	\$89.94	1,527	\$6.60	\$2.40	\$9.00	\$26.94	2.75	\$.214	\$.98
15	25.6	7,300	265.0	\$81.00	1,540	\$2.80	\$9.70	\$12.50	\$18.50	2.89	\$.237	\$.85
16	6.4	4,829	243.9	\$3.81	1,554	\$5.36	\$8.73	\$14.11	\$9.70	1.66	\$.362	1.32
17	22.4	7,200	252.0	\$77.00	2,230	\$1.30	\$6.00	\$7.30	\$9.70	2.28	\$.307	1.07
18	16.3	6,249	240.1	\$60.00	2,340	\$1.10	\$8.90	\$10.00	\$7.60	1.95	\$.341	1.21
19	18.2	6,400	229.0	\$56.00	1,733	\$1.70	\$3.60	\$5.30	\$8.70	2.07	\$.329	1.17
20	22.4	6,400	224.0	\$54.00	1,940	\$6.00	\$1.00	\$7.00	\$7.00	1.77	\$.388	1.36
21	25.5	6,100	224.0	\$53.00	2,240	\$6.70	\$5.00	\$11.70	\$7.30	1.87	\$.364	1.34
22	36.0	5,400	216.0	\$48.00	1,990	\$3.00	\$9.00	\$12.00	\$4.40	1.76	\$.384	1.33
All's Avg	44.7	7,202	263.3	\$78.47	2,251	\$1.56	\$9.27	\$10.83	\$7.64	2.39	\$.307	1.12

Rockingham
An article containing a true story of what
has occurred in the small dairy community around
Broadway Rockingham County, Va.

THE VALUE OF A PREPOTENT SIRE

By prepotency we mean the power which some animals possess to transmit certain characteristics to their offspring to a marked degree, and in these characteristics may be either good or bad. Other individuals lack this transmitting power. But in considering this subject from a progressive standpoint, we want to consider prepotency from the basis of transmitting desirable qualities. And since we believe the "bull is half the herd" this quality is especially desirable in a herd sire. And there is no way to judge this prepotent ability, absolutely. Except by a careful study of the offspring, and there is no place where this study can be made so justly as at the milk pail, since production is the ultimate end of all dairy breed improvement.

In practice, this presents two difficulties for the smaller dairymen. First, the dairyman, in order to avoid inbreeding, is obliged to change bulls before their heifers can be sufficiently tested to accurately judge the bull's merits. No bull's performance can be fairly estimated until his oldest daughters have passed through at least three lactation periods and meanwhile more of the younger ones have come into production. Secondly, so very few dairymen, comparatively speaking, keep production records, therefore their bull's merits or the degree of his prepotency cannot be accurately measured. Dairymen who raise their young stock should keep production records in behalf of their own interests, not only to eliminate the poor cow but also to know which bull is worth keeping. And for mutual benefit, dairymen should cooperate in the exchange of these bulls.

Now for a brief summary of the results from the use of purebred dairy bulls in a small dairy community, covering a period of twenty years, and eight different bulls which ranged in cost from \$55.00 to \$400.00. Production records, however, are only available for the last seven years. The results obtained have been varied.

The first bull's daughters showed noticeable improvement both in type and production, having been mated to grade cows of every description. One of the next bulls was a negative factor. In time, it developed that he was not as represented and probably not even a pure-bred. What a disappointment, what a loss of time and money to a breeder struggling for dairy breed improvement.

The rest of the bulls showed varying degrees of prepotency. Two of them proved to be outstanding as revealed by type and production records. One has been sold to another breeder and in several years was bought back and was further used with splendid results. The other was retained as long as he could profitably be used, still he was scarcely past his prime and normally has years of usefulness before him. Just such bulls should be eagerly sought by every constructive breeder. They are tried and proven. There is no guess work as to their prepotency. No breeder who really has service for a bull, even on grade cows, can afford to let a \$100 or \$200 stand between him and such a bull. I shall now give one or two concrete examples showing what prepotency does. One cow produced 282 pounds of butterfat, her daughter 302 pounds butterfat, her grand-daughter 523 pounds butterfat, and her great grand-daughter, milking as a heifer, promises even greater production. Many of the daughters of these best bulls show 50 per cent increase in production over their dams and some even 100 per cent.

The consideration of these facts gives us some idea of the value of a prepotent sire. The degree of prepotency and the full value of the increased production to the individual breeder are the only limiting factors to the value of such a bull. Bulls, like everything else, usually have to be sold on their merits. And generally speaking, we get just what we pay for. This has been the experience of this community in Rockingham County. The highest priced bull gave the best results and was the cheapest in the end.

A good bull in a community has another value which cannot be measured in dollars and cents. The value is the interest created and the faith inspired in the boys and girls through improved dairy stock that rural life is worth while, that brains as well as muscle are needed in its development, and that helping to feed the millions may be interesting as well as profitable.

Newspaper Publicity -

One page in the Extension News Letter is given this office which is filled almost entirely with cow testing association records and data each month. Beginning with next month a mimeographed cow testing news letter will be mailed to all who are directly connected with cow testing work as an additional feature. Articles are written for bulletins, daily newspapers, breed journals, agricultural papers and dairy publications.

A. Virginia Register of Production

Up to the present time, forty-two applications have been received and certificates have been issued to all of these since the new regulations require that the cow must complete her record and meet the requirements for her age before an application and record book will be accepted by this office. This feature has saved an immense amount of useless work caused by entering cows before the record was started and then having them fail to qualify. A publication will be available in a short time containing all the records of these cows.

5. COW Testers Efficiency Contest.

This contest was started in January 1934 and has been the means of reducing the labor turnover of the testers to a minimum that was hard to expect. It has been continued this year with excellent results derived through increased publicity in newspapers by testers, increased activity in condemning scrub bulls, boarding cows and placing good pure-bred sires of known production ancestry at the head of sixty-five herds in the state this year. Changes in the rules made at the first of this year met with approval of all the testers.

The awards for the 1935 Contest which ended on December 31, 1935 are as follows:

- First - Frank Heatwole, Rockingham Tester
- Second - Stewart Rivers, Loudoun No. 2 Tester
- Third - C. C. Smith, Chesterfield Tester

-- Monthly Winners --

January	C. E. Williamson, Prince William Tester
February	S. B. Fenns, Augusta Tester
March	Frank Heatwole, Rockingham Tester
April	S. B. Fenns, Augusta Tester
May	C. C. Smith, Chesterfield Tester
June	Stewart Rivers, Loudoun No. 2 Tester
July	Stewart Rivers, Loudoun No. 2 Tester
August	R. C. Corwin, Botetourt Tester
September	Jess Bird, Augusta Tester
October	R. H. Ankern, Fairfax No. 2 Tester
November	C. C. Smith, Chesterfield Tester
December	S. C. Merritt, Fairfax No. 2 Tester

6. Summary of Results in Virginia Cow Testing Associations.

Association	November 1923 - October 1926.		
	Av. No. Cows	Av. Yearly	
		Milk Prod.	B. F. Prod.
		Lbs.	Lbs.
Albermarle	395	7285	297.4
Augusta-Bookbridge	510	6577	275.6
Botetourt	461	7600	295.6
Chesterfield	535	7762	316.0
Calpeper	400	6595	286.1
Fairfax 1	587	8005	316.6
Fairfax 2	600	6783	278.9
Fauquier	491	4136	233.5
Henrico	386	7356	292.8
Loudoun 1	682	6279	278.5
Loudoun 2	596	6698	290.5
Loudoun 3	633	6664	281.6
Lynchburg	410	5400	231.1
Northern Valley	113	7244	219.9
Orange	360	6256	296.0
Prince William	573	7450	292.0
Rockingham	155	7517	334.1
Southside	293	5858	267.1

The High Herd

Virginia Cow Testing Association 1925-1926.

In June 1925 the Botetourt-Roanoke Cow Testing Association was organized and testing was commenced in July. For the first few months no high records were made that attracted any attention. In fact, it was not until October that the small herd consisting of eleven grade Jerseys belonging to Mr. Percy W. Pettit of Roanoke County started to make state record herd averages month after month. It did not take Mr. Pettit long to make use of his cow testing records by selling several unprofitable cows right at the start which is one of the chief reasons why his herd has lead all others in production of butter fat in this state for the year. To make a long story short, Mr. Pettit has good cows, large capacity, open type Jerseys. He feeds them to their full capacity on the best of feeds, silage, alfalfa, hay, good pasture, a 24% open formula feed, plenty of good water, salt and lots of kind treatment at regular hours by a man who is an efficient dairyman. This accounts for the high average record of this herd.

12 months record

Cow Years	Average Milk prod. lbs.	Average	
		Per Cent Test	Average B. F. prod. lbs.
11.6	10006.7	4.8%	485.9

High Cow

Fairfax County Association No. 1 has for several years past led all other associations in average production of the association, high herd average and high cow; but Rockingham Association has robbed her of the high association average and Roanoke Association has taken away her high herd average laurels. However, Fairfax No. 1 still has good cows, high herd averages and a high association average.

DeKok Vikina Johanna R. B. V23000, a purebred, four year old Holstein, owned by Mr. John Middleton, one of the members of the firm of Ben Middleton and Sons, Herndon, Fairfax No. 1 Association, Va., leads all the cows in cow testing work in this state by a large margin, with a production of:

20620 lbs. milk 4.28% 885.9 lbs. fat
1104.87 lbs. 30% butter.

"Johanna" came from the farm of Arlin S. Cobb, New York, as a small calf back in 1921. She is now a cow of large capacity and although she is not exactly a show animal on account of a plain head and hump, she has all the necessary anatomy to make an even larger record than has been credited to her this year.

This cow was on official test at the same time her cow testing record was made and was milked three times daily, but received only ordinary good treatment along with the regular herd in a stanchion. Her milk, sold in cans on the wholesale Washington market less the cost of trucking, was valued at \$765.82. She consumed 6830 pounds of silage, 2160 pounds hay, 6100 pounds of a 20% ready-mixed grain ration and ran on pasture during six months of the year. Her roughage was valued at \$65.72 and her grain at \$145.26, making a total cost of feed \$220.98, which leaves an income over feed cost of \$544.84.

"Johanna's" sire is Sir Hengerveld Vikima Johanna
126968

Her dam is Ruth Dorothy DeKol 225546

High Herd Average Each Month

November 1935 - October 1936

Month	Association	Owner	No. Cows	Breed	Milk Prod. Lbs.	% Fat Prod. Lbs.
Nov.	Botetourt-Roanoke	F.W. Pettit	11	Gr. J.	943	42.7
Dec.	Fairfax 1	Ben Middleton	25	G. & P.B.	1236	42.7
Jan.	Chesterfield	C.F. Andrews	10	Gr. G.	1095	42.6
Feb.	Chesterfield	C.F. Andrews	10	Gr. G.	1066	42.0
Mar.	Rockingham	B.F. Haller	8	P.B. N.	708	47.9
Apr.	Botetourt-Roanoke	F.W. Pettit	11	Gr. J.	1027	42.0
May	Botetourt-Roanoke	F.W. Pettit	11	Gr. J.	1000	42.1
June	Rockingham	I.D. Myers	9	P.B. N.	1451	42.9
July	Rockingham	I.D. Myers	9	P.B. N.	1271	41.3
Aug.	Rockingham	Endless Caverns Farm	6	Reg. Sw.	1808	44.3
Sept.	Rockingham	Endless Caverns Farm	9	Reg. Sw.	1140	40.0
Oct.	Rockingham	Endless Caverns Farm	10	Reg. Sw.	1022	43.8

High Cow Each Month

November 1935 - October 1936

Month	Association	Owner	Breed	Milk Prod. Lbs.	% Fat Prod. Lbs.
Nov.	Prince William	J.F. Hale	Gr. Guern.	1891	84.5
Dec.	Chesterfield	Minnehaha Farm	P.B. Hols.	3765	127.1
Jan.	Loudoun 11	Howard Rogers	P.B. Hols.	1837	85.4
Feb.	Chesterfield	Minnehaha Farm	P.B. Hols.	2443	114.3
Mar.	Fairfax 1	Jno. Middleton	P.B. Hols.	2092	90.1
Apr.	Fairfax 1	R.L. Harrison & Son	Gr. Hols.	1836	88.0
May	Botetourt-Roanoke	S.S. Gertz	Red. Hols.	1235	95.6
June	Northern Valley	P. Haldeman	Reg. Hols.	2053	104.7
July	Northern Valley	P. Haldeman	Reg. Hols.	1971	76.3
Aug.	Rockingham	Endless Caverns Farm	Reg. Sw.	2126	81.2

High Cow Each Month (Continued)

<u>Month</u>	<u>Association</u>	<u>Owner</u>	<u>Breed</u>	<u>Milk Prod. Lbs.</u>	<u>B. Fat Prod. Lbs.</u>
Sept.	Rockingham	D.F. Roller	F.R. Jay	1612	27.6
Oct.	Chesterfield	L.H. Gealey	Gr. Holst. & Guern.	1580	28.4

Location and Enrollment of Associations

<u>Name of Association</u>	<u>Location</u>	<u>No. Herds</u>	<u>Total No. Cows</u>
Albermarle	Albermarle County	20	429
Augusta-Rockbridge	Augusta and Rockbridge Counties	26	553
Botetourt-Roanoke	Botetourt and Roanoke Counties	27	542
Chesterfield	Chesterfield & Charles City Counties	21	374
Culpeper	Culpeper County	12	476
Fairfax I	Fairfax County	23	603
Fairfax II	Fairfax County	22	659
Fauquier	Fauquier County	21	504
Henrico	Henrico & Hanover Counties	16	526
Loudoun I	Loudoun County	21	727
Loudoun II	Loudoun County	20	681
Loudoun III	Loudoun County	22	720
Lynchburg	Campbell, Amherst & Bedford Counties	16	448
Northern Valley	Shenandoah and Clark Counties	7	143
Orange	Orange County	15	407
Prince William	Prince William County	26	609
Rockingham	Rockingham County	14	164
Southside	Hottelway, Amelia & Charlotte Counties	21	487
Total-----		352	9563

Summary of Results
in
Virginia Cow Testing Associations

	(1922) 13	(1923) 14	(1924) 15	(1925) 16	(1926) 17
Number of Associations-----					
Number of old associations reorganized-----	0	4	12	12	17
Number of new Associations organized-----	0	3	3	4	1
Number members in all Associations-----	215	267	291	346	335
Number cows in all Associations-----	5120	5276	7266	9010	9563
Average yearly milk production-----			6749	6562	6965 lbs.
Average yearly butter fat production-----			279.2	265.2	284.5 lbs. 3.14
Average test per cent B.F.--					
Average number cows producing over 40 pounds B.F. each month-----		455	592	596	936
Average number cows producing over 50 pounds B.F. each month-----		118	163	183	277
Average number dry cows each month-----				1127	1160
Number unprofitable cows sold during year-----		726	1044	1266	1422
Number pure-bred bulls pur- chased during year-----		44	36	70	65
Number pure-bred cows pur- chased during year-----		81	205	206	161

Highest yearly herd average - E. W. Pettit, Hanoke, Va. R.F.D.,
Grade Jerseys-----10,006.7 lbs. milk
485.9 lbs. fat

Highest individual year's record - John Middleton, Herndon, Va.
Fairfax Co.
Registered Holstein---20630 lbs. milk
885.9 lbs. fat

Project 2 - Improving the Type of Dairy Cattle.

Since the type of cattle is closely correlated with their production of milk or beef, this project is designed for the purpose of increasing in the state the number of dairy type cattle on such farms as are adapted to dairy farming or at least where the farmer is attempting to increase his farm income by the sale of dairy products.

The project seeks to obtain results by two methods: **First**, by bringing about the use of better dairy sires, and thus improve the type of cattle by breeding from the present herd; **second**, by the selection and purchasing of dairy type cattle on a cooperative basis, to be distributed among the farmers of a county or community and thus increase the number of dairy type cattle by purchase.

1. Better Dairy Sires
(a) The State Campaign

The State Better Sires Campaign as conducted by the Animal Husbandry Extension Office was given some assistance from the Dairy Office, chiefly by means of articles and circulars prepared. The results of the 1926 Contest were as follows:

1926 Replacements in Better Sires Project

County	Agent	Beef Cattle			Dairy Cattle		
		Shorthorn	Hereford	Ang.	Jax.	Guern.	Holl.
Allegheny	S.B. Surber	18	12	3	1	1	
Barren	S. Preston	1	6		1	2	
Madison	W.L. Browning	3	1	6	4	1	
Grayson	D.T. Painter	4	12	1			
Campbell	S. Anderson	2		3			10
Craig	W.O. Martin	2	1				1
Augusta	J.C. Colmer	1		4			4
Orange	E.V. Brooden	2	2	1	3	1	1
Rockbridge	M.G. Lewis			1	1	1	
Prince Wm.	T.T. Curtis						2
Ashbur	O.B. Rose			4			
Siles	T.E. Starnes	1	1				
Warren	D.M. Clay	2					
Total		27	25	23	11	27	5

County Campaigns

1934

(b) County Campaigns

Probably the most effective Better Dairy Sire Bull work is conducted in the nature of County Campaigns. Such campaigns usually lead up to a week's intensive field work of county agent, specialists and interested farm breeders. These campaigns are definitely organized months in advance with a procedure about as follows:

1. A county-wide survey to determine the location of grade bulls in county. This survey is conducted by the county agent and with such assistance as he can get from his Agricultural Advisory Board or other interested farm cooperators.
2. Circular letters to grade bull owners, setting forth the need for improved dairy sires.
3. News articles leading up to the campaign week.
4. The "Campaign Week" - with the field workers who are assisting in the campaign definitely organized into teams, the farmers whose names were obtained in the survey are visited by a team of workers. The object of this visit is to bring to the owner of the grade sire the advantages to be gained by the use of pure-breds and to present to him a definite plan for selecting and purchasing a pure-bred bull.
5. The "Follow-up" - following the campaign for the purpose of providing a means of distributing better bulls, there should be a consignment sale or some other means of purchasing and distributing better bulls.

Intensive county campaigns for the purpose of placing better dairy sires were held as follows:

Orange County Better Sire Campaign
County survey resulted in locating ninety-eight owners of scrub bulls.

Campaign week of July 20th -

The teams of field workers visited the owners of the grade bulls and presented a definite plan of agreement for them to state the kind of bull desired together with a promise to attend a Better Bull Sale at Orange. Twenty-six owners of grade bulls agreed to attend the sale.

The "Follow-up" -

On September 1st and 2nd there were assembled at the fair grounds at Orange sixteen pure-bred bulls of different breeds. Each bull had a sale price indicated. Nine of the bulls were sold to the owners of grade bulls who attended the sale.

Other County Work

Surveys were made in the following counties:

	Agent
Prince William	F. T. Curtis
Campbell	Bruce Anderson
Sesford	E. G. Turner

(g) Results of Better Dairy Sire Work

The results of the better dairy sire work cannot be expressed except in the terms of the number of pure-bred dairy sires placed with herd owners to replace grade bulls. These results are found as follows:

Pure-bred dairy bulls placed in Virginia as a result of:

The State Better Sire Campaign-----	41
County Better Sire Campaigns-----	7
The Virginia Cow Testing Service-----	68
Total dairy bulls replaced	116

B. Better Dairy Cattle

(a) County Campaigns.

The farming systems in many Virginia Counties are changing from one-crop systems to more dairying; from beef cattle production to dairy farming. In some counties there is a demand for the importation of dairy type cows. Since the demand for dairy cows is by many farmers who only would purchase one or two cows each,

41

it was found advisable to work out a plan for cooperatively purchasing dairy cows.

This plan of a Cooperative Purchasing Plan for Dairy Cattle is briefly described below:

The county agent determines the need for the project and if there is sufficient interest in buying more dairy cattle for the farmers of the county, a purchasing committee is selected. This committee is composed of representative farm leaders, bankers, the county agent and dairy specialist. The county agent determines by means of a questionnaire the names of farmers who desire to make a purchase. A time is arranged by the county agent when dairy specialists, farm leaders and others interested can visit individually those who desire to purchase cattle. A contract as shown below is presented to the prospective purchaser, who signs the contract and a negotiable note on his bank. When the visits have been completed, the committee can then determine the number of cattle to be bought. The cattle are then selected and purchased by the committee and distributed according to the contract shown below.

Contract for Cooperative Purchase
of Dairy Cattle

CAROLINE COUNTY

Dairy Cow Purchasing Agreement.

For the purpose of securing good high grade cows of the _____ breed, I do hereby agree to the following plan of purchase:

I, _____, do hereby authorize the Dairy Committee of the Caroline County Advisory Council, represented by M. G. Broadbush, T. H. Blanton, Dungan McKinsey and F. A. Buchanan to select for me _____ grade dairy cow at a cost not to exceed One Hundred Dollars (\$100) each.

The financing of this purchase is to be made by the use of the negotiable note amounting to \$ _____ attached herewith, it being understood that the difference between my total purchase of the cow and the amount of this note shall be returned to me at the time of the delivery of the cow.

It is further understood that the method of delivering these cows will be as follows:

The Purchasing Committee as named above will purchase the required number of cows contracted for and on the day of delivery the cost of each cow will be stated by means of a sale tag. Each cow shall be placed up for bidding and every one desiring to bid on the cow at the price named will write his name on a piece of paper, all such names will be placed in a box and mixed well, then from the box will be drawn one name, who will become the purchaser of the cow.

All the cows will be distributed in such manner.

It is further understood that this contract is in effect until October 1, 1926, after which, if no cows have been purchased by this committee, this contract is null and void and the note is to be returned.

ed.

Date _____

Signed _____

Address _____

Results of Cooperative Purchase of Dairy Cattle

Caroline County -- Dungan McKinney, County Agent

Number of prospective purchasers of	
dairy cattle-----	38
Number of farm visits made by agent	
and specialists during sign-up of	
contracts-----	35
Number contracts signed for cattle----	38

The committee from Caroline County visited in Orange County for the purpose of selecting and purchasing a carload of dairy cattle. The cattle as desired by were not found to be for sale within the price limit, so a purchase was not completed at that time.

Since the project for the "Purchasing of Dairy Cattle" was begun in Caroline County, the county agent reports on December let the purchasing of thirty-four dairy cows at an average cost of \$94.00 per head. These purchases were made generally by a few farmers going to neighboring counties to select and purchase cattle.

Montgomery County -- J. D. Hyer, County Agent

At this writing this project has not been completed further than the mentioned. The farm visits are to be made during December.

Project 3 - 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,
Dan Chichester, Secretary,
Falmouth, Va.

The Virginia Jersey Cattle Club
Mrs. A. A. Ingham, Secretary,
Falmouth, Va.

The Virginia Holstein-Friesian Breeders Club,
C. H. Grubill, Secretary,
Brewer's Bluff, Va.

These associations all have an annual meeting at the time of the annual Virginia Dairyman's Convention. Each club tries to have some activity during the year. The Guernsey breeders held a summer meeting and picnic at Fairfax, Va. The Holstein-Friesian Breeders Club held their annual consignment sale. All three clubs contributed towards the dairy calf club show at the Virginia State Fair. Also the three clubs encourage and help select and develop the various county herds that are exhibited at the Virginia State Fair.

(b) Consignment Sales

On October 27th and 28th at Orange, Va., the Virginia Holstein Breeders' Club held a two-day consignment sale. F. S. Walker was the sales manager. E. V. Gredson, County Agent, assisted with local arrangements, and F. A. Buchanan, Dairy Husbandman, served on the sales committee; and George E. Carey, Assistant Dairy Husbandman, assisted at the time of the sale.

The following statistics of the sale show some results:

102 head of cattle sold
17 consignors to the sale

Distribution of cattle sold to go to the following counties:

64
(64)

Fairfax	17
Henrico	15
Prince William	12
Savick	11
Orange	7
Louisa	7
Spotsylvania	4
Albemarle	3
Stafford	2
James City	1
Roanoke	1
Total Within state	<u>125</u>
out of state	184

(a) County Herd

The county herd project had for its purpose the securing of greater interest among the owners of pure-bred dairy cattle in the showing of their cattle at 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.

The results of the 1935 exhibition are as follows:

1. Orange County Jersey Herd

Represented by:

Six owners

Ten head of cattle

Exhibited at the following fairs:

Rockville Fair, Rockville, Md.

Shenandoah County Fair, Woodstock, Va.

Albemarle County Fair, Charlottesville, Va.

Maryland State Fair, Timonium, Md.

Lynchburg Fair, Lynchburg, Va.

Petersburg Fair, Petersburg, Va.

Virginia State Fair, Richmond, Va.

2. Spotsylvania County Jersey Herd

Represented by:

Six exhibitors

Ten head of cattle

Exhibited at the following fairs:
Fredericksburg, Va.
Virginia State Fair, Richmond, Va.

3. Augusta County Guernsey Herd

Represented by:

Ten head of cattle
Owned by three exhibitors

Exhibited at the following fairs:
Staunton, Va.
Virginia State Fair, Richmond, Va.

4. Stafford County Guernsey Herd

Represented by:

Ten head of cattle
Owned by four exhibitors

Exhibited at the following Virginia fairs:
Virginia State Fair, Richmond, Va.
Petersburg Fair, Petersburg, Va.

5. Henrico County Holstein Herd

Represented by:

Ten head of cattle
Owned by six exhibitors

Exhibited at:
Virginia State Fair, Richmond, Va.

6. Albemarle County Holstein Herd

Represented by:

Ten head of cattle
Owned by five exhibitors

Exhibited at the following fairs:
Albemarle County Fair, Charlottesville, Va.
Virginia State Fair, Richmond, Va.

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---Henrico County Herd

2. Boys' and Girls' Dairy Calf Clubs.

The dairy calf club enrollment as reported by the
Club Department for 1926 is as follows:

Dairy Club Enrollment

County	Holstein			Guernsey			Jersey		
	Calf	Heifer	Cow	Calf	Heifer	Cow	Calf	Heifer	Cow
Prince William	8		2	4		1	5		5
Loudoun				10					
Rockingham	6	4		5	5	1	4	2	
Netoway				6					
King George	4	12	3	3	4	2	1		
Necklesburg				7	6				
Campbell					1		1		
Augusta	1			11	5		7	2	
Spotsylvania				3	1		12	10	
Henrico	30	12	6	2	1		1		
Cocobland				2			1		
Westmoreland	2	4		1			2		
Fairfax	4	1		6	2	7			
Totals	60	39	11	60	25	10	21	14	5
Totals		110			95			50	

activities of Club Members which were assisted by members of this department were as follows:

	No. of Club Members
1. Instruction, by means of lectures and demonstrations at short courses:	
Petersburg Short Course	97
Fredericksburg Short Course	60
State Short Course	140
2. Visits to club members' projects with county agents:	
King George County	17
Westmoreland County	5
Chesterfield County	5

3. Virginia State Dairymen's Association

As secretary of this association, F. A. Buchanan, Dairy Husbandman, continued the activities of the association.

(a) The Annual Convention.

The nineteenth annual convention of Virginia Dairymen met at Staunton, Va., on January 20 and 21, 1926. The features of the convention were:

(1) Two day program of addresses from important dairy leaders. (See copy of program attached to this report.)

(2) Exhibit hall of educational and commercial exhibits.

(3) The first State Quality Cream Contest (See results under section 3 of this report.)

The attendance at this convention was not as large as had been expected due to inclement weather. The total attendance for all sessions was approximately one thousand dairy farmers and farm leaders.

Program of the Nineteenth Annual Convention of the Virginia State Dairymen's Association, Staunton, Va.

AUDITORIUM—BEVERLEY THEATRE

THURSDAY MORNING SESSION

January 21, 1926

9:15 A. M.—Assemble—Music

9:30 A. M.—Invocation. REV. J. C. GARBER, Staunton, Virginia

9:30 A. M.—Address of Welcome

H. MCK. SMITH, Mayor of the City of Staunton

9:45 A. M.—Address by the President

J. V. NICHOLS, Purcellville, Virginia

10:15 A. M.—Address—"Building a Sound Foundation for a Dairy Breed"

KARL J. MUSSER, Secretary, American Guernsey Cattle Club

11:15 A. M.—Address—"Agricultural Conditions in Virginia"

JNO. R. HUTCHESON, Director, V. P. I. Agriculture Extension Division

12:00 Noon—Adjourn for Lunch

Inspection of Exhibits at "Exhibit Hall"

Buick Garage, New Street

AUGUSTA HARDWARE COMPANY

HEADQUARTERS FOR DAIRY SUPPLIES

GENERAL HARDWARE

WE SELL IT FOR LESS

SAVE THE DIFFERENCE

Austinville Agricultural Limestone

Guaranteed Analysis

50% Calcium Carbonate 40% Magnesium Carbonate
97.6% Calcium Carbonate Equivalent

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in
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Low
in
Cost

40 Mesh Screen -- 200 Inch Opening

96% will pass thru this size screen

It is neither too coarse nor too fine for Prompt and Lasting Results.

No harmful or irritating effects.

Unexcelled for General Agricultural Use.

Hay, Clover, Alfalfa and other plants grow strong and have strong roots if they have plenty of lime. Strong, vigorous plants stand drought and other trying weather conditions much better than weak plants. Stock fed on strong plants is hardy.

Agricultural Limestone makes the farm and farmer prosper.

Write for Booklet, Prices, and Guaranteed Freight Rates.

THE BERTHA MINERAL CO.
AUSTINVILLE, VIRGINIA

1:15 P. M.—Assemble—Music

1:30 P. M.—Address—*"Dairy Feeding Suggestions from the Virginia Experiment Station"*

PROF. C. W. HOLDAWAY, Dairy Husbandman,
Virginia Experiment Station

2:15 P. M.—Round Table Discussion.

Led by the Chairman—

Dairy Feeding Problems,
Dairy Management Problems,
Crops for Dairy Farm,
Disease of Dairy Cattle.

3:00 P. M.—Address—*"Some Control Measures for Abortion Disease of Cattle"*—DR. I. D. WILSON, Professor of Veterinary Science, Virginia Polytechnic Institute

3:45 P. M.—Address—*"Making the 'Ole' Cows Pay"*

G. W. CARPENTER, Holstein Breeder from Randolph, New York

4:30 P. M.—Inspection of Educational and Commercial Exhibits at the Exhibit Hall, New Street

Headquarters For

THATCHER MILK BOTTLES AND CAPS

Also GIFTS of All Kinds

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FOR ALL CROPS

*The Thousands of Satisfied Customers are the Best
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Richmond, Virginia



**WE BUY SWEET AND SOUR CREAM, HONEST
WEIGHTS, CORRECT TESTS.**

DAILY RETURNS

MAKERS AND DISTRIBUTORS OF,
"EUREKA BRAND"
ICE CREAM AND BUTTER

Staunton Creamery, Inc.

Staunton, Virginia

9:00 A. M.—Assemble—Music

9:30 A. M.—Address—*“What the State Department of Agriculture is Doing for Virginia Farmers and Dairy-men*
HON. G. W. KOINER, Commissioner, State Department of Agriculture

10:00 A. M.—ANNUAL BUSINESS SESSION

REPORT OF COMMITTEES

Legislative Committee . . . W. B. GATES, *Chairman*, Rice, Virginia

Convention Committee

A. F. HOWARD, *Chairman*, Charlottesville, Virginia

Virginia Dairy Council

J. V. NICHOLS, *Chairman*, Purcellville, Virginia

REPORT OF THE SECRETARY-TREASURER

FRANK A. BUCHANAN

Election of Directors

10:30 A. M.—Address—*“What a State Dairy Council Has Done for Connecticut”*—C. E. HOUGH, President, Connecticut State Dairy Council, Hartford, Connecticut

11:30 A. M.—Address—SENATOR CARTER GLASS, Lynchburg, Va.

12:30 P. M.—Adjourn for Lunch

ALL CURRICULA OPEN ALIKE TO MEN AND WOMEN

Four-year curricula for high school graduates, leading to the B. S. degree in Agriculture, Engineering, Science, Business Administration, Secretarial Work, and Teacher-Training. Two-year curricula in Pre-Medical, Pre-Pharmacy, Pre-Dental, Pre-Law, and Home Economics. Graduate work leading to the M. S. degree and the professional degrees in

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For catalogue and full particulars, address:

DEAN OF THE COLLEGE

V. P. L., BLACKSBURG, VA.

SPROUL & CROWLE

INSURANCE AND FIDELITY BONDS

PHONE 158

MASONIC TEMPLE

STAUNTON, VIRGINIA

1:15 P. M.—Assemble—Music

1:30 P. M.—Address—“*Better Feeding of the Dairy Herd*”—
PROF. F. B. MORRISON, Professor of Animal Husbandry, University of Wisconsin; Co-author of Henry and Morrison's “Feeds and Feeding”

2:30 P. M.—Address—“Producing Crops for the Dairy Herd”—
PROF. T. B. HUTCHESON, V. P. I. Agronomy Department

3:30 P. M.—Announcements

4:00 P. M.—Adjournment of Convention

M. Kivfighan M. L. Holt Frank T. Holt J. L. Witz

WHITE STAR MILLS

Manufacturers of

HIGH GRADE FLOURS

Not Incorporated

Daily Capacity 500 Barrels

Staunton, Virginia

CENTRAL GARAGE

115 N. Central Ave.

Staunton, Va.

CHAS. TANNER & CO.

STOVES, RANGES AND FURNACES

Roofing, Guttering, Spouting, Tin, Enameled and Aluminum
Wares, Lamps, China, Glassware and Crockery

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CHAS. LUNSFORD & SONS

INSURANCE OF ALL KINDS

First National Bank Building

Roanoke

Virginia

OLDEST BIGGEST SAFEST BEST

WOODWARD'S

CLEANING and DYEING WORKS

Main Office and Plant 134, 136, 138 E. Main St.

Phone 929

Staunton, Va.

(b) Other Activities

No new projects of the Association were developed, since the organization of the Virginia State Dairy Council. A report of the activities of this Council will be reported under Section B of this report.

4. Agricultural Fairs

(a) Judging at County Fairs.

Requests for members of this department to serve as judge of dairy cattle or dairy products were filled as shown by the following table:

<u>Name of Fair</u>	<u>County Agent</u>	<u>Staff Member</u>	<u>Days</u>
Rockingham Co.	:O.W. Wampler	: cattle	: 1
Albemarle Co.	:H.S. Teal	: cattle	: 1
Orange Co.	:H.V. Breeden	: cattle	: 1
Hokeville Comm.	:T.T. Curtis	: cattle	: 1
Shenandoah Co.	:D.C. Hinkson	: cattle	: 1
Loudoun Co.	:J.R. Lister	: cattle	: 1
Fairfax Co.	:H.B. Derr	: cattle	: 1
Florida Comm.	:H.B. Derr	: cattle	: 1
Spots Co.	:D.H. Crosby	: cattle	: 1
King George Co.	:S.M. Walker	: cattle	: 1
Westmoreland Co.	:C.C. Chase	: cattle	: 1
Henrico Co.	:H.L. Kirby	: cattle	: 1
Petersburg Fair	: (District)	: cattle	: 1
Fredericksburg	: (District)	: cattle	: 1
Fair	: (District)	: cattle	: 1
Madison Fair	:H.L. Browning	: cattle	: 1

Total Fairs 15 ---- Agents 15

(b) Virginia State Fair -- Richmond, Va.

Due to a conflict in the dates of the Virginia State Fair with the dates for organizing and planning the Norfolk Milk-for-Health Campaign, some of the members of the department remained at the State Fair except for a few days at the beginning.

Exhibits -- This department assisted in securing for the State Fair a large exhibit on dairying from the United States Department of Agriculture. During three days preceding the Fair, members from this department assisted in erecting these

exhibits. The illustration below shows the type of exhibits displayed.

What shall we feed the Calves ?

WHEN SKIM MILK IS PLENTIFUL

*Liberal quantities can be fed without injury to calves.
The greater the quantity fed—the greater the gain.
But the gains are smaller per pound of skim milk.*

Pails and utensils must be kept clean and sanitary

THE GAINS SHOWN BELOW were made by 16 calves divided into 4 groups of 4 calves each—Each calf received its mother's milk until 8 days old. A change to skim milk was made gradually and at 15 days of age all were on full skim milk rations as shown below.



Group	SKIM MILK Per day Lbs.	DAILY GAINS Average Lbs.	SKIM MILK Pounds of gain per Lb.
1 Fed skim milk at rate of $\frac{1}{2}$ of body weight	13.5	0.95	14.2
2 $\frac{1}{4}$	17.0	1.09	15.7
3 $\frac{1}{8}$	21.0	1.26	16.6
4 Fed all they would take twice daily—	24.2	1.48	15.3

The experiment ran 70 days, no bad results were noted from feeding large quantities of skim milk.

SERVICE B

- Dairy Marketing -

Project IV - The Virginia State Dairy Council

- (a) State wide activities
- (b) The Norfolk Milk for Health Campaign
- (c) The Portsmouth Milk for Health Campaign

Section 3 - Dairy Marketing

Since the development at the college of the Department of Agricultural Economics, the dairy department has not attempted to render service in the field of cooperative milk producers associations, as has been done in previous years except when called upon to assist in formulating policies and other advisory assistance. The dairy marketing project of this department has been the organization and development of the Virginia State Dairy Council, which has for its purpose the educational work of teaching the people of Virginia the real health and food value of all dairy products.

Project 4 - The Virginia State Dairy Council.

(a) State-wide Activities

On April 18, 1926, Miss Eleanor Spright of Janesville, Wisconsin, was employed as specialist in the utilization of dairy products. The basis of her employment was a cooperative one between the Virginia Dairy Council and the V. P. L. Extension Service. The State Council to furnish salary and travel expense and the college extension service to place her in its organization and provide office and stenographic assistance.

At the beginning of the work of the Council, it was proposed to hold a city milk campaign at the earliest possible date. Norfolk City and County were proposed as the first campaign. Upon investigation by the specialist, it was found that conditions were not favorable to a campaign in Norfolk before early fall. After conferences with Extension leaders and leaders of the industry, it was found that similar conditions existed in other cities of the state.

During the spring and summer months the specialist devoted most of her time to holding conferences with leaders in the various cities, school superintendents, social welfare workers and others in attempting to form some cooperative working arrangements for the future work of the Council. Assistance was rendered by the specialist in giving demonstrations and lectures at 4-H Club camp and summer meetings.

(b) The Norfolk Milk-for-Health Campaign

Need for the Campaign

A survey taken in August 1936 showed the following conditions prevailing in the city of Norfolk:

General Facts

1. Population of city	174,000
2. Population of county (including small towns)	66,000
3. School Enrollment	
City	23,000
Parochial	2,000
County	4,621
Other schools	1,000
Total	30,621
4. Approximate number of cows serving the industry	4,000

The Local Dairy Industry

(Conditions as to quantity and quality of milk supply)

1. Number of quarts of milk sold daily 36,000
 per cent raw - 40% Per cent pasteurized 60%
2. Average per capita daily consumption of fluid milk (approximately) 7 1/2
3. All dairy cattle are tested for F. S. once yearly.
4. Average bacteria count on raw milk 80,000
5. Average bacteria count on pasteurized milk 15,000

Since the average per capita consumption of fluid milk daily in the United States is approximately eighteen quarts, and since the record shows the per capita daily consumption of fluid milk in Norfolk is only seven quarts, from the standpoint of the industry there was evidence of a great need for increasing the consumption of fluid milk in Norfolk.

If the need of a milk-for-health campaign in Norfolk was determined only by the desire for a campaign by the local dairy industry and the low per capita consumption, such a decision would hardly be justified except as a commercial venture. One of the greatest factors to determine the need for a milk-for-health campaign is evidence or statistics that show a large percentage of

malnutrition among the children of the city. While no definite statistics were available to show the percentage of malnutrition even among the school children, Dr. C. R. Grandy, President of the Norfolk School Board, assured the committee that the percentage of malnutrition was alarming. It is a well established fact that the use of more milk in the diet of children will greatly assist in overcoming malnutrition.

After careful consideration of all of the data available and with the hearty endorsement of Dr. P. D. Schenk, Director of the Norfolk Bureau of Public Welfare, the committee set as the date for the intensive Norfolk-Milk-for-Health Campaign the week beginning October 1, 1926.

Executive Committee

An organization meeting of representatives of all civic and public welfare organizations was held on September 10, 1926. At this meeting the following executive committee for the campaign was chosen:

Dr. P. D. Schenk, Chairman of the Campaign,
Director of Norfolk Bureau of Public Welfare.

Dr. C. R. Grandy,
Chairman of Norfolk School Board

Mr. F. L. Portlock,
County Agricultural Agent

Cooperators and Committees:

School Activities

Chairman - Mr. C. W. Mason, Supt. Norfolk Public Schools
Miss E. Hayes, Supervisor of Home Economics
Miss S. Irvin, Supervisor of Art
Mr. K. Montague, Director of Physical Education.

Publicity

Chairman - Mr. F. A. Buchanan, Dairy Husbandman, V. P. I.
Extension Service.
Mr. F. L. Harris, Editor, Virginia Pilot
Mr. W. E. Perkins, Editor, Ledger Dispatch
Mr. Francis Turner, Director, Norfolk-Portsmouth
Advertising Fund.
Miss Jennie Hoover, Bureau of Dairying

Exhibits

Chairman - Mr. F. L. Chadwick, Secretary, Retail Merchants Association
 Miss Jessie Hoover, Bureau of Dairying
 Mr. Coy, President, Tidewater Displaymen's Association
 Mr. F. W. Buchanan, Dairy Husbandman, V.P.I. Extension Service

Finance and Publications

Mr. G. C. Coleman, Owner of Birtchett Dairy
 Miss Eleanor Huright, Specialist of the Virginia State Dairy Council

activities during the Campaign

Circular Letters

<u>To</u>	<u>Number</u>
Teachers	700
Clergy	400
Restaurants	100
Physicians	185
Dentists	75
Druggists	65
Total	<u>1825</u>

Publicity

Newspaper Space	
News space (free)	325 inches
Advertising space (paid)	350 " "
Bulletins or Circulars	35,000
Milk bottle tags	30,000
Commercial posters	15,000
Moving Pictures	
Performances at which shown	54
Approximate number of people reached	121,000

Exhibits

The merchants of the city cooperated with the milk committee most excellently by making special displays in their store windows

of display material furnished by the United States Department of Agriculture, as well as providing original displays relating to the campaign.

Number of large store window displays - 30
Number of exhibits in S.P. chain stores - 100

The pictures on the following pages illustrate some of the exhibits and activities during the campaign.

LOTS OF HOMEOWNERS



WINDOW DISPLAY
 SHOWN IN 100 D. P. CHAIN STORES
 NORFOLK, VA.



FLOAT WHICH PASSED THROUGH
THE MAIN THROUGHPARTS OF NORFOLK EACH
AFTERNOON DURING THE CAMPAIGN

Speakers Program

The following groups of speakers were used during the week of the campaign:

3 - full-time Extension workers
3 - part-time Extension workers
1 - Federal Extension Worker
1 - National Dairy Council worker
1 - State Dairy Council worker
10 - white nurses
3 - colored nurses
21 Total

Number of persons addressed as follows:

School children--	
Norfolk City	12,000
Norfolk County	4,000
Adult meetings	3,500
Total	<u>19,500</u>

Results of the Norfolk Milk-for-Health Campaign

The results of a city-wide and county milk-for-health campaign such as was conducted in Norfolk are hard to determine within a few weeks following the campaign. One result in a campaign is shown by the number of people reached. The following summary shows the total number of people reached by the efforts of the campaign workers:

By circular letters	1825
By motion pictures	121,000
By window exhibits	(unknown)
By speakers' talks	<u>19,500</u>
Total number people reached	<u>142,025</u>

Increase in Consumption of Milk

All of the largest milk dealers reported an increase in sales as an effect of the campaign. Only one dealer has presented definite figures showing the amount of increase.

Hillner Dairy increased 14% in fluid milk sales during October over September.

What the Director of Public Welfare, City of Norfolk, writes regarding the effective work of the Campaign: -

CITY OF NORFOLK
Norfolk, Virginia,
October 18, 1926.

Mr. J. R. Hatcher, Director,
Agricultural Extension Service,
Virginia Polytechnic Institute,
Blacksburg, Va.

Dear Sir:

I wish to extend to you my sincere appreciation and thanks for the splendid work recently done in Norfolk in the "Milk For Health" campaign. The situation was handled splendidly and much credit is due Miss Eleanor Wright, Miss Jessie M. Hoover and Mr. Buchanan.

I am confidently expecting a decided increase in the consumption of milk in Norfolk. As a matter of fact, there is already a greater demand.

Yours truly,

(Signed) Rowhan S. Scheenk,

Rowhan S. Scheenk, M. S.
Director Public Welfare

(c) The Portsmouth Milk-for-Health Campaign

Census Facts

1. Population of city	59,000
2. School Enrollment	
City	85,000
Parochial	<u>572</u>
Total	85,572

(60)

3. Approximate number of cows serving the industry 750

The Local Dairy Industry

(Conditions as to quantity and quality of milk supply)

1. Number quarts of milk sold daily 62,000
Per cent raw - 50.65 Per cent pasteurized 49.75
2. Average per capita daily consumption of fluid milk (approximately) 3.44 oz.
3. All dairy cattle are tested for T. B. once yearly.
4. Average bacteria count on raw milk 9,000
5. Average bacteria count on pasteurized milk 1,000

The Portsmouth Milk-for-Health Campaign was held during the week of October 25, 1926 and conducted along the same general plan as the Norfolk Milk-for-Health Campaign.

As shown by the census report the per capita daily consumption of fluid milk in Portsmouth is less than one-fourth the average for that of the United States.

In determining the need for a Milk-for-Health Campaign in Portsmouth, we were fortunate in having Dr. Grice, Medical Inspector of the Portsmouth Schools, give the committee some very definite facts regarding the amount of malnutrition existing among the school children of Portsmouth. A summary of these facts follows:

No. of Pupils Examined	No. more than 75 below normal	Percentage more than 75 below N	
White	4,198	1,538	36.6
Colored	2,017	676	33.4
Total	7,215	2,214	30.7

With the school children of Portsmouth showing an average of 30% malnutrition, a milk-for-health campaign was heartily endorsed by the city health department as well as the city school board.

Cooperators and Committees

Executive Committee

Chairman - Mrs. Jarric Sykes, President Portsmouth
Housewives League
Dr. Joseph Grice, Medical Inspector
Portsmouth Schools
Miss Minnie Williams, Public Health Nurse

Publicity

Mr. Kloss, Secretary, Chamber of Commerce
Mr. Barden, Editor, Portsmouth Star
Mr. Frasier, Reporter, Portsmouth Star
Mrs. E. Triplett, Reporter, Portsmouth Star
Miss Jennie M. Hoover, Bureau of Dairying

Exhibits

Mr. Dean Ward, Scout Master
Dr. C. A. Krause, Chief Milk Inspector
Mr. F. A. Buchanan, Dairy Husbandman,
V. F. I. Extension Service.

School Activities

Mr. Hunt, Superintendent of Public Schools.
Miss Atkins, Art Supervisor

Activities During the Campaign

Publicity

Newspaper Space	
News space (free)	132 issues
Advertising space (paid)	349 "
Bulletins or circulars	8571
Milk bottle tags	8500
Commercial posters	487
Moving pictures	
Performances at which women	51
Approximate number of people	
reached	46,237
Number of memo reminders	1,160

Exhibits

Number of large store windows	22
Number of exhibits in D. F. Chain	
Stores	26

Speakers Program

The following corps of speakers were used during the week of the campaign:

- 2 - full-time Extension workers
- 1 - Federal Extension worker
- 1 - State Dairy Council worker
- 1 - local nurse

3 Total

Number of persons addressed as follows:

School children	7119
Adults	600

Results of the Portsmouth Milk-for-Health Campaign

Total number of people reached during campaign:

By circular letters	300
By motion pictures	46,237
By speakers	8,219
Total	54,756

No report from the milk dealers at this time.

SECTION 3

-Dairy Manufacturing-

Project 1 - Quality Cream

Project 2 - Efficient and Economical Manufacturing
and Marketing.

Dairy Manufacturing

Project 5 - Quality Cream.

In the Spring of 1936, the Dairy Extension Office in cooperation with the State Dairy and Feed Division and the State Bureau of Markets, undertook to work out a definite cooperative project which would be effective in improving the quality of cream delivered to the creameries of Virginia.

After several conferences of specialists representing the three agencies and Professor G. W. Holdaway, Head of the V. S. I. Dairy Department, the following plan was adopted as a cooperative project for the entire state with the Virginia creameries:

The Virginia Quality Cream Project.

1. Standard grades for cream as follows:

Sweet Cream: (For table use and ice cream purposes in season.) Shall consist of cream that is sweet, smooth, and free from all bad flavors, odors, dirt or other foreign material. Must be properly cooled after separation, and when added to cream previously separated, the whole mass must be stirred sufficiently to thoroughly mix and must be delivered daily.

No. 1 Churning Cream: Shall be cream not over four days old and may be sweet or slightly sour, not over 0.6% acidity, but must be smooth, free from all bad flavors, odors, dirt or other foreign material, and must contain not less than 25% butter fat. Must be properly cooled after separation, and when added to cream previously separated, the whole mass must be stirred sufficiently to thoroughly mix. No. 1 cream testing less than 25% butter fat shall be graded as No. 2.

No. 2 Churning Cream: Shall be cream not over seven days old, must be free from lumps, dirt and other foreign material, but may be too sour to grade as No. 1 and may contain slight undecidable odors and feed flavors, but must be free from "cowy" or stable odors and flavors.

No. 5 Churning Cream: Shall be cream not fit to grade as No. 3 and is cream that is yeasty, lumpy, cheesy, mostly stale in odors, flavors or contains strong objectionable flavors or odors, such as onions, garlic or grassy flavors, dirt or other foreign material; all of which are undesirable for buttermaking.

2. These standard grades to be adopted by:

The Virginia State Dairymen's Association
and
The Virginia State Dairy Products Association
(This was done at the 1926 annual meeting of these associations.)

3. A written agreement of the Virginia creameries accepting these standard grades with an understanding that they would buy cream only according to these grades and pay a differential of five cents per pound of butter fat between each grade.

By June 1, 1926 at least thirty of the forty-five creameries had signed this agreement.

On November 1, 1926 only four creameries operating in the state had failed to sign the cream grading agreement.

4. The state dairy workers from the cooperating agencies will promote cream grading as follows:

(a) Hold meetings of the cream producers by counties or districts so as to reach the largest number possible. At these meetings the state cream grades will be explained and suggestions for producing a better quality cream will be made.

(b) Regular inspections will be made to the creameries by the state specialists in dairy manufacturing so that uniform instruction can be given the creamery operators in the best methods of standardizing the grades. At each inspection the state worker will return with each can of cream a tag showing the grade of cream delivered and suggesting the improvement to be made by the producer.

5. Circular matter, bulletins, etc. to be distributed to the cream producers and creamery operators

**Field Work and Results of the
State Cream Project.**

Field meetings -- for cream producers.
Through the Extension Service and the
State Department of Agriculture with
the aid of county agents and specialists,
meetings were held for cream producers
as follows:

<u>County</u>	<u>No. of meetings</u>	<u>Approximate attendance</u>
Albemarle	6	36
Orange	23	118
Madison	13	290
Greene	2	15
Calhoun	20	75
Prince William	9	53
Fauquier	12	39
Loudoun	1	38
King George	3	30
Westmoreland	visited farmers	26
Stafford	" "	10
Spotsylvania	1	7
Pulaski	visited farmers	6
Sheridan	12	143
Stafford	6	36
Stafford	1	6
Grayson	5	45
Carroll	1	9
Smyth	3	19
Washington	8	51
Scott	16	78
Total	138	1185

Cream Grading at Virginia Creameries.

Since the beginning of the quality cream project, the dairy manufacturing specialists of this department have made a total of sixty-five cream grading visits to the various creameries of the state. At least one visit has been made to each creamery in the state and to some of them as many as three visits have been made. The following creameries were visited during the period of this report:

<u>Place</u>	<u>Creamery</u>	<u>No. Plants</u>
Charlottesville, Va.	Monticello Dairy	2
"	Ice Service Co.	2
"	Albermarle Creamery	2
Cordonsville, Va.	Ice Service Creamery Station	2
Standardsville, Va.	Greene Co. Creamery	2
Orange, Va.	Orange Creamery	2
"	Albermarle Creamery Station	2
"	Ice Service Co. Station	2
Madison, Va.	Orange Creamery Station	2
Culpeper, Va.	Monticello Dairy Creamery	2
"	Jovington & Nelson Creamery	2
"	U. S. Creamery Station	2
Fredericksburg, Va.	G. E. Goldsborough	1
Milford, Va.	Farmers Creamery	1
Alexandria, Va.	Farmers Creamery Station	1
Manassas, Va.	U. S. Creamery	1
The Plains, Va.	Marshall Creamery Station	1
Harrisonburg, Va.	Piedmont Creamery	1
"	Farmers & Merchants Dairy	1
"	Imperial Ice Cream Co.	1
"	Valley of Va. I. C. Co.	1
Bridgewater, Va.	Bridgewater Creamery Co.	1
Somerset, Va.	Valley Creamery	1
Weyers Cave, Va.	Weyers Cave Creamery	1
Marshall, Va.	Marshall Creamery	1
Bedford, Va.	Service Creamery Station	2
"	Fairmont Creamery Station	2
Lynchburg, Va.	Service Creamery	2
Roanoke, Va.	Clover Creamery	2
"	Garst Bros. Dairy	1
Bedford, Va.	Clover Creamery	1
Fulaski, Va.	U. S. Creamery Station	1
Wytheville, Va.	Wytheville Creamery	1
Rural Retreat, Va.	Clover Creamery Station	1
"	Fairmont Creamery Station	1
Marion, Va.	Fairmont Creamery Station	1
Chilhowie, Va.	Clover Creamery Station	1
Meadow View, Va.	Fairmont Creamery Station	1
Abingdon, Va.	Dixie Ice Cream Co.	1
Bristol, Va.	Barter Butter Co.	1
"	Dairy Products Corp.	1
Galax, Va.	Fairmont Creamery Station	1
"	Wytheville Creamery (C.G.)	1
Independence, Va.	Wytheville Creamery (C.G.)	1
Winchester, Va.	Baldeman's Creamery	1
"	U. S. Creamery Station	1
"	Fairmont Creamery Station	1

Copy of Circular Prepared to Promote
the State Quality Cream Project.

Ten thousand of these were distributed through
the grocery operators and county agents.

R 214 May 1914

QUALITY CREAM

FROM PRODUCER TO CREAMERY

*Good Butter is made
from Good Cream*

YOUR BUTTER MARKET

Good Butter 92 Score Price per lb 1926		Poor Butter 87 Score Price per lb.
48¢	Jan. 4.	43¢
47¢	Feb. 1	42¢
41½¢	Mar. 29	39¢
40½¢	Apr. 9	37¢
42¢	May 7	37¢
AVERAGE DIFFERENCE - 4.1¢		

It Pays

VIRGINIA AGRICULTURAL AND MECHANICAL COLLEGE AND POLYTECHNIC INSTITUTE
AND THE UNITED STATES DEPARTMENT OF AGRICULTURE, COOPERATING
EXTENSION DIVISION, J. NO. E. HUTCHESON, DIRECTOR
BLACKSBURG, VIRGINIA

DISTRIBUTED IN FURTHERANCE OF THE ACTS OF CONGRESS OF MAY 8 AND JUNE 30, 1914.

Why It Pays to Produce Good Cream

Good butter cannot be made from poor cream. The creamery must sell butter according to its grade. The difference in price between good and poor butter sometimes amounts to as much as fifteen cents per pound. The creamery making high quality butter receives a higher price and can return to the producer more per pound for fat delivered. In addition to and more important than price is the protection of the producer's family by producing a sanitary product. Sell your good cream to a creamery which is grading. Why pay for the poor quality of the careless producer?

VIRGINIA STATE GRADES OF CREAM

Accepted by Virginia Dairymen's Association, January, 1926

SWEET CREAM: (For table use and ice cream purposes in season.) Shall consist of cream that is sweet, smooth, and free from all bad flavors, odors, and dirt, or other foreign material. Must be properly cooled after separation, and when added to cream previously separated, the whole mass must be stirred sufficiently to thoroughly mix and must be delivered daily.

NO. 1 CHURNING CREAM: Shall be cream not over four days old and may be sweet or slightly sour, not over 0.6% acidity, but must be smooth, free from all bad flavors, odors, dirt and other foreign material, and must contain not less than 25% butter fat. Must be properly cooled after separation, and when added to cream previously separated, the whole mass must be stirred sufficiently to thoroughly mix. No. 1 cream testing less than 25% butter fat shall be graded as No. 2.

NO. 2 CHURNING CREAM: Shall be cream not over seven days old, must be free from lumps, dirt and other foreign material, but may be too sour to grade as No. 1 and may contain slight undesirable odors and feed flavors, but must be free from "cowy" or stable odors and flavors.

NO. 3 CHURNING CREAM: Shall be cream not fit to grade as No. 2 and is cream that is yeasty, lumpy, cheesy, mostly stale in odors, flavors, or contains strong objectionable flavors or odors, such as onions, garlic or grassy flavors, dirt or other foreign material, all of which are undesirable for buttermaking or for human food.

Suggestions for Producing High Quality Cream

COWS: Milk clean, healthy, high producing cows. Clip long hairs from udders, flanks, and thighs. Do not allow manure to accumulate on cows' thighs and flanks. Clean cows' udders with a damp cloth before milking even if they do not look dirty. **KEEP COWS CLEAN.** Clean milk does not come from dirty cows.

FEEDING: Feed all dusty feeds and feeds with objectionable flavors and odors after milking. Do not stir up a dust while milking. Keep cows away from wild onions. Virginia farmers lose thousands of dollars annually on account of onion (garlic) cream. **GROW YOUR FEEDS AT HOME.**

BARNES: The stable should be clean, well lighted and well ventilated. Remove the manure **DAILY** and use plenty of good fresh clean bedding. Modern stables are convenient and lessen the work but are not essential. Save the manure as **IT IS VALUABLE.**

MILKING: The milker should wash his hands before milking and keep them dry and clean while milking. He should wear clean clothes. A small top or covered pail will keep out dirt. **USE ONE.**

HANDLING MILK: Remove milk from stables promptly, separate at once and **COOL CREAM OVER A SURFACE COOLER OR IMMERSIVE THE CONTAINER IN COLD WATER AND STIR. KEEP CREAM COOL UNTIL IT REACHES THE CREAMERY.** This applies to winter as well as summer. Cooling cream is very important to good quality and the cost of cooling is very slight. Do not add warm cream to cold cream. When two lots of cream are poured together, stir thoroughly. Set the separator to make cream test from 35% to 45% fat. Store in clean, cool place, free from objectionable odors and flavors.

SEPARATOR, PAILS, AND CANS: Wash all utensils with warm water and soda immediately each time after using. Use a good brush. Scald or steam thoroughly and place in a clean place to dry and sun. The separator should be in a clean place and properly set. Protect all utensils from flies. Use only well tinned, clean cans.

DELIVERY: Sell your cream twice a week or oftener. Old cream is objectionable. Be sure that your name and address are securely attached to the can.

Results of Quality Green Project.

The following table shows the improvement in the quality of green delivered to Virginia creameries between June 1936 and September 1, 1936.

Period	Number of samples in each grade for			Totals	Percentages of samples in each grade of green		
	No. 1	No. 2	No. 3		No. 1	No. 2	No. 3
June	274	227	368	869	31.7	26.1	42.0
July	266	80	129	465	54.8	16.8	28.7
August	300	61	27	388	68.8	15.5	15.0
Totals	840	368	522	1730	47.0	21.7	31.3

Between the month of June 1936 and December 1936, three per cent of No. 1 grade of green in forty-five creameries increased from 31.7% in June to 39.7% in November. The per cent of No. 2 grade of green decreased from 42% in June to 22.9% in November, with only 13% in August.

Some of the splendid improvement in the quality of Virginia green was due to seasonal conditions, but the quality green project deserves much of the credit for this improvement.

The State Green Contest.

The dairy manufacturing specialists met as superintendents of a green contest sponsored by the Virginia State Dairyman's Association and the Virginia Dairy Products Association at their annual convention held in Staunton in January. This contest takes the place of the former out-of-door contest. There were eighty entries of green in this contest. Many favorable remarks were heard about

the usefulness and desirability of this contest, it was considered very successful.

Project 5 - Efficient and Economical Manufacturing and Marketing.

The month of February was given to the Dairy Short Course. There were seven students in this course taking the dairy manufacturing work. In addition to the short course students, the regular students taking dairy work also attended the classes.

Cream and milk improvement work was done in cooperation with the Stanton Branch of the Richmond Dairy Company and the Christiansburg branch of the Southern Dairies.

The work at Stanton consisted of a contest among the patrons. In this contest the patrons' products and practices were scored monthly. At the end of three months prizes were given to the contestant with the highest score and the one with the greatest improvement.

The work at Christiansburg consisted of making sediment tests of the milk delivered and reporting the results to the producers.

Practically all the creameries making butter in the state have been visited and assistance given. Very little was done with farm butter.

The manufacturers have been reached mostly by assisting, while at creamery grading by teaching the operators uniform grading by introducing improved methods and encouraging sanitation. There is need for work among the creameries in improving sanitation and methods. The state sanitary laws as applied to creameries are not enforced and the operators are careless about sanitation. Cream and butter are carelessly handled in the creamery with regard to cleanliness and maintenance of quality.

SECTION D

-Summary-

Including:

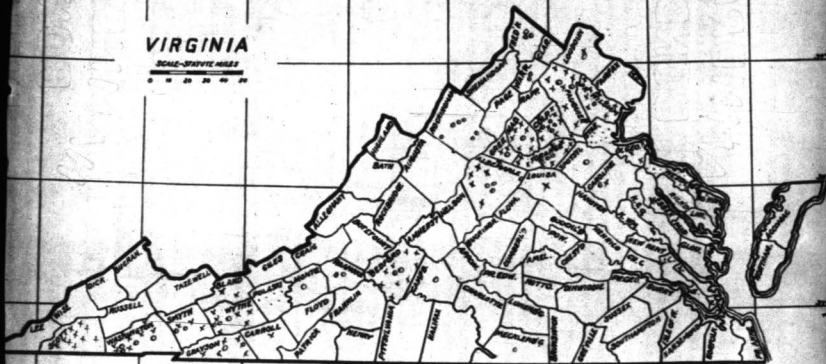
1. Map distribution of field work.
 2. Field summary.
 3. Office summary.
-

7
Distribution of Field Work - Quality Cream Project - 1926

VIRGINIA

SCALE - STATUTE MILES

0 10 20 30 40



O - Location of Creameries which were assisted

x - Field meetings held for the cream producers.

• - Farms visited

Field Summary

	P. A. Sullivan	G. S. Carey	H. G. Adams	S. J. Cassidy	Totals
1. Number miles traveled:					
Railroad	15,344	20,940	7,945	1,580	45,809
Automobile	1,492	5,014	6,966	106	11,578
2. Number visits to Counties:	56	136	40	2	234
3. Number of different Counties visited:	52	36	31	14	133
4. Number of meetings or conferences with:					
(a) County Agents	54	76	60	2	192
(b) Home Demonstration Agents	1	0	2	0	3
(c) District Agents	0	0	0	0	0
(d) U. S. Dairy Bureau workers	1	4	0	0	5
(e) Agricultural College workers	0	0	0	0	0
(f) Cow Testers	0	93	0	0	93
(g) Creamery managers	10	8	46	15	79
(h) Creameries assisted	2	8	40	10	60
5. Number farm visits	74	147	170	0	391
6. Other meetings	59	37	20	2	118
7. Number of speeches made	65	37	20	1	123
8. Number of people addressed:	1798	1851	172	189	3610
9. Number of fairs judged	6	10	1	0	17

Office Summary

	P. A. Buchanan	S. H. Carey	H. G. Jedings	W. J. Gaulfield	Totals
1. Number of days in office	196	98	79	7	380
2. Number of days in field	137	213	146	54	550
3. Number Extension Committee Meetings Attendance	40	7	21		68
	855	181	315		1351
4. Number letters written	1178	746	141	15	2079
5. Number different circular letters written	15	6	9	0	30
6. Number circular letters sent out	600	1156	587	0	2343
7. Number bulletins or circulars mailed	100	304	728	0	1132
8. Number days annual leave	10	11	12	-	33
9. Number days sick leave	1	0	2	-	3

1926.

See
(1) No changes in organization as it relates to subject matter line of work concerned. Only one person employed on the project.

(2) No changes made in the relation of Extension work in this project to the other Allied projects not to the experimental and teaching work in the subject.

(3) Program of Work:

(a) The chief problems in this work has been to develop the interest amongst the farmers necessary to get a sufficient amount of milk produced to support the cheese factories where they have been promoted and get capable men to undertake the manufacture of the cheese, and probably the greatest problem has been to find a market for the cheese after it has been made.

(b) The ultimate goal has been to interest farmers away from localities where they could get a market for their milk and who had to depend on marketing what they may have had by making it into "Country Butter" and also to get a product made (cheese) equal in quality to any coming into the State.

(c) The method of teaching the subject matter has been in each case to spend a sufficient time in the factory with the cheese maker to have him feel sufficient confidence in his ability to make cheese to be left alone until I could get back again and check him up on the work, and to make occasional visits afterwards as might seem necessary.

(d) Neither the County agents nor the Home Demonstrators have been of any great assistance in the work, about all they could do would be to develop interest in the production of milk as the work otherwise could only be done by a person with a technical knowledge of cheese making and handling the manufactured product.

(e) The results obtained this past year have been satisfactory. The factories, working, will all show substantial profits over and above all expenses and those farmers supplying milk to the factories have all been satisfied with returns for same. The quality of the product has been materially improved over what it has been at any time in the past and has for the most part been fully up to

W. D. Saunders

75

the cheese coming into the State. There have been difficulties however in marketing the cheese as no established avenues have been found yet to move the bulk of the product through. However, certain agencies here become interested and the matter of marketing the product of the factories is being worked out.

- (2) A party early in the Spring of 1928 made it known that he wanted to embark in the cheese making business and stated that his neighbors were interested and would produce the milk necessary to the operation of a factory. A survey of the situation was made and it appeared favorable for the promotion of a factory at this point, as steps were taken to get a factory ready to go to work in the early Spring. An equipment for cheese was secured and a site selected, the building erected in accordance with plans suggested and about the end of April operations were started. After working with the cheese maker about a week the work was turned over to him. Only occasional visits being made to see if any further instructions were needed. The cheese from this factory has been of good quality from the first and a great deal of the cheese consumed in this county this last summer and fall has been supplied from this factory. The market price established by the packers and wholesalers has been at all times gotten for the cheese which they have sold.
- (4) I might have been able to get some very interesting photos but not having a camera none were secured.
- (a) Other work has been undertaken to a limited extent looking to the advancement of dairying in the State such as assistance to prospective dairymen in the purchasing of cows, the building of barns and other necessary work in the handling and sale of milk and cream.
- (b) Having undertaken this work singlehanded there have been no particular demonstration outlined employed. I have taken up such inquiries as may have developed and pressed them as vigorously as could be done under the circumstances.
- (c) For the year ahead the work looks favorable as all the factories operating this last season have made good and can show substantial profits over and above expenses. There is no doubt but that the interest in cheese making will increase. The methods employed heretofore will be the basis for future efforts in the development of this work since so many of the special efforts made by the farmers in other lines have not succeeded as well as they expected, cheese making will doubtless be given more and more attention for the next few years.
- (7) If the U. S. Department of Agriculture could supply some men to assist in this work, he might be used to good advantage.

Publications with information of extensive nature would be helpful, and anything of the kind would be used wherever it might appear it could be used to advantage.

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DEPARTMENT OF THE ARMY
WASHINGTON, D. C.