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ANNUAL REPORT - DAIRY SUBSIDIARY
Frank A. Buchanan, Dairy Substantian,
June 15, 1919 - June 30, 1920.

In August 1919 the subject matter, Dairying, in the field of Extension Work for Virginia, presented several very important and interesting problems:

First: The Dairy Herds in the State as analyzed by the Cow Testing Association records showed that the "bearder" cow was too prevalent in the State. The average production of the dairy cow in Virginia being only about 100 lbs. butter fat per year in 3600 lbs of milk.

Second: There was need of an adequate and successful means of distributing purebred cattle in the State.

Third: There was a great need of building up grade herds by the use of purebred sires.

Fourth: There was need of organization for the development of the dairy industry.

The problems which presented themselves in 1919 were given the following order of importance and attacked by methods which follow below:

First: The problem of the "bearder" cow, was attacked by the organization and operation of Cooperative Cow Testing Associations.

August 1919 showed the following statistics relative to Cow Testing Associations in Virginia:

No. of Active Associations	2	
No. of members in the Associations	37	
No. of cows enrolled	882	
Average production of cows in the associations:		
	Milk	Fat
	(lbs)	(lbs)
Orange Association	574.0	24.9
Loudoun County Association	340.0	14.0

June 30, 1920, showed the following results relative to Cow Testing Associations in Virginia:

No of active associations	8
No of members in Associations	143
No of cows being tested	3011

Average Production of Cows in Associations:	Milk (lbs)	Fat (lbs)
Fairfax County Association # 1	836.0	31.8
Rockingham County	795.4	30.5
Orange County	844.8	27.04
Augusta County	801.0	24.38
Loudoun County	882.0	23.6
Southwest Virginia C.T.A.	894.0	20.5
Prince William County	702.6	21.1
Albemarle County	No	Report

Some of the difficulties which arose in organizing and operating Cow Testing Associations in 1919-1920 can be enumerated as follows:

The scarcity of labor of all degrees throughout the country made it very difficult to secure competent men as cow testers. This condition was somewhat relieved by the college offering short courses of instruction to be given to applicants for cow testing work. A short course for the Cow Testers was held during February 1920, at which time eight men were trained for this work. Previous to this time two men had received special individual training for the work.

In the organization of the Associations, the County Agents in most cases made the call for the development of this work. In the organization of two of the associations the demand for the organizations came as the result of interest created thru local dairy organizations.

A tabulation of results obtained in the work of Cow Testing Associations will show results as follows:

Increase in number of associations	6		
Increase in number of members enrolled	108		
Increase in number of cows being tested	3129	Milk	Fat.
Increase in average production:		.193.5	6.0

Second: The need of a method of adequately distributing purebred dairy cattle was provided for thru the encouragement and assistance in holding purebred cattle sales:

Number of Purebred Dairy Cattle Sales Assisted	3
Total number of cattle sold at these sales	211
Total amount for cattle at these sales	\$74,880.00

Third: The great need of building up grade herds by the use of purebred sires, was encouraged by the organization of Cooperative Bull Associations. This work was aided during 1920 by the National Purebred Sire Campaign. It is to be regretted that so far we cannot report any definite establishment of Dairy Bull Associations, though some results have been secured in placing dairy bulls by the holding of educational meetings, of meetings in the interest of the Purebred Sire Campaign, and thru personal work with individual farmers.

Meetings held in the interest of Cooperative Bull Associations:

	No.	Attendance
Purebred Sire Campaign	7	328
	9	528

In addition to meetings held in the advancement of the Purebred Sire Campaign, an illustrative circular was prepared showing the value of the use of purebred sires. This circular was distributed throughout the State to breeders, banks and farmer's organizations.

Fourth: Much time was spent in the organization of local dairy units, and in assistance to already existing dairy organizations:

Local Dairy Units organized:	Number	Membership
	4	101

As one feature of the annual convention of the Virginia State Dairymen's Association there was arranged a "State-wide Milk and Butter" Contest, held in February. The results of this first contest were as follows:

Number of entries in contest	19
Highest score for milk	98.6%

One important feature of this milk contest was the fact that a "contest week" was held, during which period the samples to be judged were collected by duly appointed agents, unknown to the contestants.

The writer was elected to be secretary-treasurer of the Virginia State Dairymen's Association, and much effort is being exerted toward making this organization of great value to every dairymen in Virginia.

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The following statistical information will give information as to how the above enumerated results were secured:

Requests from county agents answered:

Number	Reason
15	To give lecture at meetings
3	To assist with livestock sales.
4	To assist with Dairy Calf Club Work

Personal visits to farmers:

Number	Reason
9	To give expert advice on dairying.

STATE FAIR EXHIBIT 1919

At the Virginia State Fair for 1919, the Dairy Husbandry Department had two exhibits, one an illustration by use of milk cans showing a comparison of what Virginia's average dairy cow produces, and what the best cow in Virginia has done, this exhibit ^{was} to emphasize the importance of Cow Testing Associations.

The other was an actual demonstration using four cows, one a good producer, one a fair producer, one an average producer and the fourth a scrub. The results of each day's production and testing was published on charts, and a demonstration was made each day in the use of the Babcock Tester.

Special trips outside of State:

In the organization of Dairy Calf Clubs it was found necessary to go outside of the State in the purchasing of heifer calves.

Trip to Livingston County, Howell, Mich.,

No. Farms Visited	22
No. Miles Traveled (Auto)	400
No. Purebred Holstein Calves Purchased	24
No. County Agents Assisted	2
Total Amount of Purchase	\$4325.00

Field work Summary:

No. of days in field	131
No. of counties in which work was done	30
No. of miles traveled	16,100
No. of lectures given	37
No. of people met or visited	1,166
No. of people addressed	2,776

Office Work Summary:

No. of letters written (Approx.)	1800
No. of circulars distributed:	
No. of subjects:	18
No. distributed:	3635

- No. Newspaper articles prepared:
1. Cow Testing Associations in Virginia.
 2. 1920 Prospects for Dairy Calf Clubs
 3. Dairy Calf Club in Virginia.
 4. Virginia's First Dairy Calf Club.
 5. Value of Purebred Livestock Sales.
 6. The Way for Better girls.
 7. Better Sires.
 8. Better Sires - Better Stock.
 9. Statewide Milk and Butter Contest.
 10. Better Cows for Virginia.

Mailing List of Virginia Dairymen.

During 1919 a "Dairy Questionnaire" was mailed to Dairymen in Virginia, from this questionnaire was obtained the following information:

1. Name, Address and county.
2. No. of cows in present herd.
3. No. Purebred cows in present herd.
4. Breed of cows in present herd.
5. Use Purebred Bull and what breed.
6. Use a silo.
7. Does the dairymen belong to a Cow Testing Association or the Virginia State Dairymen's Association.
8. Interested in local Dairy Club.

Results of this Questionnaire as follows:

No. Mailed out:	3300
No. Replies	1035

Statistics tabulated from the information gathered from these questionnaires are as follows:

From 1926 report:

No. of cows in the Dairy herds:	13486
No. of purebred cows:	3287
No. using Purebred bulls:	620

Any part or combination of parts of the above information which includes the State, can be obtained for any county which has reported.

Annual Report of Dairy Husbandry Department covering the period between August 15, 1919 and June 30, 1920.

Respectfully submitted to E. E. Hutcherson, Director.

By Frank A. Buchanan
Dairy Husbandry.

REPORT OF CHEESE WORK.

Project No. 8.

July 1, 1919--June 30, 1920.

H. S. Merry-----Blackburg, Va.

The cheese work in Virginia for the past year has about held its own. There was a little increase in production and more increase in money for cheese as the price of cheese was a little higher than the previous year. I feel that to make a little more cheese than the former year was good, considering that one of the old factories was closed on account of shipping milk into Roanoke.

You will notice later in the report that a good average price was paid for butter fat, and compared with prices paid for butter fat at creameries in Virginia shows up very favorably. The farmers are also more satisfied with the test received from factories than they are from test received for their cream from the creameries. The creamery test has varied so that they believe they are not getting what belongs to them.

The reasons that the production of cheese has not increased here in the factories established, according to my observation, are, first, the shortness of labor, second, the use of a dual purpose cow, or rather trying to raise a regular beef calf and taking surplus milk to factory, third, the lack of care that should be given to a milk cow. It has been their custom to pay little attention to the care of the cow, thinking that if she raised the calf that was all they cared about. Fourth, the placing of the dairy or milk business as a side issue and giving it the time they could spare from their other work.

Prospects look brighter. Some farmers are gradually getting ready to produce milk, are building up their herds by saving the heifers, and as I look into the future I see a larger increase in the output of these factories. They are gradually buying better cows and some have bought dairy cows. Five high grade Holstein cows were bought in one cheese factory section and this farmer has nearly all Holstein cows, and also has some young Holstein heifers. Two pure bred Holstein bulls have been placed in Grayson County during the last year, and one placed in Wythe County in a section where they are somewhat interested in a cheese factory, and where one might be established in the future.

A number of farmers have bought cows but are cross of the beef breeds. There are two herds of nearly all Holsteins and these farmers have a great call for their heifer calves. These calves being sold around the section will produce more milk, and in time will bring many pounds of milk to cheese factories. Every dairy cow that is placed in these cheese sections means one more spoke in the wheel of progress. Progress is slow, but is sure to come out and win in the end. Two of the bulls that have been placed have dams that at two years of age produced about 11,000 pounds of milk in a year, and if tested as a full age cow would be three or four thousand pounds more than that.

A number of farmers near one factory have talked of buying one or two Holstein heifers this fall and which will freshen in the spring. I have urged them to do this and compare this cow with their beef cow. By this I hope to be able to get them to gradually change to the dairy cow.

One of the largest problems we have in these cheese sections is the opposition by the beef cattle men to the dairy calf, or to a calf that is "black-and-white". If all black, or red and white, no objection is raised. There is room for both breeds or kind of cattle in these sections, and if this is handled right there will be less opposition. I have been talking to the dairy farmers telling them to veal these black and white calves and Jersey calves that are not heifers at from four to five weeks old. By doing this these calves will bring the farmer nearly as much from four to five weeks old as he would receive at three months or weaning time, and he would have the milk that he would save the remaining seven or eight weeks which would bring quite a little money. This will protect the quality or standard of the beef calf and also help the dairyman as well. There seems to be a great deal of prejudice against killing calves as veal, but it is gradually being overcome and I have persuaded one farmer to try it and he received about \$18.50 per head after the expense and commission was taken out, so he expects to kill some more in the near future. When the farmers realize the value of milk and what that extra milk will bring them they will produce more milk, or in other words, milk will be the main production and the raising of the beef calf will be raised by the beef cattle men themselves. It will gradually work out to a one purpose cow- either milk or beef.

One man that has patronized the cheese factory told me that the cheese factory had helped him more ways than one. He had received \$600 to \$800 for milk, and had sold his yearlings for \$700 and now had some calves growing to take the place of the yearlings that he sold. So instead of having to take that \$700 and buy more stock to sell next year, whether at a profit or a loss, depending on the market, he could put that aside or use it in some other place on the farm. He said that these beat the old ways. If it wasn't for the factory he would not keep as many cows and therefore would not raise as many young cattle, so would receive less money. For ten months in 1919 one farmer averaged \$190 per cow, or an average of \$19 per month. This did not include the value of his whey or his calf.

The cheese factories during the past year sent cheese to the National Dairy Show, Virginia State Fair, and to some county fairs. Our cheese showed up well with cheese from the northern states and being new in the business we feel that such a standing speaks well for Virginia cheese. I have been asked this year to have an exhibit of cheese at numerous other county fairs, as well as at the Southeastern Fair at Atlanta, Georgia, where all the southern states are planning in making a large exhibit of cheese. We feel that the more this cheese work is placed before the people the more it will put cheese work to the front.

One difficulty we have in Virginia, and I presume it is the same in the other southern states, is that it is very hard to hold the cheese makers more than one or two years, as the factories cannot pay large enough salaries to hold the men. This makes a lot of extra work as well as a chance to produce a poor quality of cheese. The only remedy for this is that as the factories grow larger they can pay more wages and will thus keep the cheese maker.

MEETINGS HELD.

<u>Place</u>	<u>County</u>	<u>Attendance</u>	<u>Subject Discussed</u>
Lodi	Washington	24	Facts in regard to cheese making- returns from factory- method of organization.
Bethams	Washington	16	Facts in regard to cheese making- returns from factory- methods of organization.
Spring Valley	Grayson	76	How to choose a dairy cow- feed and care of dairy cow-
Spring Valley	Grayson	26	Production of pure milk and needs of factory.
Bethams	Washington	16	In regard to organizing cheese factory.
Bethams	Washington	20	Organizing cheese companies.
White Top Gap	Grayson	26	In regard to the organization of cheese factory, and returns that can be expected.

New factories organized. I cannot report any new factories organized in my section of the State. We had one factory organized at Bethans and officers elected, and then they got in a dispute over the location of the factory. If they cannot agree on a site it would be better not to build. I am in hopes they will get together and agree upon a location in the near future. I have spent considerable time on this factory, and I considered it better to spend the time to get one organized rather than a lot of time divided among two or three sections and not get any. It is a disappointment to me not to have this factory organized.

The farmers at Meadow View are building a creamery and have placed a cheese apparatus in to use the surplus milk. This was done at my suggestion, but as I had no part in organizing the creamery I do not count this as a factory organized under my supervision. As for new prospects, the county agent of Patrick County believes that he has a location that will be suited for a factory and he is a new agent so I expect to spend some time with him in the near future. This factory, if built, will be at Meadows of Dan. A second prospect is in Wythe County near Cripple Creek and Speedwell. These people are shipping cream and are dissatisfied with it on account of test and extra work in skimming the milk.

These are all the prospects I have at present, but I am in hopes that I can spend some time in new territory during the summer and fall months.

Factory	County	Am. of cheese made.	How milk is bought	Average gallons per lb. fat.	No. of patrons	Total money paid to farmer.	Average cost mfg. one lb. milk.	Average price obtained.
Spring Valley	Grayson	27,137	Fat Basis	.603	18	\$7037.48	.9476	.307
Grant Cheese Co.	"	11,148	" "	.611	7	2934.46	.059	.322
Burka Cheese Co.	"	10,064	" "	.61	12	2621.93	.0447	.305
Milk Creek	" "	5,043	" "	.527	8	1210.70	.066	.306
Independence	" "	5,050	" "	.52	6	1100.00	.079	.297
E. H. Martin	Montgomery	7,439	" "	.60	10	2033.00	.0344	.327
Retreat Cheese Co.	Franklin	4,265	" "	.625	63	1038.57	.058	.302
Bedford	" Bedford	14,188	" "	.607	14	3320.72	.05	.284
Apple Grove	" Louisa	<u>1,211</u>	" "			<u>686.30</u>	.071	.286
	Total	87,567				21,963.80		

Retreat Factory is closed and machinery sold. Three months operation.

These figures are for the year 1919, from January 1st, to December 30th, as it is impossible for me to get figures from July 1st, to June 30th.

Cost of manufacture included interest and depreciation.

No. miles traveled to June 1st-----4,297.
No. speeches made-----7.
No. people addressed-----203.
No. people met or visited-----115.
Visits made to cheese factories-----126.