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ADJUSTING FARM PRODUCTION IN CHESHIRE COUNTY, N. H., TO MARKET DEMANDS

A TYPICAL FARM IN THE CONNECTICUT RIVER VALLEY

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* The authors are also indebted to the Keene Chamber of Commerce for many of the figures regarding industries in the county; to the State Department of Agriculture for several of the photographs used and assistance given; to the State Forestry Commission and State Highway Commission for statistics furnished; to the Federal Crop and Livestock Statistician of Virginia for comparative figures; to the Boston and Maine Railroad, American Express Company, wholesale and retail distributors throughout the county and farmers in various parts of the territory for information furnished.

FOREWORD.

How much of New Hampshire's food supply is produced locally? What opportunities are there for increasing our farm production in any direction with a reasonable expectation of profit? In those directions where production has been curtailed, is the economy a sound one? From the standpoint of the consumer, what are the chances for cheaper and better home-grown food? These are questions which have troubled the mind of nearly everyone who has been concerned with the development of agriculture in the state.

As a first step towards the answer to these questions it was determined to select a representative area in which to survey conditions and to strike an economic balance between production and consumption. Cheshire County seemed particularly adapted to this purpose. The county is in many ways an economic unit, since comparatively little of its imports are reshipped to other sections. It is, furthermore, centrally located in New England as a whole,—a fact which appealed to the Bureau of Agricultural Economics of the United States Department of Agriculture and the New England Research Council, which co-operated in the project. Its agriculture is perhaps as fairly representative of conditions in New Hampshire as a whole as any one section of the state, and it has in Keene and elsewhere industries which furnish a year-round market and a growing number of summer residents who are interested in home-grown products.

On the other hand, no one region can fully and accurately represent others in every particular. A survey of conditions in the center of the state, in the eastern counties or in the mountain region would undoubtedly bring out somewhat different facts and necessitate somewhat different recommendations. It is hoped, therefore, that the present survey may serve as an example of work which should be undertaken in other areas, and as a stimulant to the solution of problems in New Hampshire as a whole. With the passage of the Purnell Act by Congress, the experiment stations of the country are committed to the study of problems of agricultural economics in addition to those of agricultural production. We hope that the present study may be followed by others of equally vital importance to the problems on the farm and at the market of both the New Hampshire farmer and his fellow-partner, the New Hampshire consumer.

J. C. Kendall,
Director.

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THE BALANCE BETWEEN FARM PRODUCTION AND MARKET DEMANDS IN CHESHIRE COUNTY, NEW HAMPSHIRE

BY

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SUMMARY AND RECOMMENDATIONS.

Cheshire County, with its decreasing number of farms and decreasing agricultural production, together with increased transportation costs on receipts of food commodities and a growing number of summer residents, has been chosen as typical of the changes that are taking place in agricultural production over a large part of New Hampshire and New England.

GENERAL.

1. Aside from its supply of whole milk, apples, bush fruits and sweet corn, the county does not feed itself.

2. A small number of crop acres per farm, irregular-shaped fields ill adapted to the use of large machinery, and a labor demand for crop production coming principally during one month of the year make the efficient and economical operation of many farms difficult.

3. Employment in industries constitutes an important source of income for many farm residents. It offers an alternative opportunity to the operation of the farm.

4. Many farm residents are old men, who have retired on the farms they own.

5. A number of abandoned farms are so small, or with a tillage area so rocky, that a general increase in prices of farm products would not be likely to cause their recultivation.

TIMBER.

1. The center of timber production in the United States is moving away from the center of population. Transportation charges increase with longer hauls, and give those producers close to the market a greater advantage in growing timber. Since 1850 stumpage prices in New Hampshire have increased from 50 cents per thousand feet to $12, and further increases in transportation costs together with reduction in supply of timber are likely to cause a continued increase in prices.

2. The production of timber is profitable at present prices.

3. There is likely to be an increasing demand for the reduction of taxes on growing timber as the lumber situation becomes more acute.

4. Owners of abandoned farms and of farms which cannot be operated economically should find timber production profitable.

5. A farm woodlot of 200 acres would furnish an occupation for farm operators during the winter and should provide an annual income.

6. Purchase of land in many parts of the county for the production of timber would make a good investment.

7. Timber production should receive every encouragement, because it would increase the demand for labor during the winter months.

DAIRYING.

1. Dairying is the basis of farming in the county.

2. In most sections the dairy market depends largely on local consumption of whole milk and cream. This demand is fairly constant, and an increased production would have to be shipped out or sold as butter.

3. Dairymen within hauling distance of milk plants at Bellows Falls and Brattleboro, Vt., have a market for some increase in production.

4. The average feed cost of producing milk on forty farms with five or more cows per farm was $1.49 per hundred pounds, which is equal to 60 per cent of the average price received at the co-operative milk plants.

5. Dairymen in those sections dependent on local demand for a market should not expand their business unless they are assured of a market for their milk.

6. Dairymen who can market their milk through the established milk plants are encouraged to increase their production by better feeding and improvement in the quality of their herds.

POULTRY.

1. Farm sales of eggs could be greatly increased between August and January, and still only supply local demand.

2. Egg prices from November to January are nearly twice those from February to July.

3. Feed requirements per pound of gain increase rapidly with increase in weight of bird.

4. Roosters not required for breeders should be sold as broilers when weighing about 2½ pounds. Farmers had 15,000 roosters on farms October 1, 1924, weighing about 5 pounds each.

5. Pullets should be depended on for egg production.

6. General farmers are advised to purchase 300 to 350 day-old chicks from reliable hatcheries between March 15 and April 20, to sell off the cockerels, to cull pullets when weighing about 2½ pounds, and to keep from 100 to 150 pullets as a laying flock.

APPLES.

1. Local demand is now the chief market for apples produced in the county.

2. Commercial producers must depend largely on Boston as a market.

3. Total production of apples in the United States is not likely to increase materially in the next ten years. Demand in the United States for apples should remain about the same as at present.

4. Apple production at prices received for the 1923 crop should prove profitable to growers on favorable sites.

5. Apple prices were very low for the 1922 and 1923 crop, and are not likely to be so low when present plantings come into bearing.

6. Plantings of at least 500 permanent apple trees each are encouraged on favorable sites, especially in the southeastern part of the county.

VEGETABLE GARDENING.

1. The market for vegetables in the county is small and frequently glutted.
2. Commercial growers truck to a number of markets, make regular trips, and have a larger variety of better graded vegetables than small growers.
3. Vegetable growers, and especially those with only a small supply, should build up a reputation for high quality, well-graded products marketed at regular periods.
4. The taking of advance orders is to be encouraged as a way of avoiding market gluts and extremely low prices.
5. Individual growers should observe carefully the increase or decrease in plantings of particular vegetables by other growers and plant more of those that appear to be scarce, and less of the others.
6. Expansion in total acreage of vegetables should not be encouraged.

POTATOES.

1. Cheshire County received 91,000 bushels of potatoes from outside producing areas during the year ending September 30, 1924.
2. Local growers have an advantage of 22 cents per bushel in price over those now furnishing this supply.
3. Local production under present producing methods is not encouraged.
4. Commercial production with potato machinery on ten or more acres, or by "potato rings," should prove profitable.

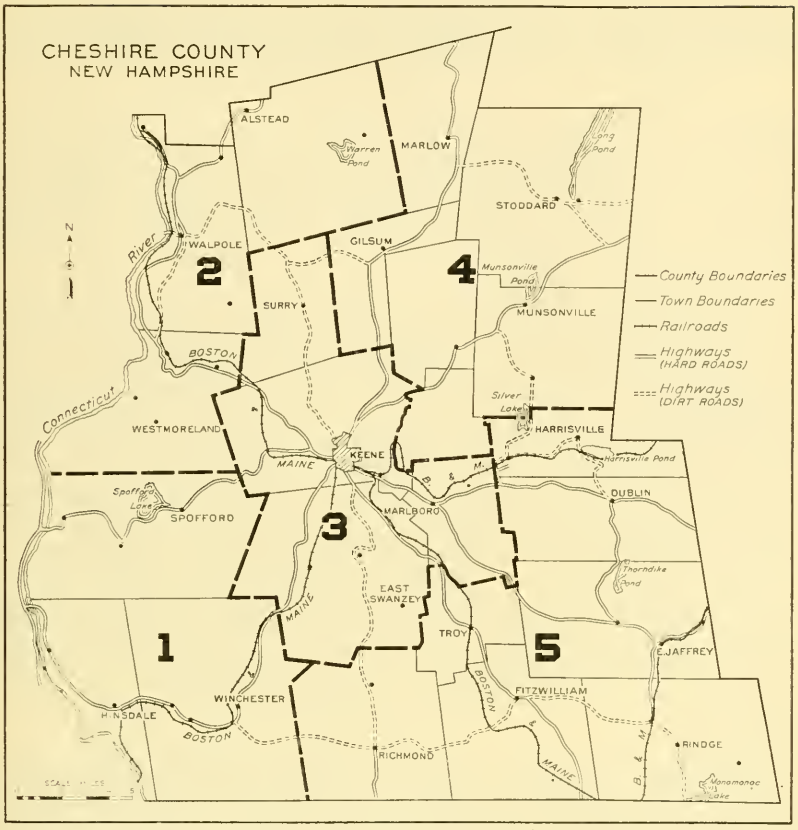
MEAT PRODUCTION.

1. Local producers cannot compete with the West in producing meat animals on marketable feeds.
2. Enough hogs should be kept to utilize waste feeds.
3. Sheep on a few farms where fences are adequate should prove profitable.
4. The pasturing of sheep on large acreages of back pastures, where milk cows are not advisable, should prove profitable.
5. Fencing costs for only a few sheep or for poor pastures are too expensive for most farms.

FEED CROPS.

Alfalfa and other legumes should be increased in acreage.

TYPICAL OF THE BETTER HILL FARMS IN THE COUNTY



CHARACTERISTICS OF THE COUNTY AS A MARKET.

Introduction.

Cheshire County, located in the southwestern corner of New Hampshire, with its decreasing number of farms and decreasing agricultural production together with increased transportation costs on food commodities and a growing number of summer residents, has been chosen as typical of a large part of New Hampshire and New England. It was the purpose of this survey to provide the economic basis for a program for farmers and those interested in the agricultural development of this area which would hasten adjustments to meet existing conditions.

Data on present production, sales and methods of marketing farm products were obtained on 182 farms in Cheshire County, and the total production and sales estimated on the basis of these records. An analysis was also made of railroad and highway receipts and shipments in order to determine the size of the local market and the extent to which Cheshire County farmers are supplying local demands for farm products.

The first part of this report covers the characteristics of the consuming population, industrial development and other trends of growth and de-

mand. The second part takes up the general agricultural situation and then deals with the specific agricultural enterprises that seem to present the greatest opportunity for change with profit to the farmer.

Consuming District.

There are no large industrial centers in Cheshire County. Keene, the only city, had a population of 11,210 in 1920, according to the United States Census; and the next two largest towns, Walpole and Jaffrey, had populations of 2,553 and 2,303 respectively. Twenty other towns, each containing at least one village, made up the remainder of a county population of 30,975 in 1920.

The development of agriculture is closely related to that of industry, since the latter serves as a market not only for farm produce, but also for farm labor. Small factories are located in many of the villages; and most of their employees produce a part of the farm products they consume, often living on nearby farms where they keep a few cows and chickens, have a garden, and perhaps cut enough hay for their own livestock during vacations or in the mornings and evenings. Village residents generally have gardens and a few chickens which help out their food supply during the local harvest season. A large number of industrial employees are, therefore, joint producers of manufactured and agricultural products.

The residents of Keene, however, are more dependent upon purchases of farm produce; and the quantity they demand is influenced by the growth of the city, and the size and stability of their income. These trends of growth and stability of income as indicated by population, bank deposits and postal receipts, are shown in Figure 1.

Population.

The population of Cheshire County has remained nearly the same in numbers for the last one hundred and thirty years. The decrease of farmers has been replaced by an increase of workers in mills and manufacturing plants. There has also been a slight shifting in the population of different towns of the county. Keene and Jaffrey show a steady increase since 1900, while most of the other towns show a slight decrease.

The industrial development of this area has brought in some foreigners, although the proportion to total population is not large. In 1920 the census classified the population of Cheshire County and of New Hampshire as shown in Table I:

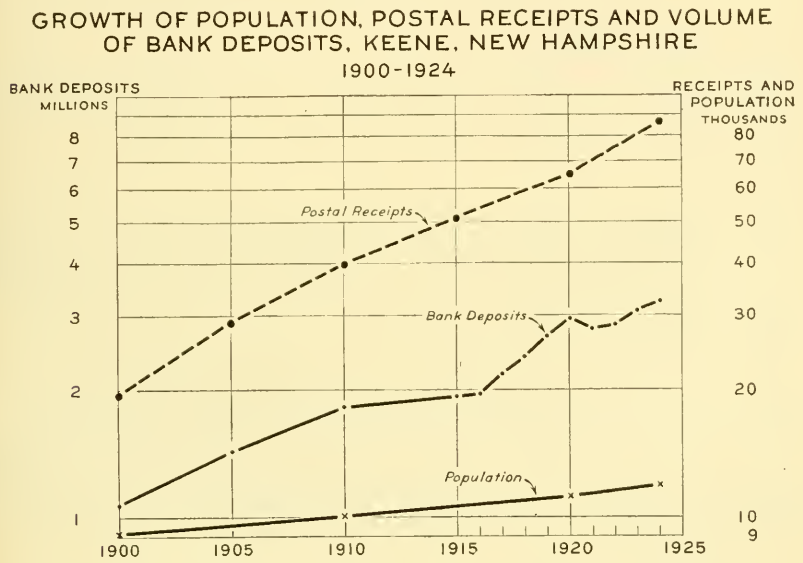
TABLE I.—*Population of Cheshire County and of New Hampshire.*

	Cheshire County.	Per cent.	New Hampshire.	Per cent.
Total	30,975	100.	443,083	100.
Native white	26,552	85.7	351,098	79.2
" " native parentage	18,537	....	.....	....
" " foreign "	4,998	....	.....	....
" " mixed "	3,017	....	.....	....
Foreign-born white	4,393	14.2	91,233	20.6
Negro	21	.1	621	.1
Other	9	....	131	.1

The proportion of native-born whites is higher in Cheshire County than in the state as a whole. A large number of the foreign population are also American-born, since they came from Canada. The place of birth of foreign-born whites in Cheshire County in 1920 was as follows:

Country of birth.	*Number.*	*Country of birth.*	*Number*
Canada (French)	1,210	Poland	384
" (Other)	505	England	266
Ireland	604	Other	892
Finland	532		
		Total	4,393

Fig. 1.*



* Population of Keene for 1924 estimated on basis of city school census.

Summer Population.

The number of people coming to Cheshire County to spend the summer has been increasing steadily for several years. In 1924, the selectmen of the different towns estimated 6,300 as the summer population for three months. They start coming into the country about the middle of May, and the last usually leave before October 1. There are some coming and going constantly, but the largest number usually come during July and August. Most of the residents are along the shores of the numerous lakes, principally Spofford Lake, Granite Lake and lakes in the southeastern part of the county. They depend entirely on purchases of food products either from farmers or local stores.

A large number of tourists also pass through the county on their way to the White Mountains and other summer resorts. They make some purchases along the road, and, in stopping at hotels and restaurants, increase the demand for food products. During the period from July 1–7, inclusive,

1924, the number of vehicles passing through Keene and Hinsdale, according to the State Highway Commission, was as shown in Table II.

TABLE II.—*Vehicles passing through Keene and Hinsdale, July 1–7, 1924.*

	Passenger cars.			Trucks.			Motor-cycles.		
	N. H.	Foreign.	Total.	N. H.	Foreign.	Total.	N. H.	Foreign.	Total.
Hinsdale	1,853	2,269	4,122	158	103	261	31	37	68
Keene, W. S. Road	1,841	1,608	3,449	436	63	499	136	23	159
Chesterfield Road	1,188	299	1,487	170	7	177	51	1	54
Total	4,882	3,566	9,058	764	173	937	218	61	281
Three months (est.)	63,466	46,358	109,824	9,932	2,249	12,181	2,831	793	3,624

Transportation—Railroad.

The city of Keene is served by three divisions of the Boston & Maine Railroad. One is the main line from Boston to Montreal; the other two give good connections to New York, the south and the west.

Highway.

Keene is located on two main hard-surfaced highways. One, running through the county from Winchester to Marlow, is the main route from New York to the White Mountains. The other, running from Fitzwilliam and Rindge to Walpole, known as the Monadnock Road, is the principal route from Boston to points in Vermont. There are in all 127 miles of hard-surfaced roads in the county.

The back roads are not very well kept, but throughout the summer months are in fairly good shape. During the winter months snow often blocks the roads, and makes them impassable for autos and trucks.

Truck lines run regularly from Keene to outlying villages, supplying the latter with goods from Keene wholesalers. Other truck lines also supply Keene regularly from Boston, while individual trucks bring food products from Fitchburg, Mass., and other markets.

Source of Income.

Manufacturing constitutes the principal source of income of Keene, and is important throughout the remainder of the county. In 1919 the total value of manufactured products in Keene was $8,513,980.

Articles manufactured in the numerous small factories represent a wide range. Of forty factories, six make chairs; four, pails and boxes; five, textiles; three, shoes; and others, machinery, wooden heels, toys, mica, celluloid, screen glue, loose-leaf ledgers, automobile accessories, granite, soft drinks, polish, overalls, manicuring implements and metal novelties. Such a wide diversity makes Keene particularly free from minor depressions caused by difficulties in one industry, and makes it reflect closely the national business situation.

Agriculture also constitutes an important source of income, which far exceeds the $1,857,000 worth of farm products sold during the year ending September 30, 1924. A large part of the products raised is consumed at home. Agriculture is, in fact, a joint source of income to many farm residents with wages received from outside work. Such a combination of enterprises stabilizes the income of the county.

Employment.

The distribution of employment in manufactories is shown clearly in Table III.

TABLE III.—*Distribution of employment in factories by towns.**

Town and name.	Number Employed.			
	Estimated number factories.	Males.	Females.	Total.
Fitzwilliam	1	20	...	20
Gilsum	1	43	10	53
Harrisville	3	93	30	123
Hinsdale	12	277	83	360
Jaffrey and East Jaffrey	7	337	204	541
Keene	53	1,812	734	2,546
Marlboro	5	125	63	188
Marlow and Lempster	2	23	...	23
Munsonville	1	22	...	22
Richmond	1	20	...	20
Swanzey	6	355	67	422
Troy	3	166	132	298
Walpole	3	75	4	79
Winchester	9	349	62	411
Total	107	3,717	1,389	5,106

*Data from New Hampshire Bureau of Labor for year 1923–24.

Every section of the county has some establishment which employs men who either live on nearby farms or furnish a market for farm products.

The center of manufacturing activity is, of course, at Keene, where nearly half of the establishments are located. The Hinsdale and Winchester section is second in importance, and Jaffrey, third.

The average yearly wage of employees in Cheshire County in 1919, according to the United States Census, was $943, compared with an average of $1,063 for New England. In spite of this lower wage, the standard of living of wage-earners is probably equal to that in other parts of New England, because of cheaper living conditions. We would not, however, expect a demand for high quality farm products above the average of other cities.

MARKETING AGENCIES.

Wholesalers.

Keene is the distributing center for food products over quite a large area extending outside of the county. These products come into Keene usually in carload lots, and are then redistributed by truck to outlying towns. A considerable amount of produce is also received in Keene by truck from Boston and Fitchburg, Mass.

Three large wholesale produce companies, one wholesale fruit company, and two wholesale meat companies handle most of the food products shipped in. A number of chain-stores, however, receive their supplies direct from outside producing or distributing centers.

Retail Stores.

There are 29 retail food stores in Keene, of which 5 are members of chain-store systems, 3 retail fruit stores, and 10 sell meat.

Farmers' Marketing Organizations.

Most farm sales in the county are made privately. A few poultrymen sell their eggs through the New Hampshire Co-operative Marketing Association; farmers close to Bellows Falls and Brattleboro sell their milk and cream through co-operative milk plants; and in the southwestern part of the county the tobacco growers market most of their crop through the Connecticut Valley Tobacco Association. Taking the county as a whole, co-operative marketing organizations are not very active.

A FEW FARMS LIKE THIS WITH LARGE FIELDS ARE PARTICULARLY ADAPTED TO POTATO PRODUCTION

THE GENERAL AGRICULTURAL SITUATION.

In topography Cheshire County shows a series of pine-covered hills and small narrow valleys. Numerous lakes scattered among the hills add to the picturesqueness of the landscape, and together with the healthfulness of the climate attract more and more summer residents each year.

The summers are moderately cool and humid. Average dates of last killing frosts in the spring and first in the fall for the past five years show a growing season of 123 days; but in most sections of the county corn can usually be successfully matured. Vegetable crops mature late in the summer, and the harvest season is comparatively short.

The mean annual rainfall of 36.99 inches is distributed with fair uniformity throughout the year, as shown in the following record of average monthly precipitation at Keene:

	Inches.		*Inches.*
January	2.65	July	3.24
February	2.69	August	4.05
March	3.62	September	3.65
April	2.65	October	2.83
May	3.00	November	2.71
June	2.76	December	3.14

Farming reaches its highest development along the Connecticut River. The bottom lands are very fertile and with the adjoining bluff lands for pasture make a good combination for a diversified system of farming. Many of the upland farms in this region are also fairly level, and the fields large enough for the use of most types of modern farm machinery. There are also some farms in many parts of the county well adapted to the use of such machines; but in most sections, and especially in the eastern and southern parts of the county, the acreage of improved land per farm is very small, and the irregular shaped fields are not well adapted to the use of large farm implements. Wooded hills, cut-over slash and waste land form a large part of nearly every farm. In the eastern and southern sections many farms have been abandoned, the farm population is small, and many farm residents depend largely on outside work for their main source of income. Farms in all parts of the county have a large proportion of non-tillable land which makes it difficult to secure efficient operation.

Since 1900 the trend of agricultural production in the county has been downward. The number of farms, amount of livestock and acreage of cereals and hays all show a decrease. Farms dropped in number from 2,660 in 1900 to 2,330 in 1910 and 1,625 in 1919. This decline has been most rapid in the eastern section (Districts IV and V on map), where in many towns scarcely anyone is now entirely dependent upon farming as a source of income. Most of the farm residents are old men who have retired, or are younger persons who obtain the major portion of their income from outside work in the mills and factories or on the roads. In nearly every section there has been some abandonment of farms, and this is everywhere considered an important problem.

There has been a corresponding decrease in production of crops and livestock, with the exception of poultry and swine, from 1909 to 1919, as seen in the following table:

	1909.	*1919.*
Cereals, acres	4,025	3,634
Hays, "	42,830	35,426
Horses, number	4,131	3,103
Cattle, "	14,769	12,939
Sheep, "	3,775	2,574
Swine, "	3,938	4,098
Poultry, "	71,336	85,116

The average acreage of improved land per farm, however, shows an increase from 30.4 acres in 1909 to 33.0 in 1920, while the total acreage per farm decreased from 138.9 to 136.2 acres. Such an increase of 10 per cent in improved acreage per farm illustrates the tendency of the younger farmers to combine the tillable land of two or more farms. As the tendency towards planting of pine increases and speculative interest in this industry expands, there will be increasing opportunity for farmers to acquire and combine such tillable land without the necessity of purchasing a large acreage of slash land suited only to timber production. This tendency to increase the improved acreage per farm should be given every encouragement, as it means a better balanced farm business and a wider use of machinery and labor-saving methods of production.

Tenancy.

The percentage of tenancy in Cheshire County is small. In 1919 only 8.5 per cent of the farms were operated by tenants, while in Iowa the per cent was 41.7, which indicates that very few farmers in this county are endeavoring to obtain ownership by the tenant and mortgage route. In other words, the younger men do not consider the opportunities in farming as good as in other industries. The lack of a tenant farm population is also making it more difficult for those who fall heir to the present farms to have them operated.

Abandoned Farms.

The question confronting the owners of many farms in Cheshire County is whether or not to operate them. The term "abandoned farms" is only a way of speaking of old farmsteads where no one is living at present and no crops are raised except, perhaps, some hay. Yet someone owns and pays taxes on most of these abandoned places, and the owners want to know what to do with the land in order to receive the greatest income from it. The so-called abandoned farm is an important problem not only in Cheshire County, but also throughout most of New England.

Under present conditions the owners consider the operation of these farms in the production of farm crops unprofitable. They are wondering if the increase in population in the United States, with its increasing demand for food products, will make the cultivation of these lands profitable through the medium of increasing prices of farm products. If these farms were planted to white pine or some other timber crop, they would not be available for cultivation for thirty or forty years. Which is the best method of procedure, which the wisest course to follow? That is the first big problem confronting many farmers in this county.

Basis of Agricultural Development.

Nearness to market is perhaps the most important reason for the cultivation of New England farms. It is not likely that future developments will increase the size of this market. The trend of industrial development is towards the center of agricultural production, but since New England supplies only a small part of its consumption of most farm products, there is little danger that a shift in population will take away its market. New England will probably continue to have for a long time a consuming population for more than it produces of most farm products.

This advantage of nearness to market now forms the basis for New England agriculture through the production of those commodities which must be produced within a limited area around a market.

Milk and cream for human consumption are expensive to transport, deteriorate with age, and must be produced within a comparatively short distance of the market. Improvement in methods of handling and means

THE ABANDONED FARM IS A COMMON SIGHT, PARTICULARLY IN THE NORTHEASTERN SECTION OF THE COUNTY

of transportation are constantly extending this area, but dairying will probably continue to be the basis for New England agriculture for a number of years. The people in counties such as Cheshire will also continue to obtain their milk supply from local producers, because of the expense of distributing such a small supply of shipped-in milk.

Fresh eggs placed in consumers' hands within a few hours after they are laid also command a premium, and supply a class of consumers for which the competitive producing area is limited.

In the production of meat animals and field crops, the West and South have demonstrated their competitive advantage.

As to the possibility of increased prices causing these abandoned farms to be placed in cultivation again, let us first consider the present organization of farms in Cheshire County.

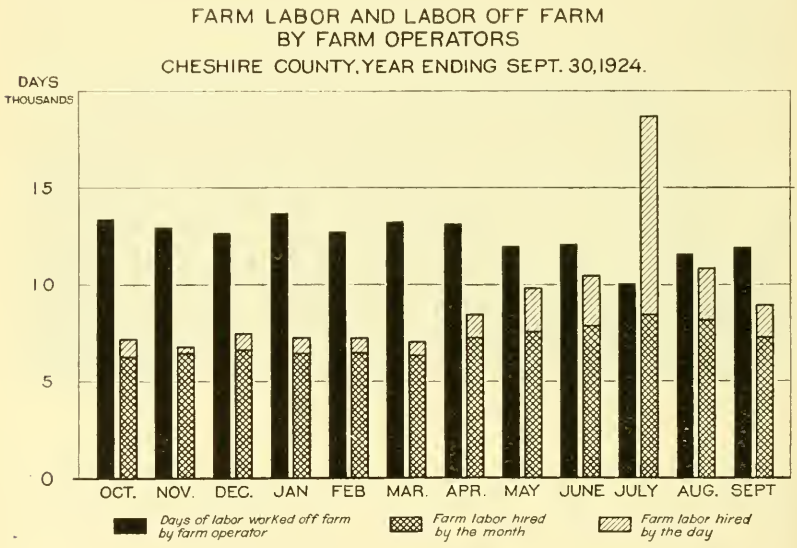
Farm Organization.

The average farm in Cheshire County is too small for economical and efficient operation, as seen in the following table of average acreage of crops and number of livestock per farm:

Crop acres per farm.		*Livestock per farm (number).*	
Oats	1.27	Horses	1.6
Corn	1.19	Milk cows	5.0
Other grain	.14	Other cattle	4.1
Tobacco	.06	Sheep	1.5
Hay	27.58	Hogs	1.1
		Poultry	60.0

Demand for labor in the production of these crops comes almost entirely during hay harvest, or within less than one month in the year. The extreme labor demand in July is shown in Figure 2. Oats, corn and other grain crops are grown on such a small acreage that most of the work must be done by hand, because the cost of machinery would be very high. Naturally some farms grow a larger acreage of these grain crops than is shown by the average acreage per farm. In District II those farms planting oats had ten acres per farm, but in the other districts it varied from

Fig. 2.



one to five acres per farm. The most common acreage of corn on farms growing this crop was three to five acres, and most of this was grown for ensilage. The present cropping system with such small acreage, therefore, makes the cost of producing feeds high.

Livestock or outside work must act as the balance wheel in smoothing out farm labor demands. Some farms are doing this very well in the operation of a dairy. The average number of livestock per farm, however, does not represent a profitable man unit. With the average labor demands for crop production one man could easily handle ten cows and many other livestock. Very few farms, however, have over eight cows, and the average number per farm is five.

The production of crops and livestock under such conditions is very expensive. These farmers must either obtain a high price for their

product, or receive a low wage for their labor. As a matter of fact, average farm incomes are low and prices are high.

Work in mills, factories and on the road also takes a large share of the surplus labor of farm residents, as shown in Figure 2. More days are worked out than are hired. In only one month during hay harvest did the days of farm labor hired exceed those worked out.

There is an opportunity for outside work at fair wages in most sections of the county, and this is having considerable effect on the type of farming followed. Many farmers are merely living on the farm, keeping a few cows and chickens and raising vegetables for home consumption; *i.e.*, they find that at slack seasons of the year working out takes the place of a cash crop. Supplementary farm enterprises, therefore, do not have the same advantage that they often have in more strictly agricultural communities.

Relative Cash Income and Expenses of Farm Residents.

The relative importance of different farm enterprises as a source of gross cash income as well as the principal cash expenses in each district are shown in Table IV. Labor forms at once one of the principal cash expenses and one of the major sources of income. The total income from the farm operator's labor in other industries, however, is much larger than the cash expenditures for hired labor. (See Table XX, Appendix.) Dairying is the major farm enterprise in all districts, and feed is the largest item of expense.

TABLE IV.—*Distribution of cash outlay and cash receipts per farm for year ending Sept. 30, 1924.*

(Percentage.)

	District I.		District II.		District III.		District IV.		District V.	
	Expense.	Income.	Expense.	Income.	Expense.	Income.	Expense.	Income.	Expense.	Income.
Labor	22.77	27.98	34.18	13.77	26.54	23.88	35.55	26.04	22.14	40.42
Fertilizer	3.62	.....	2.24	.....	2.05	.....	1.16	.....	2.03	.....
Feed	57.61	.....	56.95	.53	64.72	.39	53.66	6.61	64.78	2.10
Livestock	.83	6.09	1.22	4.01	.77	1.69	.78	1.56	.56	1.75
Dairy	14.51	42.38	4.58	55.67	4.22	53.54	8.21	21.70	7.53	38.44
Poultry	.66	11.90	.83	12.22	1.70	8.49	.64	15.51	2.96	8.99
Wood	.....	3.15	.....	9.54	.....	6.12	.....	20.28	.....	1.09
Vegetables and fruit	.....	8.50	.....	4.26	.....	5.89	.....	8.30	.....	7.21
Total	100	100	100	100	100	100	100	100	100	100

Effect of Increasing Farm Prices.

A larger demand for food on the part of an increasing population in the United States and a comparatively stationary supply of land may cause a relative increase in the price of farm products. Such an increase would naturally cause a more intensive cultivation of those farms in operation. Where these farms were operated by owners who for various reasons were slow to respond to the better opportunities, yet did not wish to leave even though their farm income was small, the full effect of economic conditions would not become apparent until their farms fell into the hands of those who would consider the returns from the different uses to which they could place their labor and their farms.

The cropping system in Cheshire County is likely to remain the same even with increased prices of farm products because of the large amount of labor required in the production of grain crops on most farms. The small, irregular-shaped fields make the extensive use of large machinery impossible, and an increase of 15 or 20 cents per bushel in corn prices would have little effect on a farmer's income with only four or five acres. Increased supplies of feed crops would, therefore, probably be furnished by a more intensive cultivation of the present surplus-producing areas. Higher prices for milk and eggs would not necessarily increase the advantage of New England in supplying its markets, because feed costs would be correspondingly higher and the margin of profit might not be any greater.

The alternative to the cultivation of Cheshire County farms is timber production, and the prices of this crop can be expected to increase faster than prices of farm products because of the increasing distance to a rapidly decreasing supply. The advantage of abandonment of farms to the production of timber can be expected to become greater than at present, and with the more intensive cultivation of land those areas which are not adapted to the efficient production of field crops will be used for timber.

Types of Farming.

The period of transition through which Cheshire County is going makes it important to distinguish between the three distinct types of farm operators there: first, those entirely dependent on farming as a source of income; second, those working in mills and factories and living on the farm; and third, those who have really retired on the farm.

The encouragement of agricultural enterprises on those farms entirely dependent on farming as a source of income must be on a very different basis from that of the other two. The costs of production on these farms must in the long run be less than the returns.

Those farm residents, however, who obtain most of their income from outside work may find increased production of milk, poultry or garden advisable even though it would not be profitable on the first type of farm.

Many of the third class of farmers are living on farms that will be abandoned as soon as the present owners are gone. The land may return a very low income, but as long as these men operate it, they should be given every help in increasing their income from it.

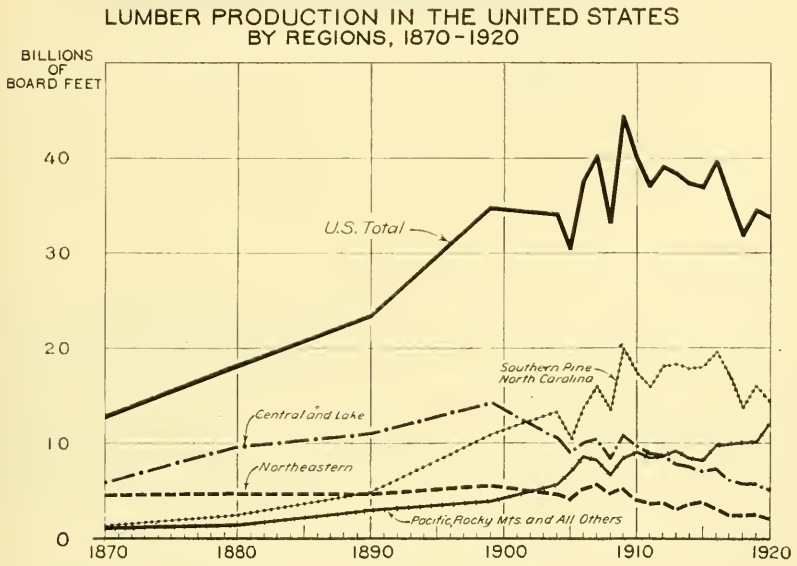
TIMBER PRODUCTION.

Market.

New England is close to the center of timber consumption. Forty-five per cent of the lumber in the United States in 1920 was consumed, and only 15 per cent produced, in the northeastern states, *i.e.*, east of Wisconsin and Illinois. This area, therefore, has a distinct advantage in lower transportation cost over more distant sections in the growth of timber.

The centers of lumber production have been shifting rapidly. (See Fig. 3.) New England in 1850 was supplying 54.8 per cent of the amount used in the United States, but in 1920 it furnished only 6.5 per cent. The percentage of the national supply coming from the Lake States reached its peak in 1880, from the South in 1919, and now the Pacific Coast and Rocky Mountain states are supplying 35.6 per cent.

Fig. 3.*



* U. S. D. A. Bulletin No. 1119.

Increase in transportation charges has followed this shift in production to more distant areas. Since 1905 the average transportation cost of lumber received in southern Minnesota increased 262 per cent, and in 1919 this charge represented 72.8 per cent of the retail selling price of the lumber.* This charge is even higher to New England markets, and will become greater, as a larger proportion of the supply comes from the Pacific Coast states, which are more than twice as far as the southern-producing areas.

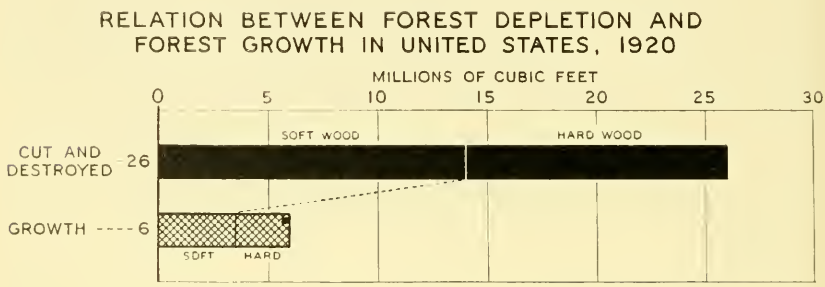
Transportation costs have been the most important factor in increasing retail prices of lumber, but in the future we may also expect scarcity to advance them. At the present time the forest resources of the country

† U. S. D. A. Yearbook 1922. "Timber: Mine or Crop."

are being cut or destroyed more than four times as fast as they are being replaced by growth, as shown in the following, Figure 4.

The trend of stumpage prices in New Hampshire, as shown in Figure 5, reflects the changes in the timber situation. Stumpage increased from 50 cents per thousand feet in 1850 to $12 in 1920, and in view of the decreasing forest reserves and increasing transportation cost we can expect further increases in the future.

Fig. 4.*



* U. S. D. A. Bulletin No. 1119. Lumber cut in the U. S. 1870–1920, cubic feet per acre per annum.

Production.

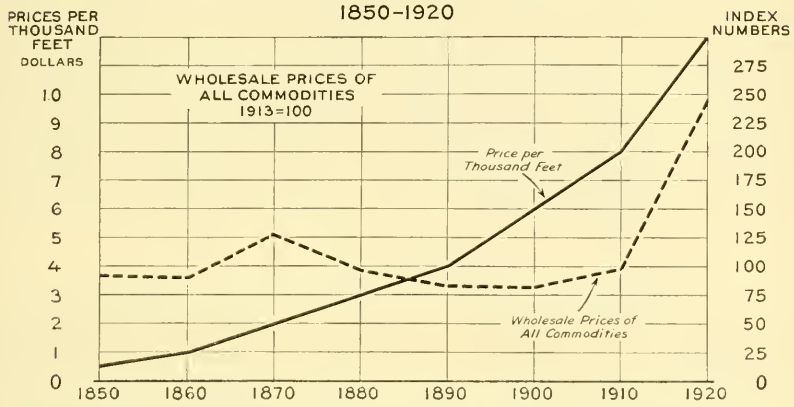
Timber production in Cheshire County offers the farm owner a good supplementary cash crop in the operation of a general farm; or forest products may be made the main crop, and tilled crops secondary, or the entire farm devoted to trees. A woodlot of 100 to 200 acres with its demands for winter work gives a more uniform distribution of labor on the general farm throughout the year, and sales of cordwood should make a good annual cash return. On those farms that have been abandoned or which have only a small acreage of tillable land, the owners should find timber production a means of securing a profitable return on their investment.

Increased production of timber in the county would also improve the market situation for other farm products. A large timber supply would furnish labor for a larger number of people and help to hold or increase population, thus maintaining a home demand for farm products, which is the basis of Cheshire County agriculture. Cheshire County furnishes an especially good market for timber, because of the large number of wood-using factories in Keene, and it is important to the farmers of this county that these industries be maintained.

The cost of producing pine in any locality and its value at present prices can be approximately determined. Naturally with increasing prices the value of this growth would be proportionally higher by the time present plantings are marketed. The Forestry Commission of the State of New Hampshire in its biennial report for June 30, 1924, makes the estimate, shown in Table V, of cost and value of producing white pine.

FIG. 5.*

PRICES OF TIMBER STUMPAGE AND INDEX NUMBERS OF WHOLESALE PRICES OF ALL COMMODITIES 1850–1920



* Stumpage prices from Forestry Department, University of New Hampshire. Index of wholesale prices from U. S. Bureau of Labor reports.

TABLE V.—*Cost of producing white pine with money at 5% interest, land at $5 per acre, cost of planting $15 per acre, and tax rate at 2½%.*

	Rotations.				
	20 years.	30 years.	40 years.	50 years.	60 years.
Taxes and interest on timber and land accrued to end of rotation	$16.57	$49.09	$156.73	$403.83	$854.10
Cost of planting carried to end of rotation	39.80	64.83	105.60	172.01	280.19
Total expenses	56.37	113.92	262.33	575.84	1,134.29
Stumpage value at $12 per M.	37.00	150.00	394.00	558.00	638.00
Net profits of plantations	−19.37	36.08	131.67	−17.84	−496.29
Net profits of natural reproductions (less accrued cost of planting)	20.43	100.91	237.27	154.17	−216.10

Net profits on this basis reach a maximum of $131.67 for plantations, and $237.27 for natural growths, at the end of the fortieth year with the given rate of taxes and stumpage value of timber. Taxes and interest make up more than one-half of the expenses, and as the national timber situation becomes more acute we can expect this cost to be cut down a good deal through reduced taxes. The Walker Bill, recently passed by the New Hampshire Legislature, exempting a maximum of 50 acres of timber, if classified, until it contains 25,000 board feet of lumber, indicates the tendency in taxation. This would have increased the net profits on the above estimate approximately $58, making a total of $189.67 for plantations and $296.27 for natural reproduction, which is equal to a return of 33.6 per cent and 49.5 per cent respectively, compounded annually on the value of the land after the expenses of operation have been deducted.

In view of this estimated return and the probable increase in prices of pine, every encouragement should be given to this enterprise. The owners of abandoned farms, and of those farms with only a small acreage of tillable land which are likely to be abandoned in the near future, should plant or encourage the natural growth of pine on suitable locations. Hardwood is also a good investment when there is a natural growth, because of the probable increase in stumpage prices, although planting of hardwoods would not be advisable. Farmers and those interested in the agricultural development of this area should encourage plantings as an investment by outsiders, because every increase in timber acreage will furnish a better market for farm products and farm labor in the future.

DAIRYING.

Market.

Local consumption constitutes the chief market for milk produced in most sections of the county. Dairymen within hauling distance of Bellows Falls and Brattleboro, Vt., have an opportunity to sell through co-operative milk plants established in those towns, but in other sections dairy products are marketed locally. Since the local demand for milk is limited and is being supplied at the present time by local producers in most sections of the county, an increase in milk production must be shipped out to other markets.

Keene represents the principal local market for milk, although there are a number of villages scattered throughout the county that require considerable amounts. The people of Keene consume approximately 5,964,000 lbs. of milk per year, or 523 lbs. per capita, comparing favorably with 460 lbs.* in Altoona, Pa., and 178 lbs.† in Roanoke, Va. This large use of milk is perhaps due largely to the comparatively low retail price of 10 to 12 cents per quart and to the high quality which enforcement of strict health regulations has assured.

The distribution of milk in Keene is very inefficient. One hundred and eight inspected dairies produce the supply, and quite a number of these dairymen distribute it directly to the consumers. Naturally one distributing company, whether co-operatively or privately owned, could do the work with much less labor, but in view of the small amount of milk handled and the large number of small producers, some of whom would continue to retail their milk rather than sell through a central plant because they have the time and labor to do their own distributing, without any extra cash cost, such an organization would not be practicable.

Dairymen and farmers within hauling distance of the co-operative milk plants at Brattleboro and Bellows Falls, Vt., have a market for an increased production of milk. These plants are at present bottling most of their milk receipts and shipping them to chain stores in Boston and Springfield, Mass. Any surplus above the demands for whole milk is converted into butter.

These plants were both organized in 1921. The one at Brattleboro has no restriction on membership, while the one at Bellows Falls requires each member to purchase $25 worth of stock for each milking cow in the herd; and the amount of stock authorized is $100,000, of which $75,000 has been issued. This allows for a considerable increase in milk receipts

* Pennsylvania State College Bulletin No. 184.

† Findings of an economic survey at Roanoke, Va., which are soon to be published.

and it is uncertain how much of an increase can take place at the present level of prices. The companies must find private markets for their milk.

The monthly prices paid to producers by these two companies from November, 1921, to November, 1924, are shown in Figure 6.

Farm sales of dairy products are mostly in the form of whole milk. During the year ending September 30, 1924, the production of milk and farm sales of dairy productions by districts were as shown in Figure 7.

Dairying is most important around Keene in District III, and within hauling distance of the co-operative milk plants at Brattleboro and Bellows Falls in District II. The other districts simply produce enough for home consumption and the demands of small local towns.

FIG. 6.

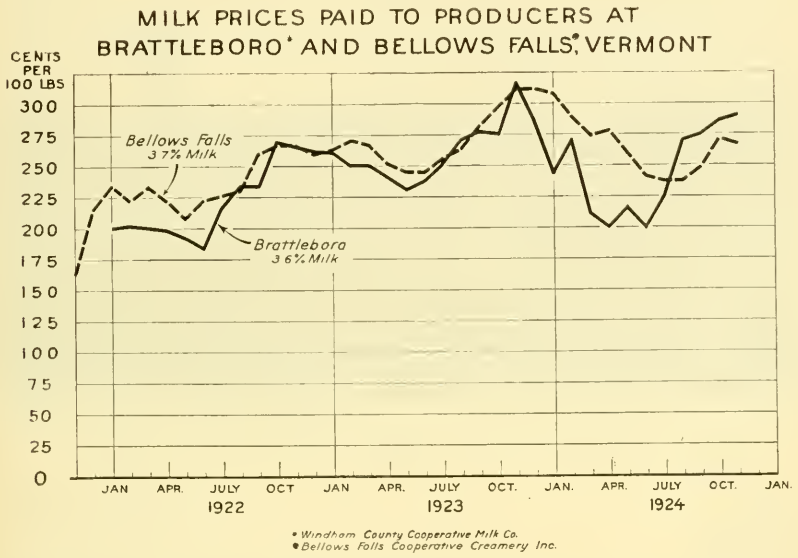
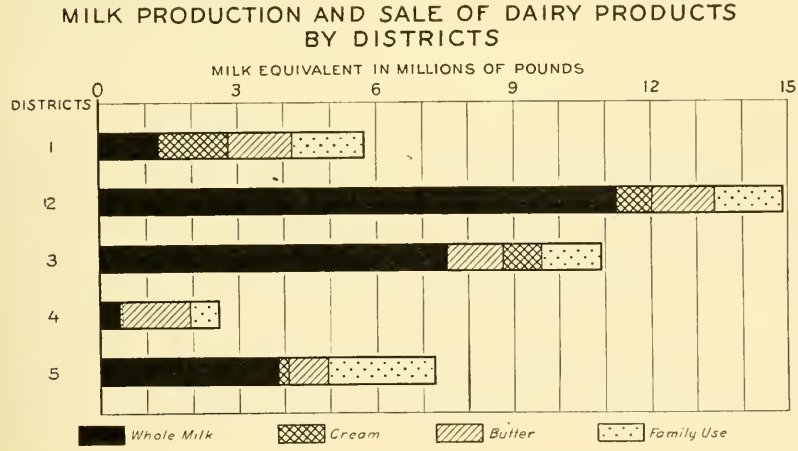


FIG. 7.



The total receipts and average prices of all sales were as follows:

	Amount.	*Average price received by farmers.*
Milk	$663,800	6c per quart
Cream	135,200	48c per quart
Butter	130,800	49.5c per pound
Total	$929,800	

ALFALFA CAN DO MUCH FOR THE DAIRY FARMS OF THE COUNTY. THIS IS THE FIRST CROP ON THE GEORGE HILL FARM OF MARLBORO

Production.

Dairying forms the basis of farming in this county. Hay, roughage and grain crops are nearly all marketed through the dairy cow. Poultry is usually but a side-line to the dairy, and a large part of the vegetables are grown on farms where dairying furnishes the chief employment for labor during the winter months.

Dairying gives the farmer with a small crop acreage an opportunity to increase the size of his farm business, and to employ his labor on some farm enterprise throughout the year. The present cropping system makes a very irregular labor demand, and the total value of the crops produced per farm is low. Some intensive system of agriculture must be followed, and dairying seems to best meet existing conditions on most farms.

The lack of a convenient market for increased supplies of milk at present price levels is a limiting factor in the expansion of the dairy industry in most sections of this county. With the exception of a few localities dairy products must be sold locally on a market now fairly well supplied. Any large increase in production would necessitate shipping outside, and in view of the small producing area in any one community or town this does not seem advisable.

Those farmers, however, who have the building space and can keep additional cows without any extra cost other than for feed should be able to increase their total income by increasing their number of cows.

In those sections where there is at present a convenient market for whole milk and cream, the question of encouraging or discouraging the dairy industry is more important. The best indication of its profitableness is the percentage which feed cost is of the price received.

Forty farms, keeping a total of 441 cows with no herd of less than 5 cows, reported the following quantity and cost of feed during the year ending September 30, 1924:

TABLE VI.—*Feed cost of milk produced by forty herds of five or more cows each.*

	Amount.	Cost per unit.	Total cost.
Timothy and Clover	640 tons	$16.00	$10,240
Alfalfa	9 "	16.00	144
Native hay	17 "	16.00	272
Corn silage	953 "	5.05	4,765
Corn	377 cwt.	2.58	974
Oats	690 "	1.86	1,282
Cottonseed meal	134 "	2.72	365
Linseed meal	52 "	2.80	146
Prepared dairy feed	6,864 "	2.34	16,089
Miscellaneous mill feeds	610 "	2.24	1,370
Bran	117 "	1.86	218
Pasture	441 head	8.00	3,528
			$39,393

Milk produced	2,646,000 lbs.
Feed cost per cwt	$1.49*
Feed cost per gallon	12.8¢
Average feed cost per cow	$89.55
Average milk produced per cow	6,000 lbs.
Average value of milk produced per cow at average yearly price paid for 3.6% milk by the Bellows Falls Co-operative Creamery @ $2.47 per hundred pounds	$148.20

The average milk production per cow in these forty herds is considerably above the average of 5,250 pounds for the county, but should be equaled by anyone keeping five or more cows. The dairymen, especially in Districts II and III where most of the larger dairies are located, are paying considerable attention to improving the quality of their herds. Quite a number of purebred dairy cattle are found in these sections, and throughout the county the number of cows per purebred bull is 51 and for each registered bull 124 cows. This compared with 52 per purebred bull in Wisconsin and 50 in Pennsylvania.

*Original figures for production costs were taken entirely from estimates of dairymen, and showed $1.27 feed cost per cwt. These figures have been revised on the basis of actual records of cow-test association members secured in the county over a 12-months period.

The farm prices received for local sales of milk are not available, but those paid by the co-operative milk plants for the period corresponding to the feed costs as shown in Figure 6, page 25, indicate that feed costs represent roughly 60 per cent of the amount received. In other words, the farmer receives 40 per cent of the gross returns as payment for labor, interest on investment, building costs, and other expenses. This return is not large, but many farmers are finding it the most profitable farm enterprise in which they can engage.

An inventory of dairy animals October 1, 1923 and 1924, indicates a decrease in dairy cows for the county and a decrease both of cows and heifers in District II, although this decrease may have occurred outside of the area supplying the co-operative milk plants. The totals for the county are as follows. (See Table XXI in Appendix for the district figures.)

	1923.	*1924.*
Dairy cows	8,570	8,080
Heifers	4,340	4,410
Other dairy cattle	1,116	1,300

Many dairymen should also be able to lower the above estimate of feed cost by improving their feeding practices. Most of the grain and concentrates fed the dairy cows in this county are purchased as prepared dairy feeds. This is an advisable practice where the dairyman is not familiar with the feeding value of the different grains and concentrates. Farmers keeping from one to five cows will probably find it more profitable to purchase prepared dairy feeds than to attempt to do their own mixing. Some dairymen, however, are cutting down the cost of their feed bill by mixing their own rations, and many other enterprising ones should find it profitable to follow their example. The county agent and dairy specialist at the University of New Hampshire are ready to assist any of these men in this practice.

Another way of cutting down feed cost is to produce more leguminous hay. Timothy and corn silage are at present the principal roughages, and they require a large amount of high-priced protein concentrates to form a balanced ration. Many farmers could reduce this cost by growing more clover and alfalfa hay.

Some farmers, especially on farms with plenty of pasture and a considerable distance from a market for milk, should also find the raising of milk cows from calves of good breeding, purchased from dairymen who now sell them at veal prices at calving time, more profitable than the production of beef cattle or sheep.

Dairying as an industry in Cheshire County depends largely on local consumption. There are likely to be yearly maladjustments to the demands of this market which a yearly agricultural policy should attempt to remedy, but a long-time program should emphasize improvement in feeding and handling methods, and in quality of cows rather than an increase or decrease in number.

In District V there was a decrease both in number of heifers and of dairy cows during the year ending September 30, 1924. This may not affect the price in this district, but should make less competition in disposing of milk. In District IV the total number of heifers and cows is about the same. Most of these are kept to supply home demands, and

the market situation is not important. In District III, the main source of supply for Keene, there has been an increase of 4 per cent in number of cows and 5½ per cent in number of heifers. This may cause a considerable increase in milk supply for Keene; and although retail prices may remain the same, dairymen may find it difficult to sell their entire supply as whole milk. In District I the number of cows and heifers is about the same, and little change during the year can be expected. In District II, however, where the best farming land of the county is located, dairying is dependent on prices received by milk plants shipping to Boston and other outside markets in New England. Since 1924 was a year of unusually low prices for dairy products, dairymen should find the situation improving during the next few years. In view of this general situation in New England, dairymen in the county who can market through the present milk plants should find it advisable to increase slightly their production by better feeding and improvement in the quality of their herds.

POULTRY.

Market.

The consumption of eggs in Cheshire County exceeds the production. During the year ending September 30, 1924, the stores purchased 353,900 dozen eggs from outside markets. Eighty-five per cent of these receipts, however, came in during the six-months period from August to January, inclusive, and some eggs were shipped out during the season of heavy production in the spring and early summer.

Adjustment to home market demands means a change in the time of local production. Dividing the year into two six-months periods, the production and sale of eggs and receipts from outside of the county are shown in Table VII.

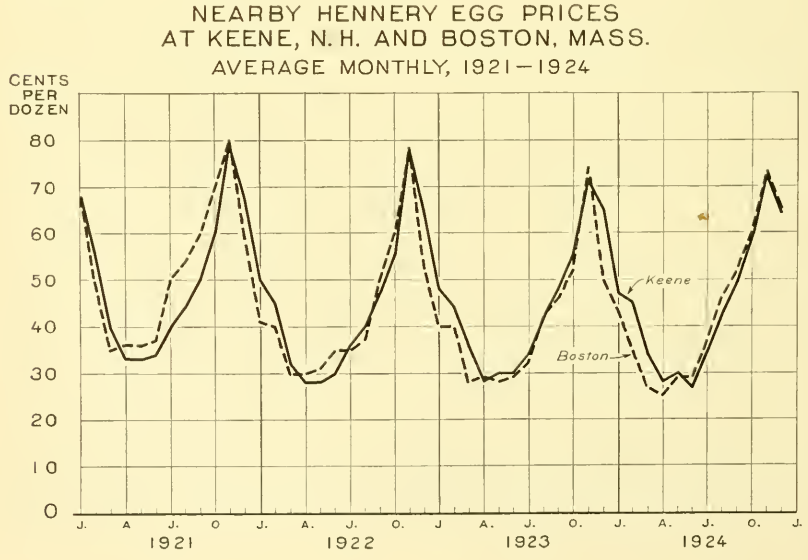
TABLE VII.—*Production and importation of eggs.*

	Total production.	Sale of locally produced eggs.	Receipts from outside county.
	Doz.	Doz.	Doz.
February to July, inclusive	398,500	315,700	103,100
August to January, inclusive	172,600	128,100	250,800

The farm sale of eggs from August to January could be increased nearly 200 per cent and still only furnish the demands of local consumers.

This adjustment of local production to local consumption, however, is never likely to be very close. It is probable that storage eggs would be shipped in during the fall and winter months regardless of the amount

FIG. 8.



produced locally because of their invariably lower prices. Furthermore, marketing and distributive agencies tend to prevent such an adjustment. A large part of the eggs coming into the county are handled by the chain stores, who do not make a general practice of buying from local producers, but depend upon buying in the open market or from such organizations as the New Hampshire Co-operative Marketing Association. This association, in turn, in order to be assured of a uniform supply, requires its members to ship all of the eggs they sell to Boston, where they are graded and re-packed. Such agencies tend to check farm sales of eggs to local stores.

The farmer, however, is concerned primarily with the price he receives. These larger distributive agencies aim to improve the grade of the products and handle them on a smaller margin. The Co-operative Marketing Association has been able to secure by grading its eggs a price of 7 cents above the top price quotations of the Boston Chamber of Commerce for approximately 78 per cent of its sales. The prices quoted by the Boston Chamber of Commerce, together with the weekly price of eggs at Keene as published by the *Market Review* of the New Hampshire Bureau of Markets, are shown in Figure 8.

Cheshire County poultrymen have no difficulty in selling fresh eggs at high prices from August to January The local market will absorb a much larger quantity at this time than is now being produced locally, and the price paid is often nearly twice that of March or June. (See Table VIII.)

TABLE VIII.—*Quarterly sales of eggs for year ending September 30, 1924.*

Month.	Eggs sold.	Price.	Amount received.
	Doz.	Cents.	
February–April	150,500	38.4	$61,700
May–July	155,200	37.1	57,700
August–October	68,700	53.4	36,900
November–January	59,400	70.4	41,900
Total	433,800	(Av.) 44.6	$198,200

The advantage of Cheshire County poultrymen, as well as those in a large part of New England, over western producers is in the production of eggs to supply the local demand during fall and early winter.

The market for poultry is primarily local consumption, although considerable amounts are shipped out of the county to Boston, Springfield, and other towns in Massachusetts and New York. As shown in the following Figure 9, approximately 33 per cent of the hens and roosters and 74 per cent of the broilers are shipped direct to outside markets. A good many of the local purchases may also be shipped out to other markets.

Increased supplies of poultry would probably be marketed outside of the county. Present prices, however, are based on the Boston market, and an increase in production locally would not affect the price except as it increased the supply of poultry on the Boston and outside markets.

The average weight and prices received by farmers during the year ending September 30, 1924, were as follows:

	Average weight.	*Price.*
Hens and roosters	4.4 lbs.	28 cents per pound
Broilers	2.0 "	35½ " " "
Other poultry	11.0 "	27 " " "

Production.

Poultry and egg production for sale is a minor source of farm income, as shown in Table IX. In most districts, however, the income from poultry ranks second to dairying.

There are very few commercial poultrymen in the county. One poultryman in Walpole has an exceptionally large commercial plant, with a capacity of sixty to seventy thousand day-old chicks, but most of the poultry raisers are farmers who keep a small flock as a side-line to a dairy or other enterprise.

Twenty-five per cent of the farm operators do not keep any poultry. A good many of these men simply live on the farm and work in some outside industry. The average number of hens and pullets per farm on October 1, 1924, and average egg production per hen and value of eggs produced per hen, grouped according to size of flock are shown in Table IX.

TABLE IX.—*Poultry production grouped according to size of flock on 184 farms for year ending September 30, 1924.*

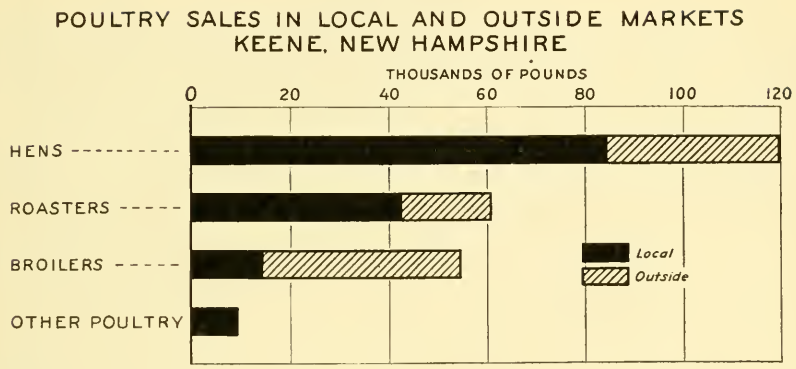
Group* size in number of birds.	Number of farms.	Per cent of total farms.	Average number birds per farm.	Average eggs per hen.	Cents per dozen.	Value of eggs gathered per hen at 45c. per dozen.
0	46	25	...	...	....	....
1–25	38	21	16	95	42.6	$3.54
26–75	62	34	46	91	42.0	3.41
76–150	27	14	110	77	43.2	2.88
151–250	7	4	210	59	50.5	2.21
251–375	1	1	270	90	44.3	3.27
375–over	3	2	498	112	49.3	4.20
Total	184	100	(Av.) 70	(Av.) 83	(Av.) 45.0	(Av.) $3.11

* This grouping of poultry flocks is based on the usual changes in size of poultry flocks on farms.

The average production per hen of 83 eggs is very low, but at the average price of 45 cents per dozen is worth $3.11. This is not an exceptionally high return. It is simply an average, and many poultrymen are receiving much more. The feed cost on the college flock at Durham, N. H., at February, 1925, prices was $2.93 per hen. Since the farm flock picks up considerable feed about the place, the actual feed cost should not be more than two-thirds of this amount, or $1.95 per hen. This would leave $1.16 for labor, equipment, use of buildings and other expenses, which most farmers would consider a fair return.

Poultry raisers, however, could greatly increase their net returns by

Fig. 9.



changing their production practices to obtain the most economical gains on their poultry and best meet the demands of the egg and poultry market. Present practices in the county are shown by the following inventory of poultry on farms, October 1, 1923 and 1924:

	1923.	*1924.*
Hens, number	41,560	34,930
Pullets, number	41,790	47,660
Roosters, number	11,400	14,800
Other poultry, number	1,630	3,550

Nearly 15,000 roosters and 35,000 hens were kept on farms in this county until October 1. The roosters probably weighed about five pounds per bird, and would have sold for about 22 or 23 cents per pound. Since the amount of feed required per pound of gain increases rapidly with the weight of the bird, as shown in the following table, and the price per pound decreases, these roosters were kept at a loss during the last two to three months. From a large number of feeding experiments, it has been found that the following amounts are required for each pound of gain per bird:

1st	pound gain	requires	3	pounds	grain
2nd	"	"	"	$3\frac{1}{2}$	"	"
3rd	"	"	"	5	"	"
4th	"	"	"	11	"	"
5th	"	"	"	18	"	"
Total for 5-pound bird				$40\frac{1}{2}$	"	"

In other words, the first $6\frac{1}{2}$ pounds of grain will produce a bird weighing about two pounds, which will bring around 80 cents on the early broiler market, while an additional 34 pounds of grain will increase the weight of the bird to five pounds, and its value to only around $1.10.

The advisability of selling off the old hens and depending on the pullets for egg production is based on the same principle. Gains in weight or the maintenance of the weight of hens require a much larger amount of feed than for pullets. The poultry specialists of the State University have been advocating this practice for some time, and the increase in the proportion of pullets in the 1924 over the 1923 inventory indicates that some of the farmers are adopting it.

Pullets are the most economical producers of eggs. All of the hens should be sold by the first of October, and the roosters and young pullets that are culled out should be sold as broilers when weighing about 2½ pounds. With chicks hatched in March, this means that these broilers should be ready for market by late May or early June, when the price in 1924 was 45–55 cents and the previous year 55 cents per pound.

The production of eggs during the period of high prices is advisable. Every poultry raiser should strive to get as large a proportion of his egg production as possible from August to January. On the University farm at Durham, 55 per cent of the eggs are laid during this period, but in Cheshire County only 30 per cent. One of the best ways of making this change is to purchase good strong, healthy chicks from some reliable hatchery between March 15 and April 20. By purchasing these chicks rather than raising them, the average farmer can obtain them earlier, usually from better stock, and can care for them with less labor than for smaller lots produced on the farm. Pullets hatched at this time should begin laying early in August, and the roosters and cull pullets can be sold on an early market as broilers at good prices.

The poultry industry in Cheshire County even with present methods of production is sound and should be encouraged. Those who are willing to follow the more approved practices should be able to secure good profits.

A flock of desirable size for the average farm is from 100 to 150 pullets. This number requires very little more labor than a flock of from 40 to 50. There would be an additional cost for feed, but this should not be over 60 per cent of the value of the eggs produced. Those who have gained some experience in the poultry business should also find a larger flock profitable. In fact, Cheshire County is favorably located with respect to markets for the establishment of poultry production on a commercial scale. The outlook for poultry and egg production for this type of producer is good.

TOBACCO.

The tobacco-producing area along the Connecticut Valley, which lies principally in Massachusetts and Connecticut, extends for a short distance into Cheshire County. Of the 108 acres of tobacco reported in New Hampshire at the last census, 106 lie in this region. The immediate prospects for shade-grown tobacco are not good, as there are large supplies of wrappers for the cigar-makers of the country now in stock. There is a prospective decrease of 10 per cent in acreage in 1925, and a general feeling that a still further decrease is advisable throughout the Connecticut Valley.

ORCHARDING.

Apples.

Market.—Local demand at present constitutes the chief market for apples produced in this county. A few of the commercial growers ship in carlots to the Boston market, but practically all of the apples grown in small farm orchards are either consumed at home, made into cider or vinegar, or sold locally as barrel apples.

Local production does not entirely supply the Keene market even during the local harvest season. In the year ending September 30, 1924, the monthly freight receipts at Keene, divided into competitive and non-competitive seasons, were as follows:

Competitive season, in bushels.		*Non-competitive season, in bushels.*	
September	38	February	.....
October	2,379	March	2,112
November	1,605	April	599
December	38	May	1,030
January	96	June	1,386
		July	12
	4,156	August	48
			5,187

The chief reason for these receipts during the local harvest season is the higher quality and better pack of the shipped-in apples. Local producers by improving on these points should be able to replace a considerable portion of such receipts.

An expansion in the production of apples on a commercial scale, however, cannot be based upon the local market demand. Some of the growers might be able to truck a part of their crop to nearby towns, but the larger part would have to be shipped in carlots to the Boston market and sold in competition with apples from the Northwest, New York and other commercial producing areas.

Commercial growers in Cheshire County, as well as in other parts of New England, however, have a decided advantage in lower transportation cost over growers in the Northwest. This advantage has increased during the last few years as shown in Table X, and with lower prices for apples has placed New England growers in a very favorable situation.

TABLE X.—*Freight rates on apples from Keene, N. H., and Wenachee, Wash., to Boston.*

Freight rates per 100 lbs. (in cents) 1917–1922.

	Jan. 1, 1917.	Aug. 1, 1917.	June 25, 1918.	Jan. 1, 1920.	Aug. 26, 1920.	July 21, 1921.	Jan. 1, 1922.	Increase since 1917.
To Boston from								
Keene	11	12½	15½	16	22½	..	20	9 cents
Wenachee, Wash.	100	..	125	..	166½	150	..	50 "

Nearness to the Boston market also gives growers with trucking facilities an opportunity to take advantage of temporarily high prices.

Northwestern growers have been able to sell on New England markets in competition with local producers, largely because of the better grade,

pack, and quality of their apples. In the past New England growers have paid very little attention to these requirements and have acquired a poor reputation on their own markets. During the last few years the quality and pack of New England apples have improved, and they are now competing to better advantage with apples grown in other areas. In fact, those who are considering the planting of commercial orchards may feel assured that, by the time their trees come into bearing, New England apples will have overcome in part at least the prejudice that now exists.

The prices which Massachusetts growers have been receiving for their best grade and poor grade Baldwin apples on the Boston market during the last four years are shown in Table XI. New Hampshire is noted for the quality and color of its Baldwin apples, which usually sell slightly above these prices. The trend, however, would be the same.

TABLE XI.—*Average price received by Massachusetts growers for best grade and poor grade Baldwin apples on Boston market 1921–1924.*

Best grade Baldwins.

	1921–22 per bbl.	1922–23 per bbl.	1923–24 per bbl.	1924–25 per bbl.
December	$6.50–$7.00	$5.00–$6.00	$4.00–$4.50	$4.75–$5.00
January	7.00– 8.00	6.00– 6.50	4.00– 4.50	5.50– 6.50
February	7.50– 8.50	6.00– 6.50	4.25– 4.75	5.50– 6.50
March	9.00	6.00– 6.50	4.00– 5.00	.....
April	.....	6.00– 6.50	3.50– 4.00	.....

Poor grade Baldwins.

	1921–22 per bbl.	1922–23 per bbl.	1923–24 per bbl.	1924–25 per bbl.
December	$5.00–$6.00	$3.25–$4.00	$3.25–$3.75	.....
January	.....	4.00– 4.50	3.50– 4.50	$3.75–$5.00
February	7.00– 7.50	4.00– 4.50	3.50– 4.00	3.50– 4.50

The price which will be received for apples grown on trees planted at the present time is very uncertain. The only indication that we have of apple prices in 1935 is the acreage of apple trees that will come into bearing during the next ten years. Data on the acreage of young non-bearing trees for the United States are not available, but the records of reclamation projects in the Northwest, which include a considerable portion of the commercial apple-producing area in that region, show a slight decrease in acreage of bearing trees. Virginia shows considerable planting of young trees, but those familiar with commercial production of apples in the South claim that there has been very little planting in other states. They also state that there has been scarcely any planting in New York State during the last few years. There will, however, probably be an increased commercial production of apples as the trees now bearing grow older, but the total yield for the United States may not be increased because of a reduction in small farm orchards. We, therefore, expect

that the supply of apples in the United States will remain about the same during the next ten years.

Apples are also meeting increased competition from the sale of citrus fruits. The acreage of these fruits that will come into bearing during the next ten years makes it improbable that the demand for apples from an increasing population will be any larger than at present.

—Cut loaned by New Hampshire Department of Agriculture

MORE THRIFTY ORCHARDS OF THIS TYPE WOULD UNDOUBTEDLY BE PROFITABLE IN THE COUNTY

Production.—There are very few commercial orchards in the county, and most of the present production is in small farm orchards. The industry is much more important in District V, where conditions are similar to those in the apple-producing section of Hillsboro County, than in other districts of the county.

The number of trees and total production of apples by districts are estimated in Table XII.

TABLE XII.—*Number of apple trees and production by districts.*

District.	Number bearing trees.	Number non-bearing trees.	Total production (bbls.).
I	1,800	1,140	1,810
II	5,490	3,630	3,080
III	6,190	1,510	2,670
IV	3,540	420	3,440
V	12,000	1,930	8,400
Total	29,020	8,630	19,400

The present yields of apples per tree for the county are very low. In 1924 it was estimated at .7 of a barrel. Very little attention is given to these small orchards, and the apples sold are considered as a net gain. This yield could be considerably increased by proper fertilizing, spraying and pruning, but many small orchards would not justify a very large cash expense.

There is a considerable acreage of land, especially in the southeastern part of the county, which is well adapted to the production of apples on a commercial scale. The conditions here are very similar to those in Hillsboro, the adjoining county, where the industry is quite a sizable one.

The cost of an orchard at bearing age and the annual expense of a bearing orchard for this area have been estimated on the basis of data obtained from commercial growers in New Hampshire. The cost of an orchard for the first ten years, on land valued at $35 per acre, interest at 6 per cent compounded annually, is as follows:

Sod Mulch System.

One acre of quincunx orchard (54 trees).

Land	$35.00	
Trees	32.40	(60c each)
Staking, Digging, Setting	21.60	(40c each)
Wire protectors	8.10	
Nitrate (10 years)	28.00	
Spraying (10 years)	57.00	
Digging around trees (10 years)	95.40	(18″ radius)
Cutting and raking hay (10 years)	40.00	
Taxes	10.00	
Costs	$327.50	
Compound interest	170.12	
Total cost	$497.62	

The estimated annual expense over a series of years in properly caring for a full bearing Baldwin tree in an economical orchard unit is as follows:

Estimated annual cost of caring for full-bearing Baldwin tree, sod mulch orchard.

Pruning	$.40
Spraying	.50
Fertilizing	.30
Mowing grass	.10
Miscellaneous	.20
Overhead	.70
Total	$2.20

This is equal to $1.10 per barrel at an average yield of two barrels per tree, which most growers in New Hampshire obtain by following proper cultural practices. However, sale of cider apples will offset a part of the cost of growing, leaving the average net cost per barrel of fruit which will be packed about $1 on the tree.

To the cost of $1 per barrel on the tree there must be added the expense of harvesting, packing and loading on the cars. In a commercial orchard of one of the adjoining counties this work was performed in 1923 at the following cost:

Standardized average cost per barrel of harvesting six-hundred barrel Baldwin crop.

Picking	$.39	
Sorting	.10	
Heading	.10	
Stenciling	.01	
Hauling	.12	
Total labor		$ .72
Cost of package and supplies		.78
Total		$1.50

The marketing costs at the University of New Hampshire orchard for the 1923 crop were as follows:

Returns per barrel for Baldwin apples, January, 1924.

	A-Grade.		*B-Grade.*
Wholesale price	$5.50		$3.25
Costs:			
Commission	$.55	$.32	
Freight	.30	.30	
Cartage	.12	.12	
Storage	.55	.55	
Total costs	1.52		1.29
Net returns per barrel at shipping point	$3.98		$1.96

The total cost per barrel at the car door, including both production and harvesting costs, was $2.50 in 1923. The A-grade fruit returned a net profit of $1.48, and the B-grade a net loss of $.54, when the cost of production was distributed uniformly to all apples sold. A tree bearing one and one-half barrels of A-grade fruit and one-half barrel of B-grade would represent a net profit of $1.95 to the owner, which most growers would consider a fair return.

Northwestern growers selling on the same market during these years have been scarcely able to meet expenses. They cannot expect to expand their acreage of apples on the basis of this price. Localities, therefore, which have been able to make fair returns during the last three years should be able to successfully meet future competition.

It is evident that there is a good opportunity for apple production for the wholesale market, provided that *high-grade apples are grown.* The low-grade fruit returns a loss, not a profit.

Those considering the planting of a commercial orchard, however, should keep in mind the minimum size necessary for economical production, nearness and type of road to shipping point, and the profitable employment of the operator's labor during the ten years an orchard is developing. Specialists at the University of New Hampshire are recommending the planting of not less than 500 trees. The operation of a cooperative grading and packing plant would also make it possible for individual growers to market to better advantage. This would probably require a production of 10,000 barrels in a community. Those starting in the orchard business in a new territory should, therefore, encourage the planting of trees in their community. In a study made throughout the state of Massachusetts on the cost of marketing apples it was found

that by truck the hauling cost varied from one-half to one cent per mile for a bushel of fruit. The cost of hauling by wagon varied from one to one and one-half cents per mile for a bushel. The wagons were used only for short hauls and usually where it was too hilly to use trucks to advantage. In Cheshire County there might be a slight increase in the cost of hauling by trucks due to the hills and condition of the roads.

The profitable employment of the operator's labor from the time of planting until the orchard is of bearing age is largely an individual problem. In District V, where the most favorable orchard sites are located, poultry or employment in some outside industry seems the most advisable.

Stone Fruits.

There are probably some sections in District V where peaches could be grown profitably. The fruit buds of the peach are much more tender than those of the apple, and for this reason care should be taken in selecting an orchard site. A location with good air drainage and with at least a partial protection against the cold north and northwest winds is most desirable. Only the more hardy varieties should be used, such as Carmen, Belle of Georgia, and Elberta.

Sour cherries are considered to be more hardy than peaches and very productive if properly cared for. To obtain best results they should be grown under cultivation, well fertilized and pruned. Most of our New England growers fail to prune the sour cherry sufficiently to get best yields. A cherry orchard should have at least 100 trees, because the small blocks suffer considerable loss of fruit from birds.

At present the demand for sour cherries is none too good in New England, but with more economical growing it is hoped that we can offer them for sale at a price that will encourage canning and so increase the demand for this fruit. Montmorency and Early Richmond are two outstanding hardy varieties that may be grown in New Hampshire.

Only the more hardy plums of the Japanese species such as Burbank, Abundance and Red June, can be grown in New Hampshire. The Japanese plums are difficult to market because their quality is not so good as that of the European plum, which can be grown in competing areas.

VEGETABLE GARDENING.

Market.

Vegetable growers in Cheshire County are largely dependent upon local demand for the sale of their products. They seldom produce a sufficient quantity of any one vegetable to warrant shipping it to an outside market, except as commercial growers truck a part of their crop to small towns in adjoining counties. Vegetables produced locally must nearly all be sold on the local market; and since the demand of this market remains fairly constant, a comparatively small change in supply causes wide fluctuations in price.

Keene and the rest of Cheshire County offer a small limited market for vegetables. There are frequent periods of scarcity and over-supply due to irregularity in the marketing of farmers and receipts from outside the county. Wholesalers and merchants often find it profitable to ship in vegetables during the local harvest season. Since local growers cannot

profitably ship to outside markets, this increase in supply causes a lower price.

The greatest competition, however, is between commercial and small vegetable growers. The former, located chiefly along the Connecticut River, outside of the county, depend on no single market but make regular trips to towns within a radius of twenty to forty miles. Some of them have built up a reputation with merchants in these towns for grade and quality. They usually have a wide variety of vegetables, and by bringing small quantities of each kind to the market each time they are not seriously affected by a low price for any one. Some of them make a practice of having some vegetable that is scarce on the market, with which to sell others of which there is an over-supply. Such practices give the commercial growers an advantage in selling their crop at above the average market price.

Local growers, on the other hand, with small acreages of vegetables have a high cost of production, because of more hand labor; they sell their crop when it is convenient rather than according to the demands of the market and depend largely on one market for their sales. In spite of these disadvantages, however, they continue vegetable production because it affords them a market for labor that is not being used by other farm enterprises; and their big problem is to receive a higher average price for what they are now producing.

In order to market their vegetables more successfully, small growers must follow closely the trade demands. Merchants generally throughout the county express dissatisfaction with purchases from this source, because they cannot depend on a regular supply of well-graded vegetables of good quality. The remedy for this situation is largely an individual one. Any grower can build up a reputation for good grade and quality. Some have done this and are now selling their crop by telephone. Others could profitably follow the same practice or, by regular marketing, endeavor to obtain advance orders for their supply. The frequent gluts or over-supply of vegetables on every market in the county, with its resulting low price, are caused more by irregularity in the marketing of small growers than by commercial growers. No matter what the cause, however, the best way to avoid receiving such low prices is by regular marketing and taking advance orders whenever possible.

There are three types or methods of marketing in the county: roadside markets, peddling and sales to stores. A few growers peddle from house to house, especially among the summer residents, but this practice requires a large amount of time and is not followed by the larger growers. Local stores constitute the principal market. Roadside stands are a convenient way to dispose of vegetables grown on a few farms. Considerable amounts can be sold to the tourists that are passing through, and many city people drive out in the evening and buy at these markets. In most cases many other products such as cold drinks and candy are sold. Those considering the establishment of such a market should keep in mind the time required to operate one and the location, which should be where the tourist will notice it over quite a long stretch of road. The market should be made as attractive and inviting as possible, and its successful operation also requires considerable salesmanship ability.

The demand of summer residents for vegetables is often considered a basis for encouragement and stimulation of vegetable production. Yet

this demand was met in 1924 with only small receipts from outside the county, as shown in Table XIII.

TABLE XIII.—*Store purchases of produce from local farmers and from outside county, with average yield per acre in county.*

Vegetable.	Store purchases from		Yield per acre in county.
	Farmers.	Others.	
Potatoes, bu.	13,880	47,620	146
Sweet corn, doz.	17,180	1,950	300
Cabbage, cwt.	780	1,120	220
Turnips, bu.	700	360	550
Dry onions, bu.	870	6,050	...
Tomatoes, bu.	380	370	150
Peas, bu.	520	130	55
Celery, doz. bunches	650	3,470	...
Asparagus, bunches	2,610	1,580	274
Cauliflower, box	610	900	...
Cucumbers, bu.	280	570	48
Beets, doz. bunches	2,480	770	...
Beets, bu.	420	130	120
Carrots, doz. bunches	1,360	580	...
Carrots, bu.	490	220	120
Spinach, bu.	470	2,040	...
Squash, cwt.	600	80	220
Shell beans, bu.	330	360	179
String beans, bu.	100	20	30
Parsnips, bu.	240	160	
Strawberries, crates	1,160	2,310	113
Other berries, crates	1,660	10	
Apples, bu.	2,960	3,120	

Except for potatoes and onions, most of these receipts came in when the vegetables were out of season locally. The production per acre also indicates that only a small acreage would be required to produce the amount that is now being shipped in.

The price received for vegetables varies widely from day to day and year to year according to the supply and quality. Ordinarily the earlier the crop the higher is the price received, although the real late market is also proving good for some vegetables. Individual, and especially commercial, growers should be able to adjust their acreage of particular crops to meet probable demands by watching the increase or decrease in plantings of other growers supplying the same market.

Production.

There are three types of vegetable growers in the county: commercial growers; general farmers with vegetables as a side-line; and laborers living on the farm and growing some produce.

Commercial producers are greatly handicapped by the seasonal demand for their labor and the high cost of marketing. Unless they have a greenhouse, they must depend on some other occupation during the winter months, or remain idle a large part of the time. They cannot depend

on one market to take their entire crop, as can growers close to Boston, but must make regular trips to a number of large towns at considerable expense for transportation. The actual marketing unit for a grower in this section is from twenty to forty miles in radius.

The principal commercial producing area is in Vermont, just across the border of Cheshire County. Growers there are well situated with respect to both Cheshire County and other markets, and are able to raise vegetables slightly earlier than the local producers. In view of this fact and the nearness with which local growers are now supplying the market, no encouragement should be given for further expansion on a commercial scale.

General farmers in this county can usually work out at good wages during slack seasons of the year. This should prove much more profitable to them than the production of a few vegetable crops for market. In the case of old men, however, vegetable gardening may often be encouraged as a means of utilizing available labor for a small remuneration.

Laborers working on roads or in factories who live on farms often have time for the production of vegetables for market. With this class of producers, the larger their sale of vegetables the larger the total income.

There is, however, special opportunity for the commercial production of potatoes which deserves separate attention.

POTATOES.

Market.

Cheshire County is a deficient potato-producing area. During the year covered by this survey, more than 91,000 bushels were shipped in at an average transportation cost of 22.5 cents per bushel, and approximately half of this amount was consumed in the county.

Local production does not even supply the demand during the harvest season, as shown in Table XIV.

TABLE XIV.—*Monthly receipts of potatoes at Keene, together with yearly receipts of other towns, divided into competitive and non-competitive seasons.*

Competitive season.	Bushels.	*Non-competitive season.*	Bushels.
October	6,555	April	8,034
November	2,081	May	5,959
December	2,172	June	5,612
January	3,785	July	13,609
February	7,527	August	3,001
March	2,269	September	1,833
	24,389		38,048
Local receipts of stores outside of Keene	10,671		18,229
	35,060		56,277
Grand total receipts		91,337 bushels.	

Potato growers in this county have an advantage in price of more than 22 cents per bushel over those producers that are now supplying the potatoes shipped in from October to March. Most of the farm sales are also made directly to stores or private individuals, and the prices received are considerably higher than wholesale.

The commercial production of potatoes as a part of a regular farm program would, however, necessitate selling to wholesalers, unless the growers were prepared to spend a great deal of time and money making small-lot deliveries to local stores and private individuals. In selling to wholesalers they would naturally receive only what it would cost to ship in the same quality of potatoes. They would have to sell in direct competition with Maine growers, but would have considerable advantage in lower transportation costs.

A very large increase in acreage of potatoes would, however, oversupply this local market and necessitate shipments outside. The prices of No. 1 U. S. Grade potatoes on the Boston market and of potatoes on the Keene market are shown in Figure 10.*

FIG. 10.

WHOLESALE PRICES OF POTATOES
IN KEENE, N.H., AND BOSTON, MASS.*
1921 – 1924

*Boston price of No 1 U S Grade less freight from Keene to Boston

Production.

Potatoes are grown in this county with large amounts of hand labor and very inefficient methods. The acreage is usually too small to justify the use of large potato machinery, and most farmers do not make use of much machinery that would be suitable. As a result the cost of production in terms of hours of labor is high, and even with the advantage of nearness to market most of the local growers must take a low wage for their labor.

The increase or decrease in acreage of potatoes under present methods of production, however, is an individual problem. A large part of the crop is consumed at home, and with the type of farmers and system of farming found in many sections of this county, there are many individual instances where an increased acreage would mean a larger income to the operator.

* Keene prices are an average of prices paid by local stores, and represent a quality of potato much below the No. 1 U. S. grade on which Boston prices are based.

Commercial production of potatoes, on the other hand, must yield a return per hour of labor commensurate with what could be received from employment in other occupations. Farmers in many sections of the county have an opportunity to market their extra labor at good wages, and potatoes should return an equally large income if they are to be an advisable crop to grow.

There are a number of farms, especially in Districts I, II and III, well adapted to the use of potato machinery and to commercial production. Potatoes require a large amount of labor, and the replacement of five or ten acres of hay land with this crop would help to balance the irregular labor demands of the present cropping system. They make a good cash crop with a high return per acre.

The yields obtained are very satisfactory. The average was 146 bushels per acre in 1924, in most cases with very poor care. Certified seed was used on only a small number of fields, and only a small part of the crop was sprayed. The average application of fertilizer was 592 pounds, whereas more than double this amount should be used. With proper care and cultural practices, the yield on commercial fields should average at least 200 bushels per acre.

SIX ACRES OF POTATOES GROWN FROM CERTIFIED SEED ON FARM OF J. W. WHIPPIE, MARLOW

The average wholesale price to local stores in Keene during 1924 was 80 cents per bushel. This is much below the average for the last three years, as shown in Figure 10, but at this price the return per acre would be $160.

An estimate of the cost of production per acre on a ten-acre field at present prices is as follows:

Returns per acre, 200 bu. at 80c		$160.00
Expenses:		
Certified seed, 15 bu. at $1.50	$22.50	
Commercial fertilizer, 1800 lbs. at $36	32.40	
Spray material	7.00	
Use of land	10.00	
Use of machinery	5.00	
Horse labor, 112 hrs. at 15c	16.80	
Miscellaneous	10.00	
Total cost outside of labor		103.70
Returns for labor		$56.30

The amount of labor required in the commercial production of potatoes in New Hampshire, according to a preliminary survey by Mr. H. C. Woodworth, extension farm management demonstrator, was 162.7 hours, which at the above return would mean a wage of 35 cents per hour. By the use of cultural practices recommended in University of New Hampshire Extension Bulletin 23, this number of hours could also be reduced to about 100. A few men in the state have already lowered the labor requirement to below 100 hours.

The most economical use of potato machinery would require from 30 to 40 acres. A few farmers may find it possible to grow this amount, but smaller farmers who wish to plant only five or ten acres should find it profitable to co-operate in the purchase and use of machinery. Farmers are doing this in other sections of the country very successfully through organizations known as "potato rings," and Cheshire County farmers could profit by their example.

MEAT PRODUCTION.

Market.

The meat supply of Cheshire County comes largely from outside producing areas. Only a small part is furnished by local growers. The efficiency of large packing plants has also made it more economical to ship out the livestock produced and ship back the dressed meat. Local producers of livestock are, therefore, dependent on outside markets for the sale of their animals.

The total production of meat animals in the county does not equal the railroad receipts, as shown in Table XV.

TABLE XV.—*Production and railroad receipts of meat animals for year ending September 30, 1924.*

	Local production.	Keene R. R. receipts.	Deficiency.
	Lbs.	Lbs.	Lbs.
Beef	1,836,600	3,422,972	1,586,372
Mutton	68,200	488,996	420,796
Pork	391,500	977,993	586,493

A considerable part of the railroad receipts is trucked out of the county to neighboring towns; but they indicate the demand of this market for meat.

Farmers also have the opportunity to market their livestock during the winter months as dressed meat in the villages, considerably above the terminal market prices. During the year covered by this survey the average prices for different kinds of livestock received by farmers are shown in Table XVI.

TABLE XVI.—*Average prices received by farmers for livestock during year ending September 30, 1924.*

	Average weight.	Average price per cwt.
	Lbs.	
Beef cattle	746	$10.56
Dairy cows	818	8.00
Dairy heifers	541	5.44
Other dairy cattle	900	2.47
Veal	108	9.12
Sows	245	9.04
Fall pigs	29	14.13
Spring pigs	40	14.25
Other hogs	228	6.85
Lambs	69	12.50
Ewes	75	9.76
Rams	175	5.90

Production.

The production of meat animals is not an important farm enterprise, as shown in Table XXI. Dairy cattle are the principal livestock kept. Those classed as beef cattle are in most cases dual-purpose cows that are not being milked; a few of them are beef animals. The sheep replace cattle in the use of pasture and often utilize otherwise waste land. Hogs are kept to consume waste feed and provide meat for home use. The farmers realize that they cannot compete with the West in the production of meat animals on marketable feeds. They must, therefore, produce meat as a side-line on a waste-feed and home-consumption basis.

An inventory taken October 1, 1923 and 1924, shows a decrease in all kinds of livestock. The slight increase in beef cattle, shown in the following figures, is in all probability merely a shifting in classification from dairy cattle to beef. The total number of cattle declined.

	October 1, 1923.	*October 1, 1924.*
Dairy cattle, number	14,026	13,790
Beef cattle, number	531	542
Hogs, number	2,118	1,806
Sheep, number	2,350	2,012

On most farms in the county, the dairy cow is the best market for the hay and roughage grown and for the utilization of the pasture. Under some circumstances, however, it is advisable to keep other livestock.

The beef animal is mainly a by-product of the dairy industry and need not be considered separately. When prices of dairy products are low, some of the animals are fattened and sold as beef.

Sheep are kept on a few farms in the county in flocks of from 1 to 300. They require very little care except at lambing time, and make better use of poor pastures than do cattle. Many acres of rough pasture land are now lying idle in the county, because too poor for cattle, which would make suitable pasture for sheep.

The farmer, however, who spends his full time working on the place cannot afford to make sheep his main form of livestock. Sheep are adapted to an extensive system of farming, and most of the farms in this

county are so small that they must be operated intensively. The labor requirements of sheep production and of the present crop production would be very irregular. Sheep have a place on the dairy farm in the utilization of pastures that are too poor for cows. There are also many farms where the operator depends on outside work as the main source of income where sheep would be the best kind of livestock to keep. They would require less labor than dairy cows, and would make good use of the rough, hilly pastures found on most of these farms.

Fences, dogs, and diseases are, of course, the principal reasons for not keeping a few sheep. The danger of loss from dogs, however, is very small and is usually over emphasized. Fences are the biggest handicap, and a considerable number of sheep would have to be kept to justify the cost of fencing. With flocks of 100 or more, the cost of fencing would not be so high per head. In such cases a small flock of sheep as a supplementary enterprise to dairying, or as the main form of livestock on farms where the operator spends most of his time in outside work, should prove profitable.

Some farmers who are willing to give special attention and care to the production of early lambs should also find the supplying of hotel trade during the early summer months very profitable.

The outlook for lamb and sheep prices is still good. They have been very high the last two years, and the trend will probably be to lower levels; but on account of the reduced number in the West and the tariff protection on wool, the returns should be good for some time.

The general practice in hog production in this county is to buy two or three pigs, weighing from 40 to 50 pounds, from a neighbor, feed them largely on waste foods from the house, and consume about half of the pork at home. This utilizes otherwise waste food, and gives the farmer a cheap supply of pork. Such production should be encouraged; and since there is now an average of less than two hogs per farm in the county, and nearly one-half of the farmers do not keep any, it would not be advisable to decrease the present number of hogs. An increase, however, must be based on the better use of pasture and purchased concentrates as supplementary to waste feeds and increased production of pork for home use.

FEED CROPS.

The farmers of Cheshire County paid out $597,000 for feed during the year ending September 30, 1924. They produced 1,030 tons of grain and purchased 12,230 tons; and their total sales of field crops consisted of 2,740 tons of hay.

In such a deficient feed-producing area prices are naturally higher than in those sections shipping feed into the county. Farmers paid an average of $1.45 a bushel for corn in 1924; and while most of the purchases were of feed-stuffs and concentrates, this price of corn indicates the high feed cost.

Hay is the basis of the cropping system, occupying 94 per cent of the land in crops. A few acres of corn and oats are grown on some farms, but the corn is usually cut for silage and the oats for hay. High feed prices are not inducing farmers to raise more grain.

Hay crops will probably remain the basis of crop production, but a considerable change could be made in the kind of hay grown, which would give a more even distribution of labor requirements throughout the crop

season. A few acres of alfalfa and clover could well be substituted on each farm for timothy or native hay. They would not only give a more even distribution of labor, but would also furnish a hay of higher feeding value, and tend to increase the yields of hay by shortening the time that one seeding of hay is left in sod. They are to be recommended wherever they can be grown.

Some farms with fairly large tillable fields and sixty or more acres of tillage land should also find it profitable by the use of modern machinery to produce more of the grain feed that they use. A grain feed of oats, peas and barley is being recommended as a dairy feed by the dairy specialist at Cornell University. This mixture can be grown successfully in this county; and if provision can be made for threshing and grinding at a reasonable price, it might prove a very desirable crop.

Every effort should be made to change the cropping system so as to get a better distribution of labor throughout the year. Some farmers can grow more alfalfa, others clover, while a few should be able by the use of improved machinery, to profitably produce more of the grain feeds consumed on the farm.

TABLE XVII.—*Acreage and production of hay, grain, forage crops and tobacco in Cheshire County for year ending September 30, 1924.*

Crop.	Acreage.		Yield per acre, 1924.	Total production, 1924.
	1923.	1924.		
Oats—grain	520	746	33 bu.	24,580 bu.
hay	1,298	1,317	1.6 T.	2,050 T.
Corn—grain	544	571	40 bu.	22,640 bu.
ensilage	1,232	1,359	10.9 T.	14,820 T.
Timothy	3,525	3,783	1.1 T.	4,120 T.
Timothy and clover	24,628	24,311	1.1 T.	26,040 T.
Alfalfa	....	164	3. T.	51 T.*
Native hay	17,214	16,548	.6 T.	10,140
Barley—grain	7	7	39 bu.	218 bu.
hay	24	37	1.8 T.	68 T.
Millet	133	196	2.0 T.	319 T.
Tobacco	21	159	....	....

Hay occupies nearly all of the crop acreage in this county.
*Of the 164 acres, 147 were newly seeded, so that production is based on 17 acres.

TABLE XVIII.—*Acreage, production and sales of potatoes, by districts, for year ending September 30, 1924.*

District.	Acres.		Yield per acre for 1924.	Total production for 1924.	Store purchases.		Farm sales to individuals.
	1923.	1924.			From farmers in County.	From outside the County.	
			Bu.	Bu.	Bu.	Bu.	Bu.
I	156	168	156	26,200	2,634	14,613	....
II	190	186	135	25,100	976	1,052	7,807
III	206	195	130	25,300	4,787	23,435	27,925
IV	87	131	161	21,100	301	639	1,268
V	144	167	153	25,600	5,181	7,876	5,405
Total	783	847	(Av.) 146	123,300	13,879	47,615	42,405

APPENDIX

TABLE XIX.—*Store purchases of produce from local farmers in Cheshire County, compared with importations from outside the county, arranged by towns and districts.*

(For county totals of vegetables, apples and small fruits, see p. 42; eggs, p. 30; meat, p. 46.)

DISTRICT I.

Commodities.	Winchester (7 stores).		Chesterfield (5 stores).		Hinsdale (6 stores).		Total for district (18 stores).	
	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.
Potatoes, bu	2,240	12,511	250	191	144	1,911	2,634	14,613
Butter, lbs	23,400	13,378	667	3,111	556	9,222	24,623	25,711
Eggs, doz	10,300	2,811	2,122	1,000	1,778	10,233	14,200	14,044
Squash, cwt	44	....	....	....	....	....	44	....
Turnips, bu	39	....	....	....	....	....	39	....
Shell beans, bu	13	....	....	....	....	....	13	....
Sweet corn, doz	1,722	....	....	....	....	....	1,722	....
Tomatoes, bu	17	7	....	....	....	....	17	7
Peas, bu	31	....	....	....	....	....	31	....
Cucumbers, bu	22	....	....	....	....	....	22	....
Beets, bunch	10,844	....	....	....	....	....	10,844	....
Beets, bu	31	....	....	....	....	....	31	....
Apples, bu	328	876	....	....	....	78	328	954
Dry onions, bu	361	1,082	....	62	24	178	385	1,322
Cabbage, cwt	244	456	....	....	3	2	247	458
Strawberries, crts	146	56	....	....	....	27	146	83
Cherries, crts	1	....	....	....	....	....	1	....
String beans, bu	16	1	....	....	....	....	16	1
Parsnips, bu	17	3	....	....	....	....	17	3
Celery, doz. bunches	32	103	....	....	....	....	32	103
Asparagus, bunch	1,167	1,222	....	....	....	....	1,167	1,222
Cauliflower, hds	167	....	....	....	....	....	167	....
Carrots, bunch	167	....	....	....	....	....	167	....
Carrots, bu	13	....	....	....	....	....	13	....
Spinach, bu	....	93	....	....	....	....	....	93
Raspberries, crts	20	7	....	....	....	....	20	7
Blackberries, crts	18	....	....	....	....	....	18	....
Blueberries, crts	49	....	....	....	....	....	49	....

DISTRICT II.

Commodities.	Westmoreland (3 stores.)		Walpole (4 stores).		Alstead (2 stores).		Total for district (9 stores).	
	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.
Potatoes, bu	70	308	706	711	200	33	976	1,052
Butter, lbs	1,256	2,856	7,202	4,533	3,900	144	12,358	7,533
Eggs, doz	956	....	4,060	....	750	....	5,766	....
Squash, cwt	1	....	20	....	10	....	31	....
Turnips, bu	....	....	6	6	....	....	6	6
Shell beans, bu	....	....	6	6	....	....	6	6
Sweet corn, doz	....	....	222	....	83	....	305	....
Tomatoes, bu	....	....	11	11	18	11	29	22
Peas, bu	....	....	28	....	44	....	72	....
Cucumbers, bu	....	....	6	6	3	....	9	6
Beets, bu	....	....	11	....	3	....	14	....
Apples, bu	....	....	144	....	83	83	227	83
Dry onions, bu	....	58	10	53	....	84	10	195
Cabbage, cwt	....	....	6	....	1	....	7	....
Strawberries, crts	....	11	104	200	6	22	110	233
Cherries, crts	....	....	6	....	4	....	10	....
String beans, bu	....	....	14	13	1	....	15	13
Parsnips, bu	11	....	....	....	3	....	14	....
Celery, doz. bunches	....	....	120	333	....	....	120	333
Asparagus, bunch	....	....	1,244	....	....	....	1,244	....
Cauliflower, hds	....	....	67	....	....	....	67	....
Carrots, bu	....	....	11	....	....	....	11	....
Spinach, bu	....	....	14	13	....	....	14	13
Raspberries, crts	....	....	6	....	2	....	8	....
Blackberries, crts	....	....	6	....	11	....	17	....
Blueberries, crts	....	....	70	....	72	....	142	....

TABLE XIX (*continued*).

DISTRICT III.

Commodities.	Keene (13 stores).		Surry (1 store).		Swanzey (7 stores).		Marlboro (4 stores).		Total for district (25 stores).	
	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.
Potatoes, bu.	3,590	18,566	14	42	739	2,494	444	2,333	4,787	23,435
Butter, lbs.	1,750	163,750	....	1,387	3,511	14,000	711	30,900	5,972	210,037
Eggs, doz.	10,732	308,025	510	....	6,587	6,613	5,333	8,333	23,162	322,971
Squash, cwt.	410	12	2	....	8	....	46	46	466	58
Turnips, bu.	418	261	....	....	....	6	52	28	470	295
Shell beans, bu.	276	325	....	....	....	....	17	22	293	347
Sweet corn, doz.	12,500	1,500	22	....	39	....	333	444	12,894	1,944
Tomatoes, bu.	250	179	....	....	4	....	43	23	297	202
Peas, bu.	296	44	....	....	....	....	67	67	363	111
Cucumbers, bu.	252	244	....	....	....	11	....	281	252	536
Beets, bunch	18,864	7,440	....	....	....	333	....	722	18,864	8,495
Beets, bu.	209	80	2	....	....	....	56	....	267	80
Apples, bu.	1,062	462	4	....	62	216	217	556	1,345	1,234
Dry onions, bu.	476	1,716	....	7	....	304	....	444	476	2,471
Cabbage, cwt.	498	355	....	....	....	33	....	153	498	541
Strawberries, crts.	246	1,184	8	3	11	56	....	194	265	1,437
Cherries, crts.	15	....	....	....	....	....	....	....	15	....
Strawberries, crts.	504	290	....	....	2	....	117	17	623	307
Parsnips, bu.	152	112	....	....	6	....	28	....	186	112
Celery, doz. bunches	501	2,514	....	....	....	67	....	337	501	2,918
Asparagus, bunch	108	92	....	....	....	67	94	128	202	287
Cauliflower, hds.	266	184	....	....	....	....	....	650	266	834
Carrots, bunch	16,176	4,872	....	....	....	....	....	489	16,176	5,361
Carrots, bu.	281	174	2	....	....	....	59	9	342	183
Spinach, bu.	450	1,705	4	....	....	24	....	111	454	1,840
Raspberries, crts.	80	....	....	....	....	....	....	....	80	....
Blackberries, crts.	41	....	4	1	....	....	....	....	45	1
Blueberries, crts.	1,279	....	....	....	....	....	....	....	1,279	....
Watermelons, no.	....	6,165	....	....	....	....	....	....	....	6,165
Cantaloupes, crts.	....	1,169	....	....	....	....	....	....	....	1,169
Chickens, lbs.	16,131	2,500	....	....	....	....	....	....	16,131	2,500
Turkeys, lbs.	6,500	12,908	....	....	....	....	....	....	6,500	12,908
Cottage cheese, lbs.	250	....	....	....	....	....	....	....	250	....

DISTRICT IV.

Commodities.	Marlow (1 store).		Stoddard (1 store).		Gilsum (1 store).		Sullivan (1 store).		Nelson (1 store).		Total for district (5 stores).	
	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.
Potatoes, bu.	28	83	....	222	267	267	....	17	6	50	301	639
Butter, lbs.	267	533	167	500	3,111	556	136	136	444	111	4,125	1,836
Eggs, doz.	133	756	533	356	10,000	500	....	....	400	44	11,066	1,656
Squash, cwt.	4	....	....	....	.....	4	....	....	....	....	4	4
Turnips, bu.	....	....	4	4	.....	11	....	....	....	....	4	15
Peas, bu.	....	....	....	....	6	....	....	....	....	....	6	....
Beets, bu.	....	....	....	....	.....	11	....	....	....	....	....	11
Apples, bu.	6	....	56	27	100	50	....	....	....	....	162	77
Dry onions, bu.	....	13	....	22	.....	89	....	22	....	11	....	157
Cabbage, cwt.	....	....	....	11	.....	22	....	....	....	....	....	33
Strawberries, crts.	6	....	....	....	.....	28	....	....	....	....	6	28

TABLE XIX (*continued*).

DISTRICT V.

Commodities.	Dublin (2 stores) * and Harrisville (4 stores).		Jaffrey (4 stores).		Troy (5 stores).		Rindge (2 stores).		Fitzwilliam (2 stores) and Richmond † (2 stores).		Total for district (21 stores).	
	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.	Local.	Imported.
Potatoes, bu.	(22) 267	(310) 817 (6,333)	2,500	3,833	2,111	1,167	167	83	114	1,666	5,181	7,876
Butter, lbs.	2,167 (2,278	6,167	1,222	28,278	9,000	26,556	333	4,111	3,778	11,778	16,500	83,223
Eggs, doz.	1,600	4,111	1,889	13,711	7,111	2,556	3,111	....	20,888	2,222	36,877	22,600
Squash, cwt.	6	6	11	11	37	....	....	....	....	....	54	17
Turnips, bu.	22	....	78	22	78	22	....	....	....	....	178	44
Shell beans, bu.	....	3	9	8	8	1	....	....	....	....	17	12
Sweet corn, doz.	8	3	2,222	....	28	....	....	....	....	....	2,258	3
Tomatoes, bu.	6	6	....	111	....	....	....	....	28	26	34	143
Peas, bu.	4	1	17	17	24	....	....	....	....	....	45	18
Cucumbers, bu.	....	11	....	11	1	3	....	....	....	....	1	25
Beets, bunch.	....	322	....	83	....	....	....	300	....	....	....	705
Beets, bu.	9	8	17	17	21	14	1	4	56	....	104	43
Apples, bu.	139	28 (23)	117	78	500	667	5	....	134	....	895	773
Dry onions, bu.	....	178	....	650	....	406	....	72	....	578	....	1,907
Cabbage, cwt.	3	14	28	78	....	....	....	....	....	....	31	92
Strawberries, crts.	11	28	....	140	....	50	....	....	....	....	11	218
String beans, bu.	2	3	28	....	12	4	....	....	22	....	64	7
Parsnips, bu.	6	....	....	22	13	18	....	....	....	....	19	40
Celery, doz. bunches	....	11	....	83	....	22	....	....	....	....	....	116
Asparagus, bunch	....	....	....	67	....	....	....	....	....	....	....	67
Cauliflower, hds.	....	....	28	....	78	61	....	....	....	....	106	61
Carrots, bunch	....	27	....	1,333	....	....	....	300	....	....	....	1,660
Carrots, bu.	9	8	17	17	36	10	3	2	56	....	121	37
Spinach, bu.	....	....	....	33	....	64	....	....	....	....	....	97

* Figures for Dublin shown in parentheses.
† Data for Richmond not taken. Estimated here as duplicate of Fitzwilliam figures.

TABLE XX.—*Average cash outlay and cash receipts per farm by districts for year ending September 30, 1924.*

(For percentages, see Table IV)

Items.	District I.		District II.		District III.		District IV.		District V.	
	Cash Outlay.	Cash Receipts.	Cash Outlay.	Cash Receipts.	Cash Outlay.	Cash Receipts.	Cash Outlay.	Cash Receipts.	Cash Outlay.	Cash Receipts.
Labor	$147	$320	$256	$248	$159	$416	$161	$460	$111	$530
Fertilizer	23	....	17	....	12	....	5	....	10	....
Feed	372	....	426	10	388	7	244	117	326	28
Livestock	5	70	9	72	5	29	4	28	3	23
Dairy	94	485	34	1,004	25	934	37	383	38	504
Poultry	4	136	6	220	10	148	3	274	15	118
Wood	....	36	....	172	....	107	....	358	....	14
Vegetables and Fruit	....	97	....	77	....	103	....	147	....	95
Total	$645	$1,144	$748	$1,803	$599	$1,744	$454	$1,767	$503	$1,312

The smallness of the sample makes the possibility of error in these figures fairly high.

TABLE XXI.—*Inventory of dairy and beef cattle in Cheshire County, October 1, 1923 and 1924.*

District.	Dairy cattle.								Beef cattle.
	Dairy cows.	Heifers.	Other dairy cattle.	Number pure breds.	Number registered.	Number grades.	Number calves born.	Number calves died.	
I 1923	1,780	1,350	16	....	....	....	....	....	48
1924	1,730	1,440	130	11	25	3,264	1,510	....	19
II 1923	2,740	1,050	130	....	....	....	....	....	105
1924	2,420	940	290	33	....	3,617	2,080	22	89
III 1923	1,830	980	440	....	....	....	....	....	23
1924	1,900	1,040	520	48	21	3,391	1,770	31	23
IV 1923	760	500	320	....	....	....	....	....	105
1924	630	610	260	10	....	1,490	600	3	91
V 1923	1,460	460	210	....	....	....	....	....	250
1924	1,400	380	100	4	9	1,867	960	....	320
Total 1923	8,570	4,340	1,116	....	....	....	....	....	531
1924	8,080	4,410	1,300	106	55	13,629	6,920	59	542

Dairy cows show some decrease in number, while heifers show a slight increase. The principal decrease occurred in District II.

Beef cattle are not important in this county.

TABLE XXII.—*Production and sale of dairy products by districts for year ending September 30, 1924.*

District.	Number cows.*	Average amount milk produced per cow.	Total milk production.	Sales.						
				Quantity.			Value.			
				Whole milk.	Cream	Butter.	Whole milk.	Cream.	Butter.	Total return.
		Lbs.	Lbs.	Lbs.	Lbs.	Lbs.				
I	1,696	3,400	5,695,800	1,249,000	226,000	60,500	$30,800	$52,300	$30,600	$113,700
II	2,380	5,850	14,749,500	11,127,300	116,900	59,400	234,800	16,300	32,400	283,500
III	1,846	5,880	10,828,400	7,473,500	181,100	37,000	260,100	59,600	18,900	338,600
IV	550	4,700	2,558,900	208,500	3,700	64,700	11,900	500	32,200	44,600
V	1,430	5,240	7,237,100	3,840,800	31,400	37,500	126,200	6,500	16,700	149,400
Total	7,902	5,250	41,069,700	23,899,100	559,100	259,100	$663,800	$135,200	$130,800	$929,800

Whole milk constitutes the principal sales of dairy products in Districts II and III, where dairying is most important. In other sections a considerable portion of the milk is made into butter.

*The difference between this number of cows and the 1924 inventory is due to the method of determining average number of cows milking for an entire year.

TABLE XXIII.—*Total production, farm use and sale of dairy products, by quarters for year ending September 30, 1924.*

Quarter ending.	Total milk production.	Sales.			Family use.		Whole milk to stock.
		Whole milk.	Cream.	Butter.	Whole milk.	Butter.	
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Dec. 31, 1923	10,991,800	6,695,000	124,200	60,700	793,600	29,400	91,200
March 31, 1924	10,566,700	6,523,900	124,600	62,400	735,100	26,800	100,700
June 30, 1924	10,535,500	6,030,500	200,800	68,000	894,400	31,200	136,900
Sept. 30, 1924	8,975,700	4,649,800	109,500	68,000	402,200	389,900	147,700
Total of quarter	41,069,700	23,899,200	559,100	259,100	2,825,300	477,300	476,500

TABLE XXIV.—*Amount received from sale of dairy products by quarters for year ending September 30, 1924.*

Quarter ending.	Whole milk.		Cream.		Butter.	
	Total.	Cents per qt.	Total.	Cents per qt.	Total.	Cents per lb.
Dec. 31, 1923	$184,400	5.9	$29,500	47.4	$31,200	50.4
March 31, 1924	173,800	5.8	28,600	45.8	31,500	50.7
June 30, 1924	174,500	6.2	52,500	52.2	32,300	47.7
Sept. 30, 1924	131,100	6.1	24,600	44.8	35,800	53.0
Total of quarter	$663,800	(Av.) 6.0	$135,200	(Av.) 48.6	$130,800	(Av.) 49.5

Note.—Farm sales of cheese amounted to $1,860.
Whole milk sales constitute more than two-thirds of the total sales of dairy products

TABLE XXV.—*Inventory of poultry in Cheshire County October 1, 1923 and 1924, and production of chickens during the year.*

District.	Inventory.				Breed.		Production and mortality.		
	Hens.	Roosters.	Pullets.	Other poultry.	Purebred.	Grade.	Chicks hatched.*	Chicks died.	Poultry. died.
I 1923	4,750	1,920	8,460	340	....	....	....	....	....
1924	4,930	3,080	6,940	460	580	14,830	16,900	3,850	3,950
II 1923	12,830	2,960	10,440	170	....	....	....	....	....
1924	11,450	2,990	12,760	480	....	27,680	30,900	9,140	1,690
III 1923	7,660	4,310	10,790	540	....	....	....	....	....
1924	6,760	5,700	11,820	470	400	24,350	22,900	10,300	400
IV 1923	6,350	540	5,990	....	....	....	....	....	....
1924	5,050	1,450	7,420	....	930	12,990	19,900	3,680	130
V 1923	9,970	1,670	6,110	580	....	....	....	....	....
1924	6,740	1,580	8,720	2,140	70	19,110	32,000	9,490	770
Total 1923	41,560	11,400	41,790	1,630	....	....	....	....	....
1924	34,930	14,800	47,660	3,550	1,980	98,960	122,600	36,460	6,940

Most of the 14,800 roosters and 34,900 hens on farm October 1, 1924, should have been sold during the summer.
* Does not include day old chicks purchased by farmers in Cheshire County.

TABLE XXVI.—*Egg production and sales by districts for year ending September 30, 1924.*

District.	Number hens and pullets.	Eggs per hen.	Total eggs gathered. (Doz.)	Total eggs sold.	Price rec'd per doz.	Total value of sales.	Total value of eggs produced.*	Average value of eggs per hen.
			Doz.	Doz.	Cents.	Dollars.	Dollars.	Dollars.
I	12,540	89	92,600	74,500	42.4	$31,500	$39,200	$3.12
II	23,740	75	169,700	149,900	43.2	64,800	73,300	3.09
III	18,520	58	90,000	68,900	47.2	32,500	42,400	2.29
IV	12,400	116	120,300	98,800	45.3	44,900	54,500	4.46
V	15,770	75	98,600	51,700	47.3	24,500	46,600	2.96
Total	82,970	83	571,200	443,800	44.6	$198,200	$256,000	$3.09

* Total eggs gathered times average price for those sold.

TABLE XXVII.—*Egg production and sales by quarters for year ending September 30, 1924.*

Quarter ending.	Number eggs gathered.	Number eggs sold.	Price per dozen.	Amount received.	Eggs preserved.	Eggs used by family.
	Doz.	Doz.	Cents.	Dollars.	Doz.	Doz.
Dec. 31, 1923	74,200	59,400	70.4	41,900	....	14,800
March 31, 1924	201,100	160,500	38.4	61,700	2,380	40,000
June 30, 1924	197,500	155,200	37.1	57,700	1,560	42,300
Sept. 30, 1924	98,400	68,700	53.6	36,900	370	29,700
Total	571,200	443,800	(Av.) 44.7	198,200	4,310	126,800

Three-fourths of the farm sales of eggs were during the period from February to July inclusive. Prices of eggs at this time were little more than half the December price.

TABLE XXVIII.—*Inventory of sheep and swine in Cheshire County, October 1, 1923 and 1924.*

District.	1923.		1924.		1923.			1924.		
	Ewes.	Other sheep.	Ewes.	Other sheep.	Sows.	Boars.	Other hogs.	Sows.	Boars.	Other hogs.
I	30	....	13	....	130	16	480	110	16	320
II	1,390	310	1,040	310	54	..	520	16	..	330
III	....	....	....	....	80	11	440	210	11	370
IV	110	70	110	83	41	8	150	100	3	100
V	440	....	420	36	68	..	120	40	..	180
Total	1,970	380	1,583	429	373	35	1,710	476	30	1,300

The number of sheep in this county shows a decided decline during the year ending September 30, 1924.
Number lambs born during year ending September 30, 1924, was 1,160.
Number lambs died during year ending September 30, 1924, was 90.
Total number of hogs declined during the year ending September 30, 1924. Practically all of this decline occurred in Districts I and II.
Number pigs farrowed spring, 1924, was 2,350. Fall of 1924 was 1,210. Number died during year ending September 30, 1924, was 120.

TABLE XXIX.—*Number of apple trees and yield by districts for Baldwin, McIntosh and other varieties.*

District.	No. trees.		Yield per bearing tree.	Production.			
	Bearing.	Non-bearing.		Baldwins.	McIntosh.	Others.*	Grand total.
			Bbls.	Bbls.	Bbls.	Bbls.	Bbls.
I	1,800	1,140	1.01	570	....	1,240	1,810
II	5,490	3,630	.69	1,300	170	1,610	3,080
III	6,190	1,510	.43	890	60	1,720	2,670
IV	3,540	420	.97	190	....	3,250	3,440
V	12,000	1,930	.70	2,520	350	5,530	8,400
Total	29,020	8,630	.69	5,470	585	13,350	19,400

*This production of "Other" apples probably includes a considerable amount of Baldwin and McIntosh.