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6-1-1929

# Marketing of Poultry Products

G.L. Stevenson

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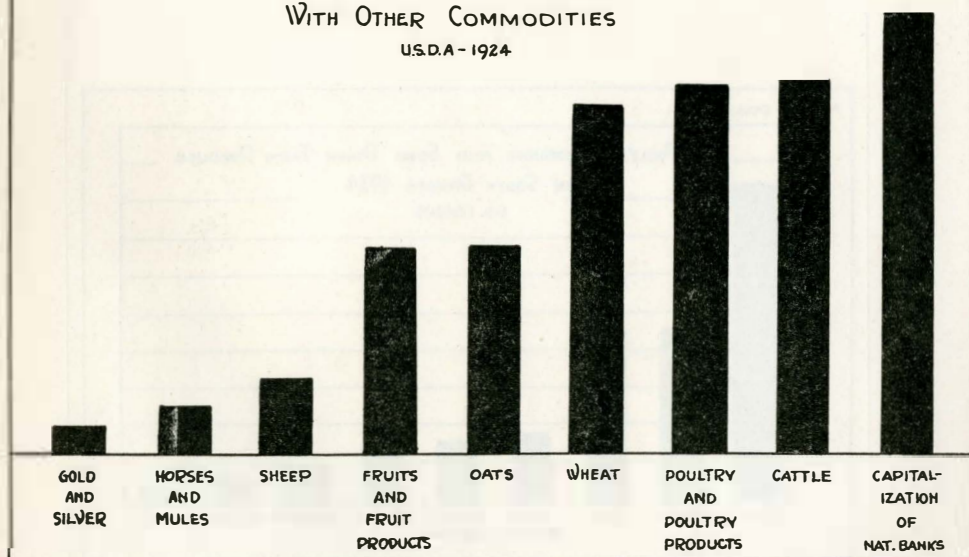
### Recommended Citation

Stevenson, G.L., "Marketing of Poultry Products" (1929). *Bulletins*. Paper 243.  
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# Marketing of POULTRY PRODUCTS

COMPARISON OF VALUE OF POULTRY AND POULTRY PRODUCTS  
WITH OTHER COMMODITIES  
U.S.D.A - 1924



POULTRY DEPARTMENT  
AGRICULTURAL EXPERIMENT STATION  
SOUTH DAKOTA STATE COLLEGE OF  
AGRICULTURE AND MECHANIC ARTS  
BROOKINGS, S. D.

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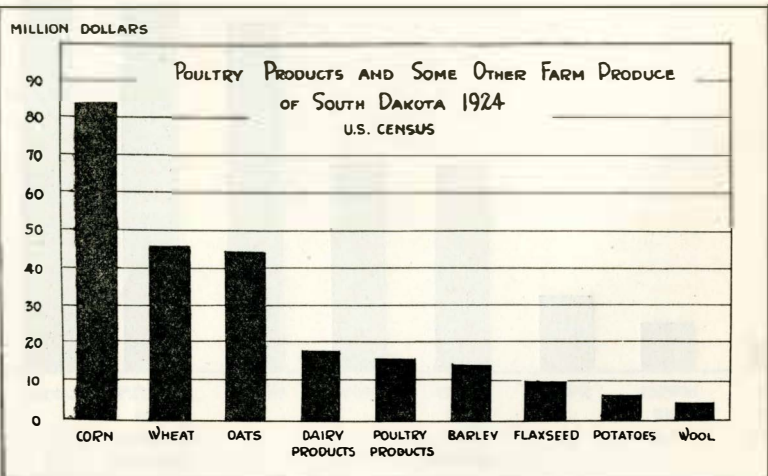


Fig. 1—A comparison of value of poultry products in South Dakota with some other farm products.

# MARKETING OF POULTRY PRODUCTS

By G. L. Stevenson

Poultry products are more generally produced than any other farm commodity. According to the 1925 Agricultural Census, nine out of ten farms have chickens and in South Dakota the percentage is even larger. Eggs have been for generations and are still a common medium of exchange. Every day, eggs are being bartered for groceries and other necessities of the farm home. The industry has grown remarkably in the past quarter century. At present it ranks fifth in value to the American farmer, a billion and a quarter industry. The consumption of poultry products has increased more rapidly than the population. In 1879 the per capita production of eggs was approximately 9.4 dozen compared with 16.6 dozen in 1925, an increase almost two times as great as the population increase.

According to the South Dakota Department of Agriculture, the poultry income of the state runs well over twenty-five million dollars per year—our fifth greatest agricultural income producer. Not long ago, this great industry was regarded by most farmers of this state merely as a home source of food or pin money for the women and children. The new appreciation for poultry has grown out of better knowledge of the efficiency of the farm hen in turning more or less low cost or waste feeds into a substantial income. They have been the means of tiding over many a hard pressed family through the financial storms and stresses of the past decade.

Most of the poultry marketed in South Dakota is sold alive to local buyers or produce houses. Much of it is trucked into the larger centers and there loaded into live poultry cars for sale in Chicago and Eastern markets. Some of the larger houses hold the stock for feeding for a time. The distance to market, heavy transportation charges and disease risks make the handling of live poultry a decidedly speculative proposition. The bulk of the market demand for live poultry comes from the Jewish trade which generally demands heavy, well fed fowls. The general criticism of South Dakota stock is that there are too many light weight, poorly conditioned or diseased birds. Because of this fact, a considerable percentage of stock is rejected or condemned in the terminal markets.

## Direct Shipments versus Local Marketing

To ascertain the advantages or disadvantages of direct shipments of live poultry, the poultry department has for the past three years made up selected lots of light and heavy fowls in season for the Jewish holiday trade. These lots were shipped by express to Chicago, the chief poultry marketing centers for this section, and at the time of shipment a check sale of this stock made in the local market. After deducting express charges, in no case was there any encouraging margin over local prices and in several shipments there were actual losses. The shrinkage on live shipments often exceeded 10 per cent and on milk fed young stock as much as 25 per cent. Local prices are often discouragingly low on live poultry but small scale direct shipping does not seem to offer



much betterment. The heavy shrinkage and high transportation costs stand in the way of possible margins even on selected quality stock. It would appear that the small shipper must choose between selling locally or marketing his poultry dressed.

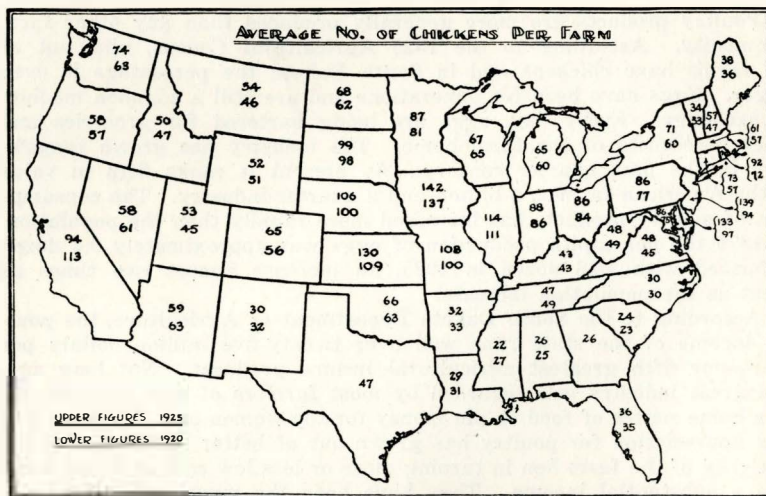


Fig. 2—This map shows the average number of chickens per farm in the various states. South Dakota ranks well up in this respect.

The poultry department has shipped considerable dressed poultry in the past few years to this same market during the winter months and has obtained good margins of profit over local markets. The stock was dry picked, graded and packed in small barrels. The net returns gave gains varying from 5-20 per cent on fowls up to 40 per cent on dressed capons. Local markets as a rule do not give much consideration to capon stock and in order to realize proper returns one must seek large central markets. There is a big problem in marketing dressed broiler stock in that shipments would have to be iced.

Since the war the farm price of chickens has tended toward relatively higher levels than before. The price increases in poultry have been relatively greater than retail prices of commodities farmers buy indicating to some extent increasing profits in selling poultry for market. Poultry prices are distinctly seasonal being highest in late spring and lowest in the late fall months when the great bulk of the farm surplus is just on market. It was found that better prices ruled where hens were marketed early in September than when sold in November. Culling is best done in late August or early September and then the culls may be disposed of generally to better advantage.

#### Egg Marketing

The level of Egg prices has been lower relatively than the price of chickens; that is, there has been in general more improvement in meat prices than egg prices. In the marketing of eggs South Dakota has made very little improvement. Most of the output is still sold or bart-

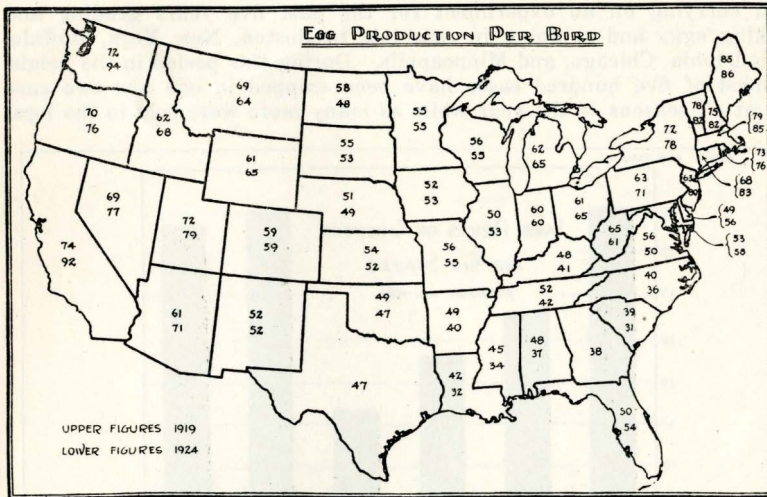


Fig. 3—This map shows the egg production per bird in the various states in 1919 and 1924.

ered to local merchants or store keepers who re-sell to local produce houses or to truck drivers for central buying houses. The truck pick-up system has brought about considerable improvement in egg quality since gathering is more frequent and delivery in the shipping centers more rapid than formerly. Local merchants dislike to handle eggs but feel that they must do so to keep their trade. Competition is usually very keen and to get the trade, eggs are often handled at a loss. This is especially true in the spring when the market is weak and declining and drops in price are frequent. This system of buying is bad for the merchant and worse for the producer. It tends to put a premium on low quality in that the inferior product commands as good a price as the best. There is no incentive to produce a superior article. Several attempts have been made to establish a system of buying eggs on grade and in some localities encouraging progress was made. In general the movement collapsed and return was made to the "take them as they run" basis largely because of the keen competition for trade among the store keepers and the over-reaching of the local produce houses. They were slow to return a fair share of the premium on higher grades to the producer. No doubt the poultryman was at fault to in having unreasonable expectations in the way of rewards.

#### Shipping Direct

Cooperative handling of poultry products has not met with much success in the state. Apparently it requires control of a large volume of business and efficient and skillful management to carry on such movements. Under present conditions about the only avenue left open for the poultryman who is ambitious to produce a superior article is to market his product directly in the large consuming centers. With the purpose of demonstrating what might be done along this line, this station has

been carrying on an experiment for the past five years grading and packing eggs and shipping in case lots to Boston, New York, Buffalo, Philadelphia, Chicago, and Minneapolis. During this period in the neighborhood of five hundred cases have been shipped in one and two case lots at all seasons of the year while as many more were sold in the local

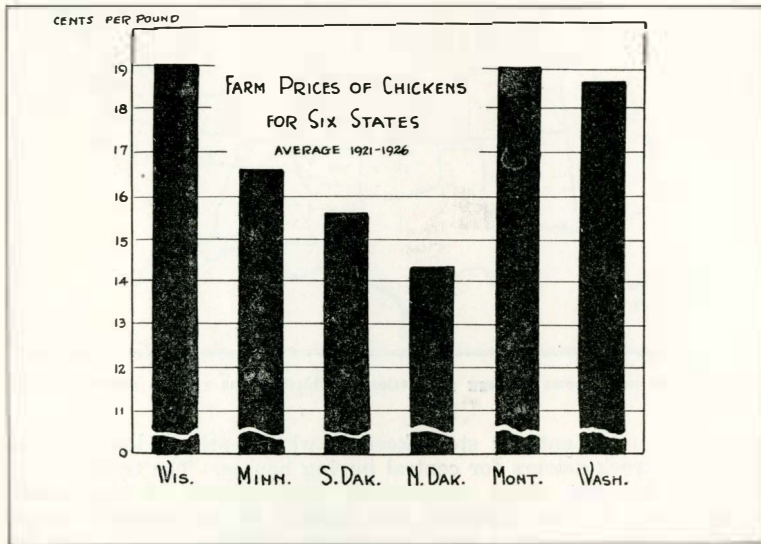


Fig. 4—A comparison of the farm price of chickens in six states. Prices in South Dakota ran considerably better than in North Dakota, but below these of Minnesota, Montana, Washington and Wisconsin.

market for a comparison. These eggs were consigned to buyers catering to select trade in the cities indicated. An investigation was made of the financial standing of each buyer before shipment was made. (This is a very necessary precaution as fly-by-night-concerns are common and in dealing with them one has no recourse in case of fraud. New York now has a bonding system which protects shippers who sell through bonded houses.)

During this period some net profit was obtained on eggs marketed in Eastern markets in every month except March, April and May. During these spring months, egg production reaches its peak and all markets tend to reach a more or less common low level, the differential equaling approximately the difference in transportation costs. At this season the transportation on single case lots offsets any possible margin of profit. By June, however, the supply decreases and the more sensitive eastern markets tend to work upward while the local prices lag behind. From this time on the margin of net profit gradually increases until it reaches a maximum in November or early December and then recedes gradually until the low spring levels are reached. On shipments to Minneapolis and Chicago returns were not encouraging—the prices ranging but little higher than Brookings. Generally the price received merely allowed margin enough to cover transportation costs and nothing for grading.

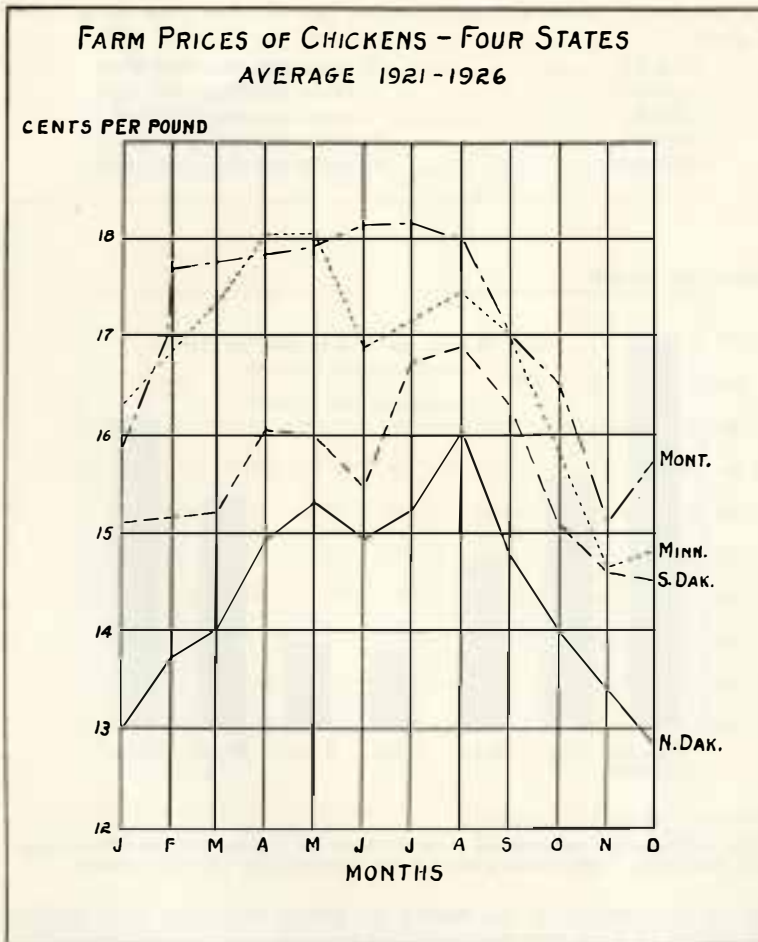
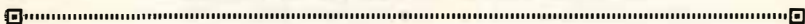


Fig. 5—The average trend of farm prices of chickens during the 12 months of the year is shown in this chart. Note the peak in South Dakota is reached in August and the low point is in December.

Apparently local markets are based largely on Chicago quotations. During the year 1925-26, egg buyers in the state put on a campaign to buy eggs on a grade basis and held to it through the year. But the defection of the local store keepers and breakdown of the cooperative egg marketing efforts undermined the structure and there was a general collapse with the return to the old case count or average quality price system. Consequently a lower cost of prices for producers of better quality stock. In this brief period local prices on quality products approached quite closely that of the best eastern markets and there was little or no premium obtained on shipped eggs—the maximum margin being only four





cents per dozen. Maximum net margins for the five year period were as follows:

1923-24-----	22 cents per doz. over local
1924-25-----	12 cents per doz. over local
1925-26-----	4 cents per doz. over local
1926-27-----	17 cents per doz. over local
1927-28-----	18 cents per doz. over local

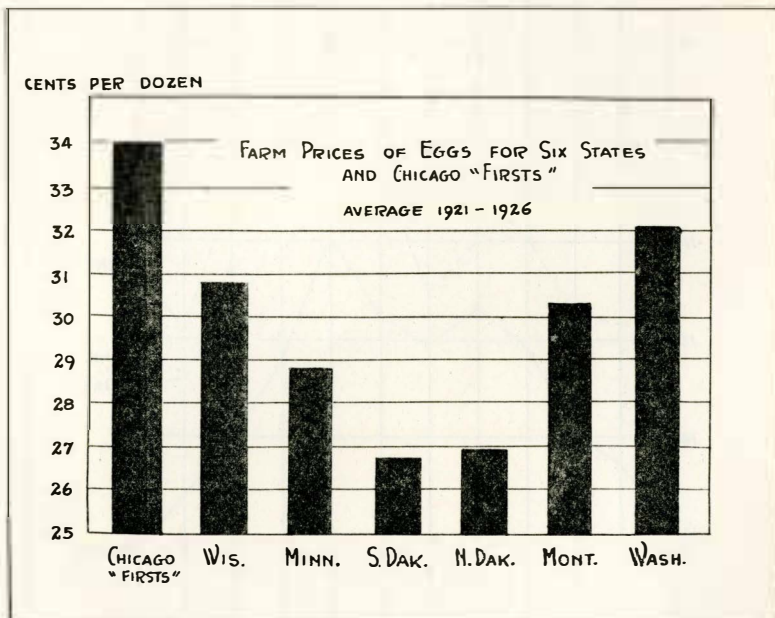


Fig. 6—This chart compares the price of "firsts" at Chicago with the price of eggs in several states. South Dakota prices are low in comparison with other states.

Since the failure of the buying on grade effort the local markets have tended to drag and the margin or premium on shipped eggs apparently tends to increase.

All eggs marketed were packed in ordinary thirty dozen cases with excelsior pads at the bottom, next to the top and on top. This requires six pads for each thirty dozen case. In general ordinary straw board flats and fillers were used. The cup flats have been utilized more in the past year as they seem to reduce breakage somewhat. Losses from breakage, at one time considerable, have been greatly reduced in the past few years probably due to better express handling. Eggs for Eastern marketes should be as fresh as possible. In warm weather holding over two to three days causes considerable deterioration unless held in a cool, fairly moist place. In cooler weather, eggs may be held for as much as a week or more before shipping. Eggs come more slowly in the winter season and where the farm flock is not large it may require several days output to fill the regulation case. Next to freshness, eggs

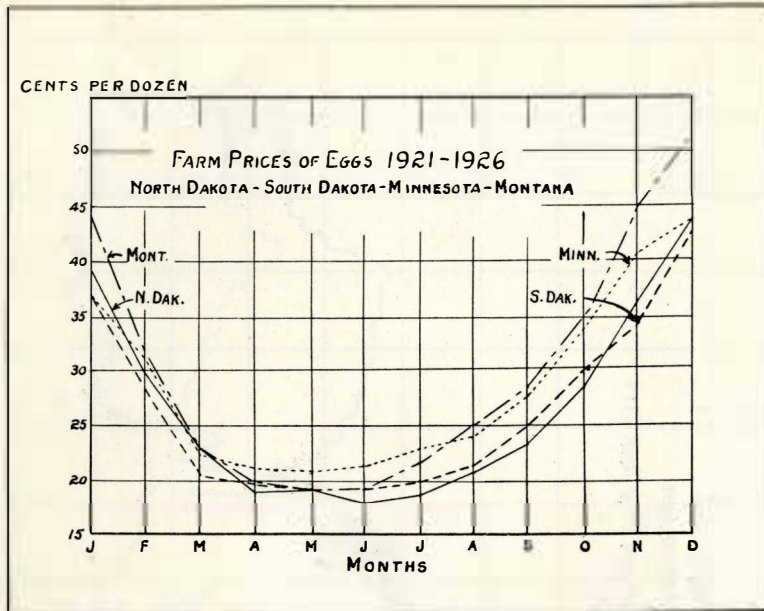


Fig. 7—Egg prices by the month in four states. In South Dakota, the peak in egg prices comes in December with the low point in April and May.

should be of good size—the standard weight being 24 ounces to the dozen or 45 pounds net or 57 pounds gross to the case. Clean eggs is the prime requisite. Soiled eggs may be wiped clean with a damp cloth but very dirty eggs cannot be cleaned well without washing and this tends to hasten deterioration in quality. A good quality pack of eggs necessitates color, grading, uniform size, normal shape and firm dense shell structure. The New York market prefers white shelled eggs and will generally pay a premium of 2-5c over brown eggs, while the Boston market prefers brown eggs and will pay a like premium for them.

In the spring and summer months it is generally advisable to candle eggs if not sure of quality as one bad egg might spoil the shippers reputation for quality. Candling will detect checks, blood clots, meat spots, developing embryos, staleness and enlarged air cells. South Dakota eggs do not have a very favorable reputation in the wholesale markets. They run high in undersize, dirties and heavily evaporated and heated eggs, especially in the warmer months. The size of the egg may be built up by selection of better breeding stock and by better methods of feeding and growing the layers. A large percentage of the dirties may be avoided by keeping nests and houses cleaner and better supplied with litter. Yards or runs should have better drainage and eggs gathered oftener. The small rainfall in this section, especially in the summer months, makes for a dry atmosphere which causes rapid evaporation from eggs and the large air cells which usually are associated with stale eggs. Some of this may be avoided by frequent marketing or by better

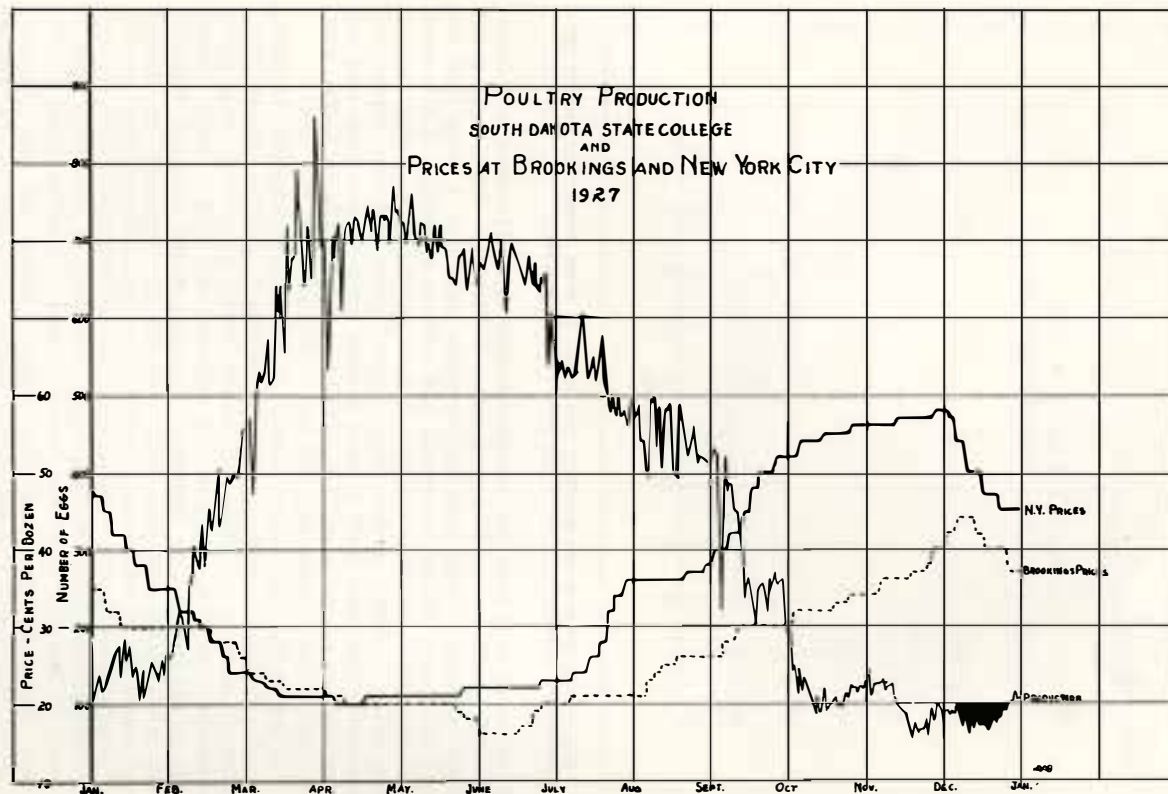


Fig. 8—This chart shows a comparison of production by months of the State College poultry flock with the prices of eggs at Brookings and New York City. Note that when production is highest, the prices are inclined to be low.

storage facilities, but this will doubtless always remain as something of a handicap.

Fertility in eggs is responsible for most of the summer losses. Such eggs will start germination at summer temperature and may even grow a fair sized chick before they reach the egg buyer. After the breeding season, there is no reason for turning roosters in the flock. By removing them practically 25 per cent of the summer eggs now go to the dump might be sold for human consumption. The following rules will greatly improve the market quality of South Dakota eggs:

#### TEN RULES FOR IMPROVING MARKET QUALITY OF EGGS

1. Keep healthy vigorous stock and give it good care.
2. Provide plenty of clean nests.
3. Gather eggs at least twice daily.
4. Keep eggs in a cool place.
5. Use unmarketable eggs at home.
6. Market eggs twice a week or oftener in summer if possible.
7. Grade eggs for uniformity of size, shape and color.
8. Pack eggs according to express requirements.
9. Standard bred chickens improve quality of product.
10. Build up a reputation for quality product.

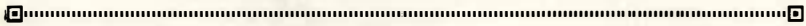
#### Preparation for Market

If farm hens have the run of the corn cribs, they may be fat enough for market. However, many farm fowls which have been compelled to shift for themselves will generally respond to special feeding methods. Crate or pen fattening may be used but the latter method is more practicable on farms. The idea is to restrict the bird's activity at the same time furnishing a ration rich in fat producing elements.

Corn and milk in some form make up the basal portion of most fattening rations. Corn meal and wheat middlings wet with skim milk or buttermilk so that it will pour from a pail is commonly fed in troughs two or three times daily. Corn or corn and wheat may be fed once or twice daily alternating with the wet feed. This intensive feeding is generally carried on for ten days to two weeks before marketing the stock. Broilers may be finished off the same way but turkeys do not stand confinement feeding very well and get off their feed quickly. Ducks and geese as a rule do not need a special feed other than access to what corn they will eat. With the special feeding as indicated, this station has been able to increase the weight 25 per cent or better in a ten day period on broilers, using four pounds of feed for one pound of gain. Capons gained 12 per cent under the same conditions.

Dressed poultry is generally scalded or dry picked. Scalding brings out the yellow color in yellow skinned fowls. Unless carefully done, it is apt to over-heat or cook certain areas and make a blotchy carcass. Scalding, for this reason, is not well esteemed and for choice stock or for stock intended for storage the dry picking method is preferred.





This is done by suspending the bird by the legs in a shackle and holding the head in the palm of the left hand with one finger forcing the mouth open. The knife is then inserted in the mouth and a diagonal cut made to sever the jugular vein. As soon as free bleeding starts the knife blade is reversed and thrust up through the groove in the roof of the mouth just back of eyes, and into the brain. When the brain is struck the bird will give a squak and a convulsive struggle. The shock causes a loosening of the muscles which hold the feathers so that they come out easily if the braining is properly done. One difficulty with the beginner is allowing the bird to bleed until it is unconscious before the brain is struck and the shock effect is lost.

A modified method of scald picking known as the "slack scald" is coming into more common use. With this method the bird is stuck and bled and then plunged into water at a temperature of 125-130° F and held there for about a half minute to a minute. They are then hung up and picked, as in dry-picking. This method takes longer than the full scald, but generally less time for dry picking. It gives almost as fine appearing carcasses as with the latter method. The slack scald does away with the blotching and cooking effects of over-scalding and gives a better keeping quality in cold storage.

All dressed poultry should be chilled as soon as picked. The old way was to plunge them in cold water for a period. This method plumps and improves the appearance but the stock does not keep as well. Dry chilling is now preferred.

In the warm months, dressed poultry should be packed in barrels or boxes with alternate layers of cracked ice; but as ice is not generally available, summer shipping of dressed stock is not common with South Dakota poultry producers. During the colder months, no icing is necessary as a rule. The birds, after cooling, should have their heads cleaned and wrapped, and packed in layers in barrels or boxes. Box packing is now more generally used. Birds are packed either breast or side pack; that is, with breasts or sides uppermost and usually a dozen birds to a box. The inside of the box should be lined with strong paper and paper should be placed between layers of birds if double layers are packed. All stock for shipment should be undrawn.

Ducks are dressed either by dry picking, scalding, or steaming. The dry pick method is preferred on account of the value of the feathers. Geese are usually handled in the same way. To remove the down, the birds may be covered with melted paraffin or resin powder and then dipped in hot water.

Turkeys are started on a fattening ration about October 1. The common practice consist of feeding a grain mixture of wheat and oats at first and gradually changing to corn until this makes up the full diet. The grain is fed sparingly at first and gradually increased until about a week before marketing when they are given all they can eat. New or soft corn should be avoided and turkeys should not be closely confined. Most turkeys are marketed alive but where it seems profitable to do home dressing they should be dry picked and handled the same as chickens.