

POULTRY

An Appraisal of the Problems and
a Statement of Recommendations



One of 12 committee reports prepared by representative producers in cooperation with staff members of Oregon State College and other agencies. Adopted at the statewide agricultural conference March 27-29, 1952.



August 1952

Federal Cooperative Extension Service
Oregon State College
Corvallis

Foreword

A State Agricultural Conference was held at Oregon State College on March 27, 28, and 29, 1952, at which reports of 12 major committees were discussed and approved at public forum sessions. This publication contains the report of one of those 12 committees. Reports of the 12 committees are to be issued in the following publications:

Agricultural Relations	Oregon Agriculture 10
Dairy	Oregon Agriculture 11
Farm Crops	Oregon Agriculture 12
Farm Forestry	Oregon Agriculture 13
Fur Farming	Oregon Agriculture 14
Horticulture	Oregon Agriculture 15
Land Economics	Oregon Agriculture 16
Livestock	Oregon Agriculture 17
Poultry	Oregon Agriculture 18
Rural Life	Oregon Agriculture 19
Soil and Water Resources	Oregon Agriculture 20
Specialty Crops	Oregon Agriculture 21

The purpose of this state-wide conference was to take stock of the present situation in the agriculture and rural life of the state and to indicate probable trends and desirable developments over a period of years ahead. Members of the 12 committees were private citizens who were invited by the Extension Service to participate in this activity and who willingly donated their time and paid their own expenses to take part in a series of committee meetings during the year preceding the conference. It is felt that these reports contain the considered judgment of a representative group of citizens who carefully studied available facts in arriving at the recommendations presented. They are being published by Oregon State College as a public service for use by individuals and groups who may wish to consider these facts in planning their own future activities.

Statistical data have been checked by Extension Specialists in Agricultural Economics Information and are based on the most recent available reports of the U. S. Department of Agriculture, U. S. Department of Commerce and other sources deemed reliable.

F. L. BALLARD
Associate Director

Summary

Chickens

For several years Oregon has been consuming approximately one-fourth more market eggs than it has been producing. For this reason, the Committee recommended a gradual expansion in the production to bring market eggs in line with market possibilities. It is anticipated that the human population in Oregon will continue to expand. As it does, still more laying hens will be required to produce the eggs consumed in the state. Oregon's average egg feed ratio for the past ten years has been in a more favorable position than the average for the United States and most other regions.

The broiler industry in Oregon has been gaining rapidly. We probably consume about one-fifth more broilers than we produced in 1951. The Committee felt that there is room for about this much expansion. This could easily take place in one season. Broiler production in Oregon should probably level off in line with local consumption. The average chicken feed ratio for Oregon during the past ten years has been similar to the United States average including several of the main broiler producing areas. The Committee recommended that the financing of broilers be limited to the purchase of feed from day old until the birds are marketed.

Oregon has sufficient hatching capacity to take care of the present demand. As the industry increases, there will be room for some expansion in hatching capacity.

There has been a substantial shift from White Leghorns to heavy breeds in Oregon. This has been due mainly to the increased demand for hatching eggs. About 50 per cent of the laying hens in Oregon are White Leghorns and the other half heavy breeds, mainly New Hampshires and Rhode Island Reds. The Committee felt this is a good balance for the production of market eggs, hatching eggs and broilers. There is some interest in Crossbreds and a white meat type breed or strain.

Oregon is exporting approximately 150 carloads of hatching eggs per year. These eggs go mainly to California to produce broilers. To maintain this export business, a well organized Poultry Improvement Program is essential. The Committee felt that there is room for some expansion in the production of hatching eggs in Oregon. It was recommended that producers line up market outlets before mating up flocks and determine the difference between cost of producing hatching and market eggs.

The Committee recommended that flock owners adjust the size of their operation to one of three units: (1) small back yard flock of 25 pullets or less, (2) side line flock of 500 or more, and (3) commercial flock of not less than 2,500 laying hens.

It was recommended that producers use labor saving devices and replace from 75 to 100 per cent of their flock with a fresh supply of pullets each year. The pullets will lay from 25 to 30 per cent more eggs during the first year with a corresponding increase in income. It was further recommended that commercial producers hatch two or three groups of chicks per year to keep their laying houses filled to capacity.

Wheat has always been the main source of poultry feed in Oregon. The last few years it has been so high in price that the industry has been forced to use large quantities of corn and milo that must be imported from the Midwest. This means that our feed prices and cost of production are higher than the Midwest. The Committee went on record favoring the income certificate plan or two price system on wheat that has been proposed by the Oregon Wheat League. This would provide a lower price for feed wheat than wheat used for milling.

There are some definite advantages in a conventional type house 30 or 40 feet wide with a driveway down the center. It can be used for brooding chickens or turkeys, raising chicken broilers or turkey fryers, production of market eggs or chicken or turkey hatching eggs. This type of house can also be used for many other purposes such as sheep, cattle or hog barn or machine shed. The Committee recommended that plans be made available for this type of house made from rough lumber. This is a comparatively low cost house.

The Committee recommended that the industry maintain a balance between the three systems of marketing poultry products including cooperative marketing, private enterprise and individual initiative. Producers, wholesalers, retailers and consumers must continue to improve and maintain egg quality.

Although there is room for some gradual expansion in production of market eggs, hatching eggs and chicken meat, it was recommended that the industry should not be exploited. There are already too many unqualified people coming in and going out of the poultry business.

The Committee recommended that an Extension Veterinarian trained in poultry diseases, a Farm Management Specialist, a Poultry Marketing Specialist, and more County Extension Agents trained in poultry be added to the staff as vacancies occur and funds become available.

Turkeys

Oregon and the Pacific Coast are producing a large surplus of turkeys. The turkey feed ratio has been less favorable in Oregon and on the Pacific Coast compared with the United States and the Midwest average for the past few years.

The Committee felt that Oregon is well adapted for the production of hatching eggs and poults. The mild winters, early springs, cool summers, low altitude, good stock and well organized Turkey Improvement Program are some of our advantages.

To maintain 250,000 breeder hens that Oregon has been carrying the last few years, it is recommended that at least 1,500,000 market turkeys be raised for proper selection.

In 1951 the per capita consumption of turkey in the United States was $5\frac{1}{2}$ pounds. This was approximately 60 per cent higher than it was ten years ago. The Committee felt that turkey consumption will continue to increase. This means continued expansion in the turkey industry.

Inasmuch as Oregon and the Pacific Coast are producing a surplus, the Committee recommended that cost of production and available markets be taken into consideration before expanding or going into the turkey business. As the population and per capita consumption on the Pacific Coast increases, it will improve the outlook for market turkeys in this area.

At least 50 per cent of the hatching eggs and poults produced in Oregon are exported to various parts of the United States. There are about 40 turkey hatcheries in Oregon. Many hatcherymen also serve as egg brokers which makes it possible to assemble and export large quantities of hatching eggs. The Committee felt that Oregon is in a good position to compete for the hatching egg and poult market throughout the United States.

Most turkey growers in Oregon raise from 3,000 to 5,000 turkeys and carry over from 400 to 700 breeder hens. It was recommended that qualified growers carry breeder hens along with raising market turkeys to provide a year round program. The Committee recommended the production of Beltsville fryers or roasters as a side line to raising mature market turkeys where feasible. Cost of production should be considered and markets lined up before the poults are started. Turkey fryer and roaster production will be a major enterprise with some growers.

The raising of market turkeys on a year round program is already under way with Beltsville Small Whites. It was felt that this trend will continue with other breeds.

The Committee recommended that the industry or individual breeders develop more large master breeding flocks to continue to improve and standardize the quality of our stock. This will require the application of genetic principles through a pedigree breeding program.

It was recommended that the industry maintain a balance among three systems of marketing including cooperative marketing, private enterprise and individual initiative. It was further recommended that the financing of mature market birds be limited to the purchase of feed from 8 weeks until slaughtered, and from day old until marketed with turkey fryers or roasters to avoid undue expansion.

Chickens

Subcommittee Report

Oregon's poultry industry

The poultry industry in Oregon is one of the major agricultural industries. The gross income from chickens and turkeys has ranged from 18 to 45 million dollars annually for the past 10 years. It was \$50,331,000 for 1951. This does not include the income from turkey hatching eggs, poults, chicks, or the sale of chicken hatching eggs. Receipts from the sale of poultry and poultry products account for about 10 per cent of the total cash receipts from farm marketings. Approximately one third of this income is from turkeys and two thirds from chickens.

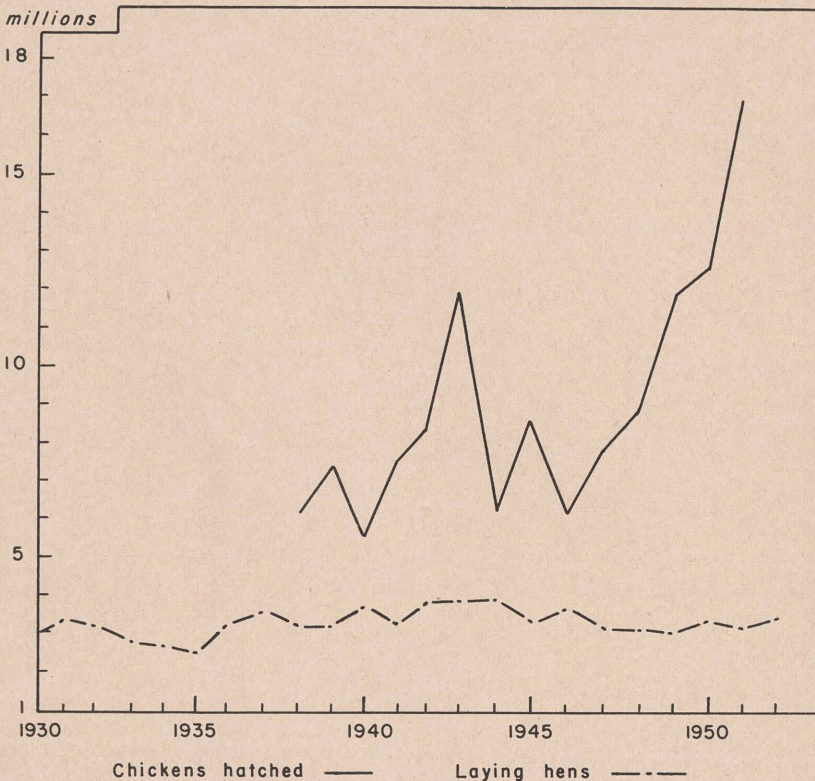


Chart 1. Laying hens on Oregon farms, January 1, and chicks hatched during year by commercial hatcheries.

From 1914 to 1920 the chicken industry in Oregon changed from an underproduced importing state to an overproduced exporting state. It remained on this basis until 1940. Oregon changed back from an exporting to an importing state of market eggs and chicken meat from 1940 to 1950. The main reason for this was the 40 per cent increase in human population during this decade.

The laying hen population in Oregon has not changed a great deal since 1930, with the exception of about a 20 per cent increase during World War II as illustrated in chart 1, page 7. Following the war, the industry cut back to about prewar level of production due mainly to high employment, high wages in other industries and high cost of feed. General farmers have also been able to make as much or more money in other lines of agriculture. The

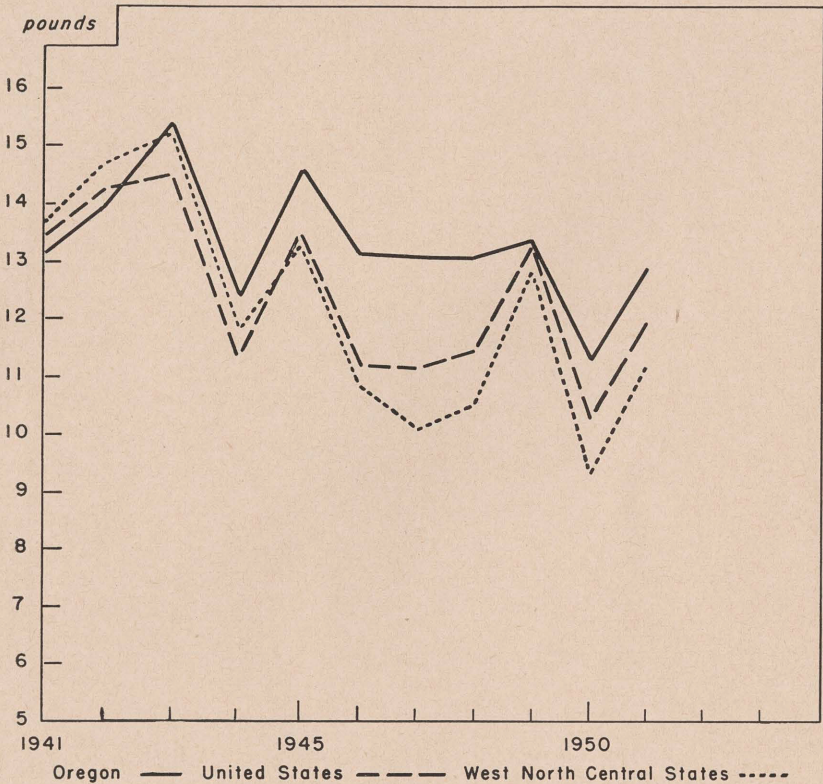


Chart 2. Egg feed price ratio: Pounds of feed one dozen eggs will purchase in Oregon, United States, and West North Central states.

number of laying hens in the state has ranged from 3 to 3½ million on January 1 since 1925, with the exception of the war years when it increased to four million.

For the past few years, Oregon has been consuming approximately 25 per cent more market eggs than we have been producing. For this reason, there should be room for a gradual increase in laying hens to supply the local demand. The markets are available in this area. It is anticipated that the human population in Oregon will continue to expand. As it does, still more laying hens will be required here or elsewhere to produce the eggs consumed in the state.

California and Washington are also consuming more market eggs than they are producing. Chart 2 shows the egg feed ratio for Oregon, the United States, and the West North Central States from

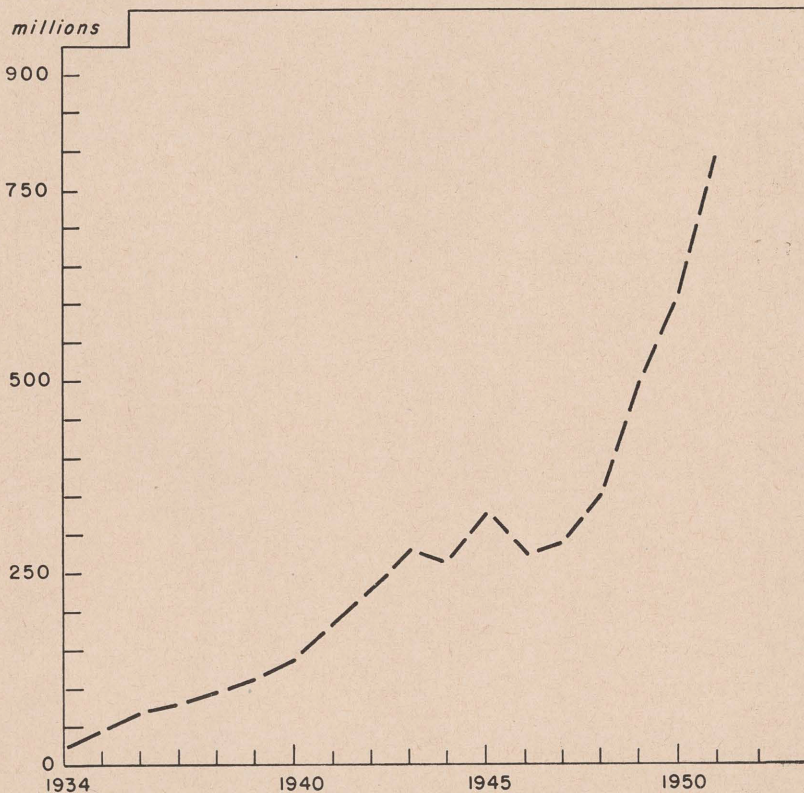


Chart 3. Number of broilers raised in the United States.

1941 to 1951. The egg feed ratio is the pounds of feed a dozen eggs will buy. It is used to measure the position of the industry one month or one year with another, by states or regions or the United States average. Chart 2 indicates that Oregon has been in a favorable position to produce market eggs.

Broiler industry

The progress made by the broiler industry is one of the outstanding developments in the history of American agriculture.

In 1934 less than 34 million broilers were produced in the United States. In 1951 there were approximately 774 million as shown in chart 3. It is estimated that there may be over a billion broilers produced in the United States by 1955. It could be sooner.

Approximately 50 per cent of the chicken consumed in this country at the present time is broilers. This increase has been brought

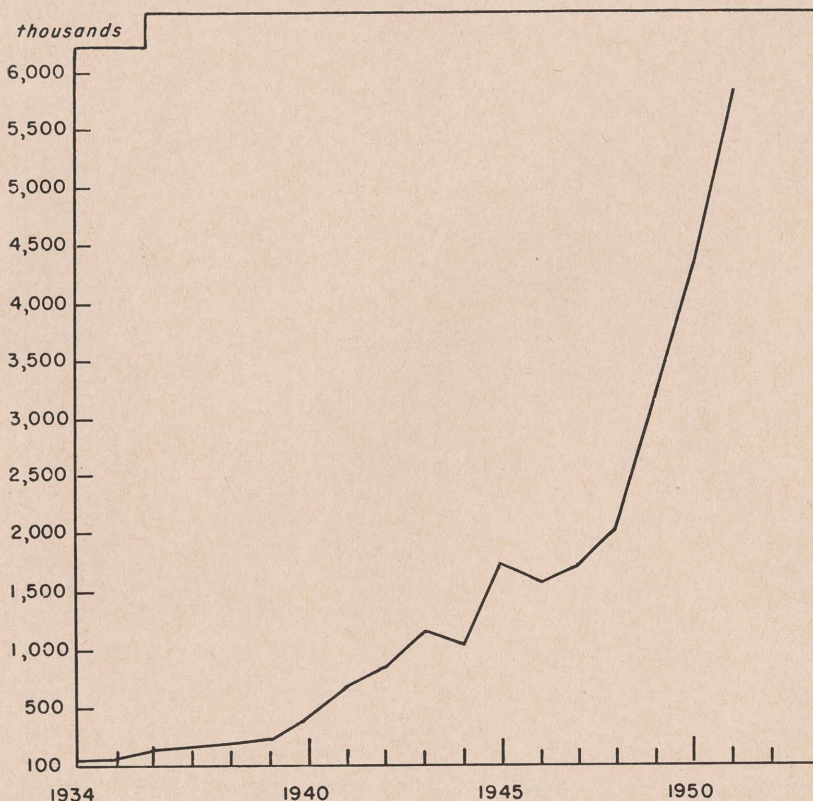


Chart 4. Number of broilers raised in Oregon.

about through improved breeding, feeding, management and marketing. The shortage and high cost of red meats have stimulated production especially during the past five years.

Ten years ago it required 12 weeks and about 12 pounds of feed to produce a 3 pound broiler. Today it is being done in 10 weeks or less with 9 pounds of feed.

The broiler industry in Oregon has been gaining rapidly also. In 1934 Oregon produced less than 120,000 broilers. In 1950 there were 4,336,000. In 1951 there were 5,854,000 raised as shown in chart 4.

This means Oregon consumed about 20 per cent more broilers than we produced in 1951 according to the national per capita consumption. There may be room for about this much expansion. This could take place in one year. Broiler production in Oregon should probably level off in line with consumption. It is doubtful if Oregon would be able to produce broilers for export with our high feed and labor costs. Chart 5 includes the chicken feed price ratio for Oregon, the United States and the North West Central States. The chicken feed ratio is the pounds of feed a pound of chicken will buy. Oregon is about average compared with these areas. The egg feed ratio is more favorable for Oregon producers than the chicken feed ratio.

Inasmuch as a new crop of broilers can be raised in 10 weeks, the price cycle is of short duration. There can be a surplus with low

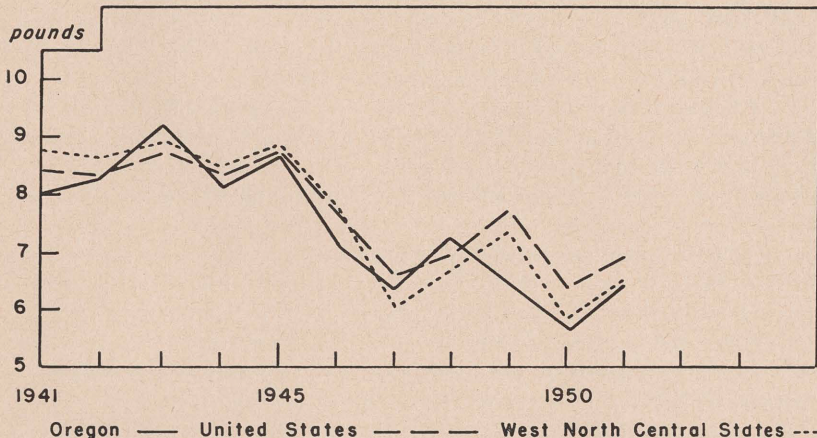


Chart 5. Chicken feed price ratio: Pounds of feed one pound of chicken will purchase in Oregon, United States, and West North Central States.

prices and three months later a shortage and high prices. Even during periods of comparatively high prices, the competition is keen and the margin of profit per bird is small. It will average less than five cents per pound if the birds are sold live weight. This means that a large volume must be handled to make a living.

The Committee recommended that financing of broilers be limited to purchase of feed from day old until the birds are marketed. In other words, the producer should own his land, plant, equipment and be able to purchase the chicks. It was also suggested that the producer or whoever is doing the financing should make certain that the broilers can be sold when they reach market finish.

Producers should investigate cost of production and available markets before starting a group of broilers. For several years the broiler market has been poor during the months of October, November and December. Hatcherymen should keep record of the weekly broiler placements and avoid setting eggs that will produce surplus chicks.

Hatchery industry

From 1925 to 1935 chicken hatcheries in Oregon had a rapid expansion. Along with this came the problem of pullorum disease control and the need for a state-wide poultry improvement program that was organized in 1935.

At the present time there are about 100 commercial chick hatcheries in Oregon and 40 turkey hatcheries. In 1951 Oregon hatched 16,800,000 chicks and the Committee estimates about 5 million poults. At least 50 per cent of the poults are exported. The number of chicks exported is comparatively small, probably 10 to 15 per cent.

The majority of chicks are hatched during the months of March, April and May as shown in chart 6. However, the hatching season is gradually becoming more of a year round operation. Chart 6 indicates that there have been from 250,000 to 500,000 chicks hatched each month from July to December during the past five years. As broiler production increases in this area, the number of chicks hatched the last six months of the year will gradually increase. This will mean more hatcheries operating on a year round basis.

There are a sufficient number of chicken and turkey hatcheries in Oregon to meet present demands. As the poultry population increases, there will be room for some hatchery expansion. The trend is toward breeder hatcheries where the flocks are under close supervision. The large mail order hatcheries are gradually passing out of the picture. The tendency is for hatcheries to be located in the area where the chicks are sold.

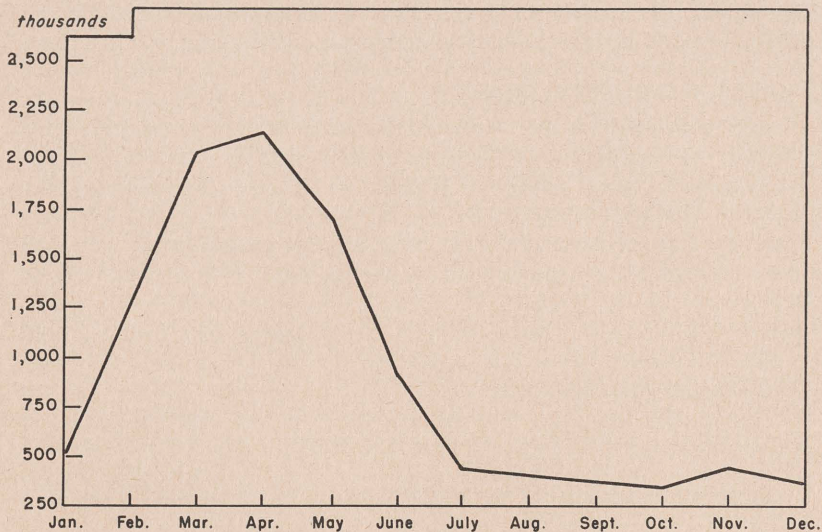


Chart 6. Chicks hatched in Oregon, by months, during the 5-year average, 1947 to 1951.

Shift in breeds

Fifteen years ago 85 per cent of the chickens in Oregon were White Leghorns. This has gradually changed until at present there are about 50 per cent White Leghorns and 50 per cent heavy breeds mainly New Hampshires and Rhode Island Reds. This change from White Leghorns to heavy breeds has been due mainly to the demand for hatching eggs for broiler production. For several years Oregon has been exporting well over 150 carloads of heavy hatching eggs to California which go to produce broilers. The New Hampshire is the most popular breed for broilers at present because they are fast growing, rapid feathering, and early maturing. There is some interest in crossbreds and in a white meat type breed or strain. There are some strains of Rhode Island Reds that have been on the increase for egg production. The production of hatching eggs has provided an additional market for Oregon eggs. Most hatcheries pay a premium from 20 to 25 cents per dozen for hatching eggs above grade A large price to retailer on the Portland market. Oregon is in a good position to compete for the hatching egg market on the Pacific Coast. We have room for considerable expansion in the production of hatching eggs. It was recommended that producers

line up market outlets before mating up flocks and determine the difference between the cost of producing hatching and market eggs.

Poultry improvement program

To maintain this export hatching egg business, a well organized poultry improvement program is essential. The Oregon Poultry Improvement Association was organized in 1935 and adopted the National Poultry Improvement Plan the same year. This program is designed to carry on official pullorum testing and flock selection under official state supervision in cooperation with Oregon State Department of Agriculture, the United States Department of Agriculture and Oregon State College. There have been from 350,000 to 450,000 chicken breeder hens participating in this program annually during the past eight years.

Since this program was organized, pullorum disease has been practically eliminated from all breeding flocks. There has also been

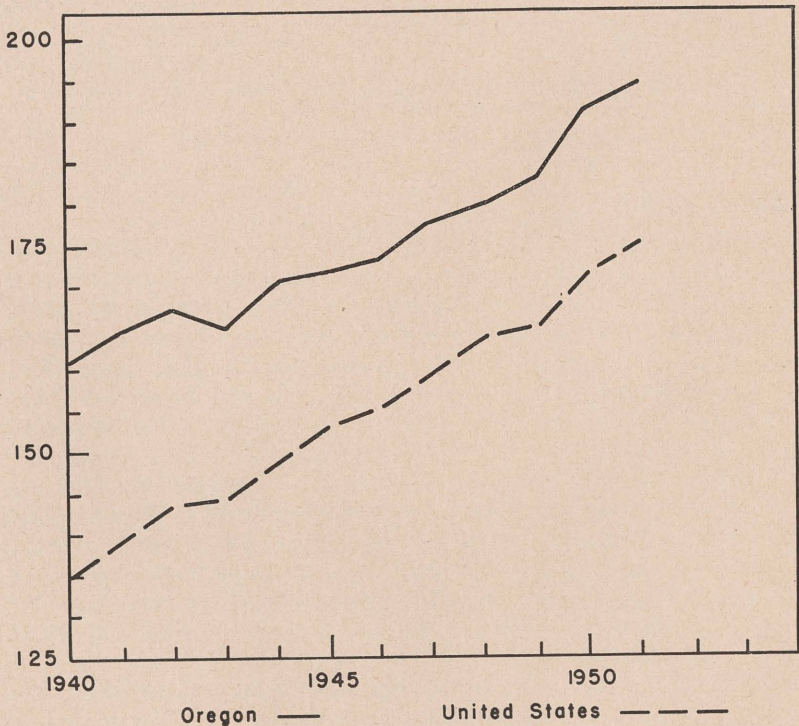


Chart 7. Average number of eggs per layer per year for the United States and Oregon.

a substantial increase in the average egg production in Oregon during the past ten years. For example, in 1940 the average production per hen in Oregon was 161 eggs. In 1951, the average rate of lay was 194 eggs as shown in chart 7. This was 19 eggs per hen above the national average as shown in the same chart. The average production can be still further increased by the use of well bred males, culling, selection, a higher percentage of pullets in the laying flocks each year, and more all-pullet flocks. The all-pullet flocks are more profitable for commercial egg production, especially with the heavy breeds.

Adjustment of flock size

One of our Extension poultry projects for many years has been the proper adjustment of the size of flock. This has an important bearing on obtaining economical production. Poultry producers should adjust their units to come under one of three classifications: commercial flock, side line flock, or the small family flock.

A poultryman who expects to derive his major source of income from chickens should develop a business unit of not less than 2,500 laying hens. The number will depend somewhat on the age and health of the operator and income needed to maintain a reasonable standard of living. The labor income in Oregon for the past few years has ranged from \$1.50 to \$2.50 per hen.

The general farmer or part time farmer who plans to supplement his cash income from chickens should have a side line flock of at least 500 laying hens. This makes the unit large enough to justify proper feed and care of the flock. With this size unit, sufficient eggs will be produced so they can be marketed twice a week in case lots which is an important item in maintaining quality. Poultry records indicate that this size unit is more economical than smaller flocks.

For the farm or urban family that just wants a family flock to supply them with what eggs and poultry meat they will consume, 25 or less fresh pullets each year will do the job.

The small family flocks often have a tendency to become too large and the side line flocks too small. Many commercial producers are also trying to make a living with units that are too small.

Poultry management

In poultry management, emphasis has been placed on labor saving devices and larger units for the commercial producer. Some labor saving devices that are being used and that have proved satis-

factory are deep litter, larger pens, mechanical feeders, mechanical egg cleaners and graders, automatic watering devices, bulk feed, feed and litter carriers and housing designed to be cleaned with mechanical equipment.

Producers should be encouraged to replace from 75 to 100 per cent of their flock with a fresh supply of pullets each year. Pullets will lay from 25 to 30 per cent more eggs during the first year with a corresponding increase in income. Producers are urged to brood two or three groups of chicks per year to keep their laying houses filled to capacity.

Producers should thoroughly investigate the advisability of purchasing untried mechanical equipment in their poultry management program. Many of these devices will prove practical while others will not. Some growers have a tendency to purchase labor saving equipment that is expensive and does not increase their carrying capacity.

Poultrymen should be encouraged to feed quality feeds. At the same time, feed manufacturers and producers should use cheaper grains such as milo and barley in poultry feeds when it is economical to do so. Wheat has always been the main source of poultry feed in Oregon. The last few years it has been so high in price that the industry has been forced to use large quantities of corn and milo that must be imported from the Midwest. This means that our feed prices and cost of production are higher than the Midwest. Oregon's poultry industry is in favor of the income certificate plan or two price system on wheat that has been proposed by the Oregon Wheat League.

There has been considerable interest in wire cages and wire pens in Oregon. This system of housing is still in the experimental stage. Additional information is needed on this type of house in comparison with the conventional type house. Field observations and experimental results indicate that wire cages and wire pens can be used in western Oregon. Laying hens in cages or wire pens do not lay as well during extremes in temperature as comparable birds in a good conventional type house. There are some definite advantages in a conventional type house 30 or 40 feet wide with a driveway down the center. It can be used for brooding chickens or turkeys, raising chicken broilers or turkey fryers, production of market eggs or chicken or turkey hatching eggs. This type of house can also be used for many other purposes. The Committee recommends that plans be made available for this type of house made from rough lumber.

Marketing

The industry should try and maintain a balance between the three systems of marketing poultry products including cooperative marketing, private enterprise and individual initiative. If poultrymen in Oregon are going to compete with producers from the Midwest, they must continue to improve the quality of their eggs and obtain reasonable enforcement of the Oregon Egg Law. Producers should be encouraged to have egg rooms equipped with humidified coolers and market their eggs at least twice a week. Wholesalers, retailers and consumers should be urged to keep eggs under refrigeration in a manner similar to that of meat and milk.

Industry should not be exploited

Although there is room for some gradual expansion in the production of market eggs, hatching eggs, and chicken meat, this does not mean that the industry should be exploited. There are too many in-and-outers in the poultry business. Most of this is the result of unqualified people wanting to retire to raise chickens. It requires capital, experience, and hard work to make a go of it.

Oregon has a large number of small farms. An efficient operator can make a good living on a small farm with chickens. There is a growing tendency by the commercial producers to raise their pullets in confinement. Experimental results at Oregon State College and field observations indicate that it can be done. This requires more investment in poultry buildings but less land.

Disease control

The Poultry Committee recommended that the College hire an Extension Veterinarian to assist with the poultry disease program. Poultrymen were urged to make more use of the poultry disease laboratory at Oregon State College and the regulatory facilities of the State Department of Agriculture to control poultry diseases.

Research

It was recommended that the Experiment Station work on current and basic problems in breeding, nutrition, incubation, housing, management, marketing, cost of production studies, utilization of poultry byproducts, poultry diseases, including health and sanitation. It was also recommended that research work be published and passed on to the industry as soon as possible after it has been completed.

Education

The following *suggestions* were made for an educational program:

1. That the Poultry Specialist continue to send out timely information through press, radio, and circular letters.
2. That at least two poultry meetings be held in the main poultry producing counties each year; one in the form of an all-day school during the fall or winter months to present up-to-date information, and a summer meeting to discuss current poultry problems including culling, egg grading, production and maintaining egg quality, and disease control problems. That additional educational programs be carried on through state-wide poultry organizations and the poultry short course at Oregon State College.
3. That an Extension Veterinarian and a Poultry Marketing Specialist be hired to assist with the poultry disease and marketing programs and that more County Extension Agents trained in poultry be added to the staff in the main poultry producing counties as vacancies occur and funds become available.
4. That a state-wide poultry record keeping project be inaugurated. It was agreed that this would require more time on the poultry project by county personnel and a Farm Management Specialist.

Turkeys

Subcommittee Report

Oregon's turkey industry

The turkey industry in Oregon has developed from a minor farm enterprise to one of the major agricultural industries during the past twenty-five years. The annual gross income from turkeys for several years has ranged from 15 to 20 million dollars. This includes sale from market turkeys, breeding stock, hatching eggs, and poults.

In 1930 there were slightly more than one-half million turkeys in Oregon. This number gradually increased each year until 1945 when over three million were raised as shown in chart 8. There was a substantial reduction in the number of turkeys raised in Ore-

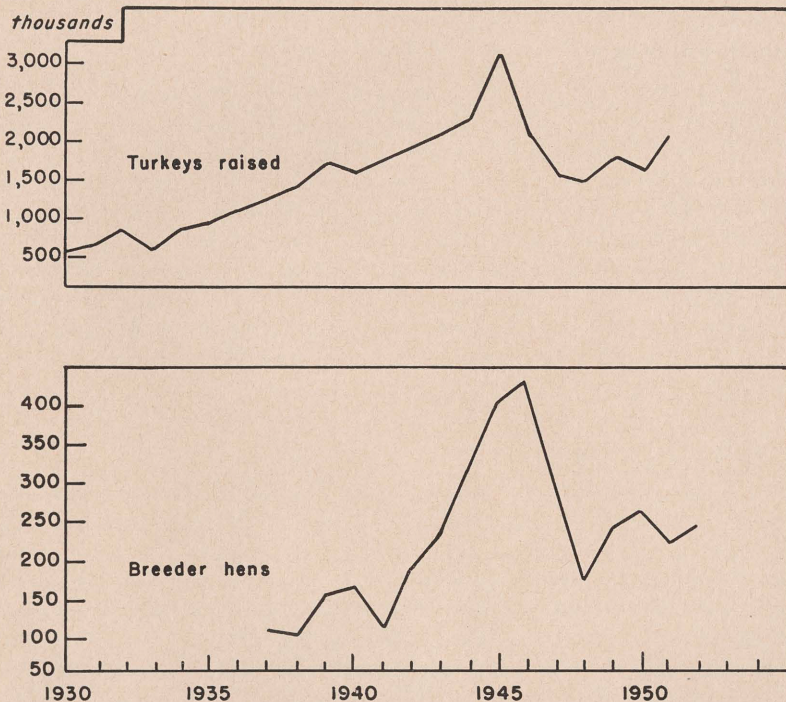


Chart 8. Number of turkeys raised during the year and the number of breeder hens on Oregon farms on January 1.

gon following World War II due to a shortage and high cost of feed and adjustment to peace time needs. The number raised the last five years has ranged from $1\frac{1}{2}$ to $2\frac{1}{4}$ million as indicated on chart 8.

Most of the turkeys in Oregon are raised by commercial producers in flocks from two to five thousand. A few raise from 10,000 to 20,000. The industry is intensified in the western part of the state throughout the Willamette Valley, including Douglas and Jackson counties in southern Oregon and Umatilla and Deschutes counties in eastern Oregon. There is no reason why turkeys cannot be grown in other counties if producers become interested and learn the business.

The majority of growers buy their poults from commercial hatcheries. However, many producers maintain breeding flocks, sell hatching eggs and have their eggs custom-hatched to produce their own poults. In addition, many hatcherymen maintain breeding flocks and carry on their own breeding program.

Shift in breeds

The large majority of turkeys raised in Oregon are the Broad Breasted Bronze. There has been some increase in the Beltsville Small Whites the past few years. There were approximately 20,000 Beltsville breeder hens in Oregon in 1951 and in the neighborhood of 250,000 as mature market birds. This would be about 10 per cent of the breeder hens and 10 per cent of the market turkeys. There will no doubt be some increase in the Beltsville turkeys in Oregon in the future. The Committee feels that Beltsville Small Whites are here to stay and have a definite place in Oregon's turkey industry. The hens weigh 7 to 8 pounds and the toms 14 to 15 pounds when mature.

Turkey fryers and roasters

During 1951 there were at least 150,000 Beltsville fryers and roasters produced in addition to the birds marketed at maturity. The raising of market turkeys on a year round program is already under way with Beltsville Small Whites. It was felt that this trend will continue with other breeds. The production of turkey fryers and roasters will be a side line to the raising of market turkeys and chicken broilers with many producers. Beltsvilles can be marketed and processed as fryers, roasters or finished market birds. Producers should investigate markets and cost of production before starting a group of turkey fryers or roasters.

Turkey improvement program

Oregon has been one of the leading states in the production and development of Broad Breasted turkeys. As a result there has been a large demand for hatching eggs, poults and breeding stock from various parts of the United States. Due to this increased demand for standardized Broad Breasted turkeys and for hatching eggs and poults from officially blood tested stock, a group of Oregon turkey breeders organized the Oregon Turkey Improvement Association in July 1940. The objectives of this organization were to improve and standardize turkey breeding flocks, to control and prevent the spread of pullorum disease under official state supervision, and to work for the general benefits of the industry. It has served as the one state-wide turkey organization since it was organized.

In 1944 the National Turkey Improvement Plan was adopted which was similar to the Oregon program.

In 1938 there were over 100,000 turkey breeder hens in Oregon. This number gradually increased to over 400,000 breeder hens in 1945 and 1946 as a result of wartime demand as indicated on chart 8. During the past few years, the number of breeder hens in Oregon has been in the neighborhood of 250,000 which is in line with present demand. At least 50 per cent of the hatching eggs and poults have been exported. Since the Oregon Turkey Improvement Association

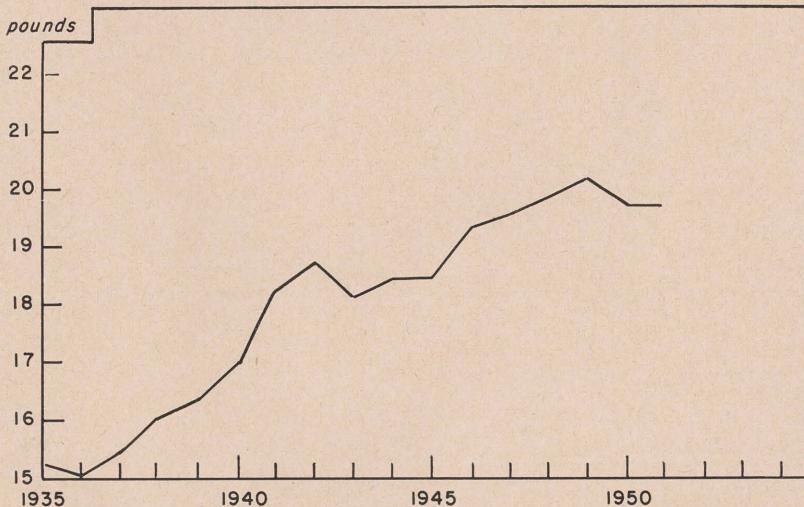


Chart 9. Average live weight (including both hens and toms) of Oregon turkeys.

was organized, rapid progress has been made in improving the quality of Oregon's Broad Breasted turkeys and controlling pullorum disease. For example, the state average weight of market turkeys, hens and toms, in 1936 was 15 pounds. The past two years they have averaged close to 20 pounds as shown in chart 9. This is about 2 pounds greater than the national average. As more Beltsville Whites are produced, the average weight of all turkeys will decline.

From 1940 to 1951, inclusive, 2,571,617 turkey breeder hens and toms have been tested for pullorum disease under the supervision of the Oregon Turkey Improvement Association. During this eleven year period the average per cent of reactors was .14 per cent (fourteen hundredths of one per cent) which is an outstanding record. All flocks participating in the Oregon Turkey Improvement Association must meet the standard of U. S. Pullorum Clean (no reactors first test) and Oregon U. S. Approved Broad Breasted, U. S. Certified, U. S. Record of Production or U. S. Approved. This is the sixth consecutive year we have maintained this exclusive standard.

The Committee recommended that the industry or individual breeders develop more large master breeding flocks to continue to improve and standardize the quality of our stock. This will require the application of genetic principles through a pedigree breeding program.

In order to further improve the quality of Oregon turkey breeding flocks, multiple inspections with at least 50 per cent of flocks examined each year was recommended. Turkey breeding flock owners and hatchery supply flocks should select closely for uniformity and early market maturity. At least three hens and ten toms should be available for selection for each breeder bird kept in an effort to maintain quality of stock.

Breeding flock owners participating in the advanced stages of the National Turkey Improvement Program should be encouraged in their efforts and urged to increase numbers of turkeys entered in the program. At such a time as R.O.P. flock improvement justifies, the commercial and hatchery flock supply owner should utilize R.O.P. males to head certified flocks.

Oregon produces a surplus

For the past two years, Oregon has been producing over one 20-pound turkey per capita. That is approximately three times more turkey than we will consume. In other words, at least 60 per cent of our present production must be exported mainly to eastern markets. California and Washington are also large exporting states.

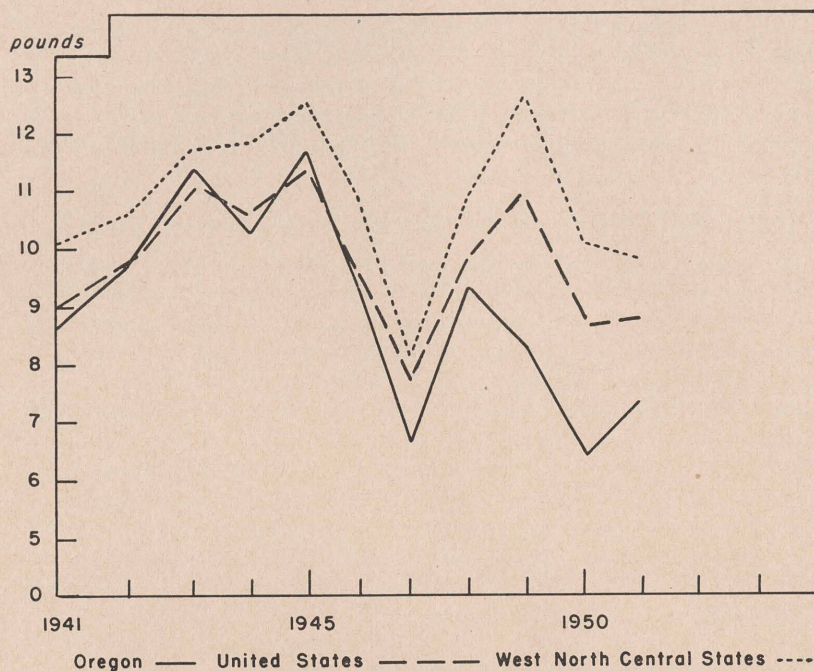


Chart 10. Turkey feed price ratio: Pounds of feed one pound of turkey will purchase in Oregon, United States, and West North Central States.

Most of the Oregon export turkeys go to eastern markets. It costs close to 5 cents a pound to put them on the New York market. It costs Midwest producers only $2\frac{1}{2}$ to $3\frac{1}{2}$ cents per pound. Their cost of production will also be somewhat smaller. Chart 10 shows the average turkey feed price ratio from 1941 to 1951 for Oregon, United States and the West North Central States. The turkey feed ratio is the pounds of feed a pound of turkey will buy at any given time. The turkey feed ratio is published each month by the Bureau of Agricultural Economics by states, regions, and United States average. Chart 10 indicates that the turkey feed ratio is less favorable for Oregon's producers compared with the United States and West North Central States.

These advantages of the Midwest are offset to a certain extent by better stock, climate, equipment and more commercial producers with technical knowledge.

Wheat has always been the main source of poultry feed in Oregon. The last few years it has been so high in price that the in-

dustry has been forced to use large quantities of corn and milo that must be imported mainly from the Midwest. This means that our feed prices and cost of production are higher than the Midwest. Oregon's turkey industry is in favor of the income certificate plan or two price system on wheat that has been proposed by the Oregon Wheat League.

Oregon well adapted to produce hatching eggs and poults

Oregon is especially well adapted for the production of hatching eggs and poults. The mild winters, early springs, cool summers, and low altitude are some of the natural advantages. As previously mentioned, the state is also well equipped with a turkey improvement program, breeders, hatcheries, processing, marketing facilities, and concentrated production. We should always be in a good position to compete for the hatching egg and poult market.

To maintain the 250,000 breeder hens that Oregon has been carrying the last few years, about 1,500,000 turkeys should be raised each year. The lower half of chart 8 shows the number of breeder hens carried over in Oregon from 1937 to 1951. Producers should raise approximately three hens and ten toms for each breeder they keep to provide sufficient selection.

United States per capita production

There were slightly less than 53,000,000 turkeys produced in the U. S. in 1951 which was 19 per cent greater than in 1950. This will provide about 5.5 pounds per capita. This is 60 per cent higher than it was in 1940. It is anticipated that turkey consumption will continue to increase. This means a continued expansion in turkey production. Inasmuch as Oregon and the Pacific Coast are producing a surplus, cost of production and available markets should be taken into consideration before expanding. As the population and per capita consumption on the Pacific Coast increase, the outlook will improve for market turkeys in this area.

Hatchery industry

Oregon has approximately 40 turkey hatcheries with adequate capacity for present demands. Approximately 50 per cent of the turkey hatching eggs and poults are exported to various parts of the United States. Many poults and some hatching eggs are shipped by air. Several turkey hatcherymen serve as egg brokers along with their hatchery business. This is desirable because the Midwest hatcheries that buy eggs in Oregon want to deal with an operator where they can obtain a large volume when they want it. One of the main

advantages that Oregon has in producing hatching eggs and poults is that the industry is highly concentrated and well organized on a commercial basis.

Management problems

The Committee was agreed that one man with the help he would ordinarily get from his family, could raise 3,500 market turkeys and carry over 400 to 700 breeder hens each year. This is considered an economic program for the average producer. Turkey growers are urged to carry breeding hens along with the raising of market turkeys to have a year round operation.

Labor saving devices should be utilized to provide greater economic returns. A minimum of one acre for every 100 turkeys maintained should be available with a two-year rotation system to avoid soil contamination. Sod pastures and the use of green feeds are recommended to save feed and help keep the breeders out of the mud during the fall and winter months.

Growers are urged to provide shelter for their breeders during the fall and winter months. Breeder hens that start to lay early in the season are the most profitable.

Marketing

A balance in marketing of market turkeys and hatching eggs including cooperative marketing, private enterprise, and individual initiative is desirable. Stricter supervision of grading and inspection of turkeys was recommended with enforcement of laws and regulations. The evisceration of turkeys is gradually increasing. The Committee felt that in the near future practically all turkeys would be fully drawn ready for the oven or cut up ready for the pan.

Credit

It was recommended that individuals contemplating entering the turkey business be in a sound credit position before starting. Those requiring credit should be encouraged to obtain financing from a regular credit agency. Loose credit by feed companies, hatcheries and processors should be discouraged. The Committee feels that credit should be limited to the purchase of feed from 8 weeks until the birds are ready for market.

Disease control

It was recommended that more assistance in disease diagnosis and supervision of disease outbreaks be made available to turkey growers. The Committee went on record favoring hiring an Exten-

sion Veterinarian trained in poultry diseases. Growers are urged to make more use of the poultry disease laboratory for diagnosing diseases and also the facilities of the State Department of Agriculture for enforcing disease regulations. It was also recommended that there be continued close cooperation among the industry, State Department of Agriculture and Oregon State College in controlling disease outbreaks.

Research

It was recommended that the Experiment Station work on current and basic problems in breeding, nutrition, incubation, housing, management, marketing, utilization of poultry byproducts, cost of production studies, turkey diseases, health and sanitation. It was further recommended that the research work be published and made available to the industry as soon as possible after it has been completed.

Education

The following *suggestions* were made for an educational program:

1. That the Poultry Specialist continue to send out timely information through press, radio, and circular letters.
2. That at least one turkey meeting be held in the main turkey producing counties each year. That additional educational programs be carried on through Oregon Turkey Improvement Association.
3. That the Extension veterinarian and a poultry marketing specialist be hired to assist with the poultry disease and marketing programs.
4. That more County Extension agents trained in poultry be added to the staff in the main turkey producing counties.
5. That a state-wide turkey record keeping project be inaugurated. It was agreed that this would require more time by county personnel on the turkey project and a farm management specialist.
6. That additional emphasis be placed on consumer education for turkeys as to grade, evisceration, broilers, and cut-up turkey.

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