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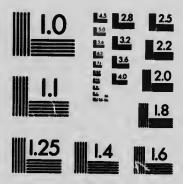
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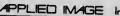
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# BULLETIN No. 25

# DEPARTMENT OF AGRICULTURE SASKATCHEWAN

# Fleshing Chickens for Market

W. A. Wilson

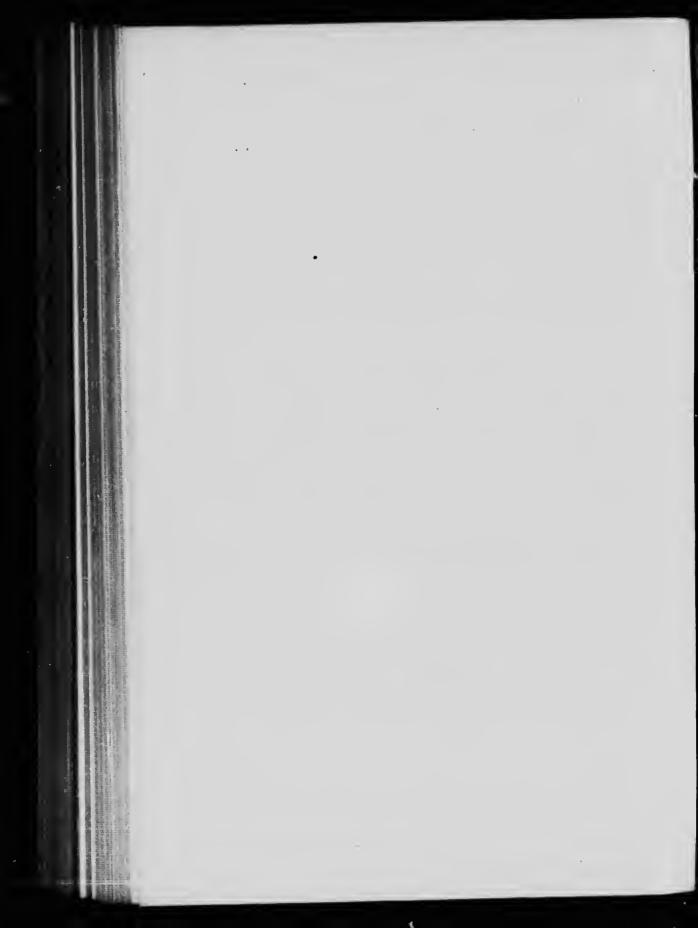
PUBLISHED BY DIRECTION OF THE HON. W. R. MOTHERWELL, MINISTER OF AGRICULTURE



REGINA

JOHN A. REID, GOVERNMENT PRINTER

1911



Hon. W. R. Motherwell, M.L.A., Minister of Agriculture.

SIR,-I have the honour to submit for your approval Bulletin No. 25 of this department, entitled "Fleshing Chickens for Market." This bulletin has been prepared by Mr. W. A. Wilson, Superintendent of Dairying, and embodies his wide experience of the methods usually employed, and those used at the government fattening stations, together with his knowledge of the requirements of the various markets that are open to the poultry raisers of this province. For the past four years the dairy branch of the department has conducted poultry fattening stations at several of the government operated creameries, and Mr. Wilson has demonstrated beyond doubt or question the existence of an almost unlimited demand for plump ehickens, well fleshed, tender and attraetively prepared and packed. He has shown also that Saskatchewan farmraised birds can be profitably fitted to meet this demand. What is needed now, is that this knowledge be given widespread publicity amongst the farmers of the province and I, therefore, beg to recommend that the bulletin be printed for distribution.

I have the honour to be, Sir,

Your obedient servant,

A. F. Mantle, Deputy Minister.

DEPARTMENT OF AGRICULTURE, Regina, June 30, 1911.



# INTRODUCTION

The unlimited demand for tender, palatable birds, the multiplicity of inquiries from farmers respecting general poultry matters, the importance of the industry and the splendid opportunities that await those who will meet the trade demands both in quality and regularity of supply have been responsible for the preparation of this publication. Its object is to place in the hands of Saskatchewan farmers and others who are interested in supplying well fleshed birds for their own table and for the trade generally, such information as experience has shown to be hat calculated, when put in practice, to enable them to offer for sale a superior quality of chicken meat and thus extend the market for poultry, not only by securing new trade, but by increasing the consumption on the farms, in the villages, towns and cities within and outside of the province, and which will also insure a more profitable return for the money invested.

Poultry in the form of broilers, roasters and stewers has always been more or less a stable article of diet. When a tasty, nutritious meat diet is required one's thoughts usually revert to the domestic chicken. So often it happens that the product is not procurable, and when it can be had it is so unpalatable and tough that the meat is not relished.

That there is a paying margin of profit in poultry has been demonstrated, but it must be borne in mind that the rofit is dependent on the accurate, businesslike knowledge of the other. The roadway to the successful marketing of poultry is strewn with the wrecks of individual or co-abined effort in attaining profitable results without the requisite knowledge.



# GENERAL

The latest statistics place the number of poultry on Saskatchewan farms at 4,626,118. At a very align of 35e each they represent an asset of \$1,619,141.30. This is for poultry alone. Double the amount and it will represent a fair approximate value of the poultry and eggs of the province. Measured in dollars and cents the industry has not as yet, for such an extent of territory, reached very large proportions. But interest in the work is only beginning and the opportunities and possibilities that are open to the poultrymen are sure to stimulate rapid and profitable develor tent. Just what may be done is dependent upon the individual at a poperative efforts of those who raise poultry for marketing.

#### POULTRY A NEGLECTED CROP.

Poultry has always been a neglected crop on the farm. This is particularly true in Saskatchewan, where the greater possibilities for "making money," naturally associated with a rapidly growing country, have absorbed much of the farmer's attention. The chickens pick up a living as best they can until the farmer's wife desires to do some shopping. Then they are caught, slaughtered and taken to the "store." Speaking generally, no effort is made to flesh them before killing and when ready for marketing they present about as unattractive appearance as one would wish to see. When subsequently prepared for the table the quality of the flesh is about in keeping with the appearance.

# PRESENT METHOD OF PREPARING BIRDS FOR MARKETING.

The manner in which chickens are now generally prepared for the market is anything but praiseworthy. The heads are ent off and the neek protrudes from underneath the skin. The skin is torn by plueking and discoloured by sealding. The legs are dirty and of various colours. The birds are mostly of the leggy type and made to appear doubly so by the absence of flesh. They are not thoroughly starved before killing and are drawn by inexperienced workers. The intestines very often are broken and exercta left in the interior. The general unsightliness is further increased by hanging the birds up by the neek or legs. In short, the birds are very often unfit for human consumption when first marketed, and certainly this condition is enhanced if they are held for a time in storage. Seeing such conditions so widespread one almost receives the impression that there is some rivalry among the farmers as to who can put the poorest poultry meat on the market. Many have excelled in this particular. There is a constant temptation to be "careless," "thoughtless" or "to tri ." To cut off a little expense here and a little there in the assumption that the product will be "good enough." If the work is worth doing it is worth doing well.

#### HOW BIRDS SHOULD BE PREPARED.

To meet the trade conditions and demands for table use birds of the meat strains or utility type-preferably the latter-should be When the chickens weigh about three and one-half pounds commence a special course of feeding for fleshing. Confine them in crates or limited runs. Feed a diet of mash. Avoid undue disturbance. Feed not less than three and not more than five weeks. Give plenty of water to drink and especially during the last twelve hours. Starve thirty-six hours before killing. Kill by dislocating the neck or by cutting the arteries in the mouth and piercing the brain through the roof of the mouth. Dry pluck immediately. Be careful not to tear the skin. Fold the legs and the wings to give the bird a plump appearance. Place in the shaping board at once. Put a two or three pound weight on the back of each bird and leave them in this position until the joints become set. Market them undrawn. Leave the heads and feet on and truss each bird with a clean cord or white ribbon, if the buyer so desires. Observe also the buyers' wishes with respect to leaving a rim of feathers on the leg and wing joints and around the neck, and have the heads and feet perfectly clean. By following this method the attention of the



Figure 1. Breast and Thigh Development

dealer and the consumer will be attracted by the appearance and the

quality will not be disappointing.

The illustration, figure 1, "Breast and Thigh Development," shows a side view of the average fowl in the market. The breast flesh ought to go out to the dotted line. There would then be twice as much white meat, and it would eost no more to bring the bird to maturity. The middle figure of the same illustration shows a cross section of the average market fowl, the dotted sections showing the breast meat. Breed a round, wide-breasted bird and the amount of breast meat will be more easily increased. Look carefully to the selection of the breeding stock and select birds that are built to carry a large amount of breast and thigh meat.

DEALER'S AND CONSUMER'S RESPONSIBILITY.

While indifference and negligence may be justly attributed to the producer, the dealer and the consumer are not wholly innocent respecting the undesirable conditions that prevail in the poultry trade. The dealers, particularly, have been lax in their duties in that they have accepted, very largely without question or comment, birds in any and every condition of flesh and appearance and have made no distinction in price. Careless producers have thus received more than their due and those who have gone to trouble and expense have not been rewarded. The difference in the economic value of well fleshed and of lean birds has

not been recognised, in consequence of which the most powerful factor in influencing the farmer to adopt better and more scientific methods in connection with the poultry work has not been acknowledged. The consumer, too, probably because of the absence of opportunity in testing the quality of poultry meat, has not been sufficiently insistent upon obtaining the better quality. It seems, therefore, that the trade and the producer alike require some education. The farmers should bear this in mind and should not become discouraged if the results of their first trials do not equal their expectations. Markets are not established in a season and it will require patience and perseverance to create a permanent and profitable trade, concerning the possibility of which there is ample assurance.



Figure 2. Interior of Fattening Station

#### CHICKEN FATTENING STATIONS.

Owing to the general disregard of the poultry business the government in 1907 adopted an educational policy of a practical and commercial nature as the most effective means of convincing the public that they were neglecting the poultry industry and allowing splendid opportunities to be taken advantage of by others who were not so suitably situated but who had sufficient interest and foresight to meet the trade conditions. The fattening station was thought to be the best method of carrying out this policy, as the actual conduct of the work could be seen and would be a practical demonstration to each farmer, with his own birds, of how to prepare them and how and where they might be marketed. While the chief object of these stations was to educate by concrete demonstra-

tions they have also brought increased monetary returns to those who have placed their birds therein for fleshing. This latter result has added greatly to their popularity.

#### OBJECT OF FATTENING STATIONS.

The purpose of the fattening station was, first, to obtain information on the cost of fattening chickens; second, to ascertain the feeling of the trade with respect to milk-fed chickens; third, to learn what prices could be obtained for that class of poultry; fourth, to show the farmers how they might, with very little cost and trouble, flesh their birds at home; fifth, to demonstrate the best method of killing, plucking and preparing them for market.

The government erected and equipped the stations and undertook to supervise the work of feeding and preparing the birds for the trade and also to find a suitable market and make payments direct to the farmers who supplied the birds for feeding. At the stations the farmers had an opportunity of seeing modern methods of cooping and feeding, and when killing time came the balance of the work could be seen. With a large portion of the trade price is a secondary consideration to the consumer, providing the quality be satisfactory. The farmer, by following the most approved methods and catering to this trade, may obtain a better price for his produce, increase the demand and extend his market.

#### RESULTS OF THE WORK AT THE FATTENING STATIONS.

The demonstration and experimental work at the fattening stations has been conducted for four years and the results have shown that there is a ready and profitable market for milk-fed chickens.

The tabulated statement given below presents a summary of the work:

Year	No. of birds	Live welght	Dressed weight	Value dressed	Fattening cost dressed weight	Selling price per pound dressed weight
1907	494	1 530	1,990	374.08	5.88	19,38
1908	1,861	6,931	6,920	1,243.50	5.86	17.97
1909	2,984	11,074	10,890	1,909.73	80.8	17,65
1910	1,333	4,705	5,094	1,016.25	6.69	19,95
Totals and averages		23,540	24,764	4,543.58	5.98	18.74

The fattening cost includes the labour for feeding and plucking and also the cases in which the birds were packed for shipping. It was difficult to secure the right kind of feed and some of it cost as high as \$2.50 per hundredweight.

For the four years the average dressed weight per bird was 3.23 pounds and the average selling price 18.74c per pound or 60.53c per chicken. A large percentage of the birds was of a very poor type for feeding and, on the whole, did not make creditable gains. In 1909 the accommodation was overcrowded and several makeshifts were resorted

to which did not prove satisfactory. In all instances, however, the quality of the flesh was so much superior to that of the ordinary bird offered to the trade that wherever they were sold favourable comments and repeat orders were received.

#### METHOD OF SELLING.

Quality is a splendid selling agent, particularly when the article is required for the domestic table. All the milk-fed chickens were sold on their merits. In most instances a sample case was sent to the dealer, and without exception the quality and appearance of the birds brought business. The best and most extensive trade obtains at the Pacific coast, although the home demand is increasing rapidly and even at the present time exceeds the local supply. Small consignments were placed at various points between Fort William and Vancouver and it only requires some concentrated effort in order to establish permanent and profitable markets at all of the larger centres.

#### OPINIONS OF DEALERS.

As evidence of the trade feeling the following communications received from dealers should be interesting and convincing:

From Messrs. R. Robertson & Co., wholesale brokers, Vancouver, B.C., dated October 22, 1909:

"We confirm receipt of your letter of the 19th instant and now beg to advise you that we will take the additional 1,200 chickens you will have for shipment by the end of November at 20 cents a pound f.o.b. shipping point.

"If you can increase this quantity we will take up to a carload of these chickens, and we shall be pleased to hear from you further as to what the prospects are of getting an additional supply."

Second letter from Messrs. Robertson & Co.:

"Approximately 90 per cent. of the pouitry consumed at the coast is !mported from Ontario, or a total of 35 carloads this year, made up principally of chickens and turkeys. There is an unlimited demand for poultry here if the quality is satisfactory. The difficulty with North-West poultry up to the present time has been that no attempt has been made to put it up in first class shape outside of what your own government is doing."

Third letter from Messrs. Robertson & Co.:

"The chickens you have shipped have given exceiient satisfaction and we think there is no question about being able to handle all the milk-fed chickens you can raise as this is a spiendid market for very fancy poultry."

From P. Burns & Co., Calgary, Alta., dated October 20, 1909:

"We should be giad if you could quote us prices on poultry if you have any to spare. As you are probably aware we do not get nearly enough in this country to meet our demands and have to import large quantities from Eastern Canada. We are, therefore, open to buy all the poultry that is offered in the West."

This latter firm at the time of writing was offering 18 cents a pound for No. 1 chickens; 14 cents for No. 2 and 10 cents for No. 3. They place a premium, and justly so, on good birds. It is only fair that the producer who takes the precautions to prepare his birds properly should be rewarded. Poultry dealers cannot hope to obtain the highest price for their produce until they recognise the importance of appearance and quality and their influence in fixing permanent and profitable markets.

Further extracts could be given from communications received from dealers, all of which emphasise the importance of appearance and quality of flesh. I think, however, that the foregoing quotations should be convincing and will convey to the producer his responsibility in

making his work profitable.

In fitting poultry for the market, therefore, one should aim at giving the largest attainable percentage of meat to bones and offal. Furthermore, the texture of the skin, shape, appearance, firmness of flesh to the touch, entire absence of layers of fat in the dressed bird, and white, juicy, finely flavoured qualities when cooked, are points of excellence. In order to obtain this a system of feeding for specific results is necessary.

#### IMPORTANCE OF BREED AND GOOD CONFORMATION.

Breeds, and the scientific principles of breeding, will not be discussed in this bulletin. But in order that the breeder who is catering to the table trade may obtain the greatest profit from his labours and offer plump well fleshed birds for sale, breed and good conformation are very essential. The American or English breeds, commonly called utility breeds, are the most desirable for table trade and are classified below:

American	
Breeds	Varietles
Plymouth Rocks	{ Barred White Buff
Wyandottes	Silver
Javas	Black Mottled
Domlnlques	Rose Comb
Rhode Island Reds	{ Single Comb Rose Comb
Buckeyes	Pea Comb
English	Class.
Breeds	Varieties
Dorkings	Silver Gray
Redcaps	Rose Comb
Orpingtons	

The Dorkings, Redcaps, Javas, Dominiques and Buckeyes are not generally kept in this country. The others are favourites and quite commonly met with.

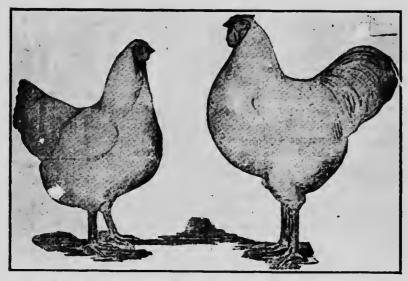


Figure 3. Good Type and Conformation-What the Farmers Should Have



Figure 4. Scrub Bird of Poor Conformation.—What Farmers Generally Raise at Present

#### SELECTING A BREED.

The question is very often asked, "Which is the best breed?" As utility birds there is little, if any, preference. In making a selection it is largely a matter of fancy on the part of the individual, but once the choice is made no attempt should be made to cross. It is a dangerous practice for commercial purposes and more especially for the amateur.

Too often one is influenced to choose a breed that is not generally kept in the community or country, from the mere fact that it is uncommon and that he will have something not owned by his neighbours. This factor is sometimes responsible for crossing with other breeds later on, because the owner finds it difficult and expensive and sometimes impossible to secure a change of blood in his particular breed. One will have little occasion to regret fixing his choice on one of the common breeds such as Barred Rock, White Wyandotte, Buff Orpington or Rhode Island Reds. The owner will have ample opportunity of comparing his birds with those belonging to older and more successful breeders and will have no difficulty in securing a change of blood with good stock and at a reasonable price. This will remove the temptation to cross.

#### PURE BRED BIRDS versus GRADES.

Scrubs and grades should be a thing of the past. Those who raise such are likely to meet with disappointment. A bird that will put on the most flesh for the least money in the shortest time must have a short back, short neck, plump, well rounded breast and not be leggy; it should show every sign of a healthy, vigorous, strong constitution. The results of experiments made by the Dominion Department of Agriculture several years ago between pure bred and grade chickens are noteworthy:

"When pure bred and scrub chickens were reared under the same conditions the pure bred bird of the utility type made more rapid and economical gains in live weight than did the scrubs.

live weight than did the scrubs.

"In crate fattening the pure bred birds again made the greater gains. It was also demonstrated that the cost of food per pound of gain was less with the pure bred chickens.

"At the age of four months the pure bred chickens were fattened and ready for market, possessing a uniformity in quality and appearance unequalled by the others at any time.

"At no age were the scrub chickens as saleable as the pure bred birds.

"For meeting the demands of the higher class local trade, or for outside markets, scrub chickens are not satisfactory."

Similar work has been conducted by many others and all have found the same results. It can and should be accepted as conclusive that success is largely dependent upon raising pure bred chickens showing good conformation.

USE THE TRAP NEST TO SELECT BIRDS SHOWING GOOD CONFORMATION.

The trap nest is an automatic device by which the hen, when she enters, locks herself in. It is now recognised as the only method of selecting the best stock either for egg or meat production.

Figures 5 and 6 show simple and desirable models. They are easily constructed and for any extra labour required in attending to the flock will return a splendid reward.

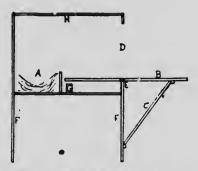


Figure 5. Simple Form of Trap Nest
"A" is the nest. The hea slights on "B" and welks to inner end of same. "B" being hinged at "E" the hea steps into the nest the inner end of "B" end releases the support "C" which is hinged at its upper and. As the hea steps into the nest the inner end of "B" being the shorter goes up and closes the opening. The top "H" a used as a lid for removing the hen.

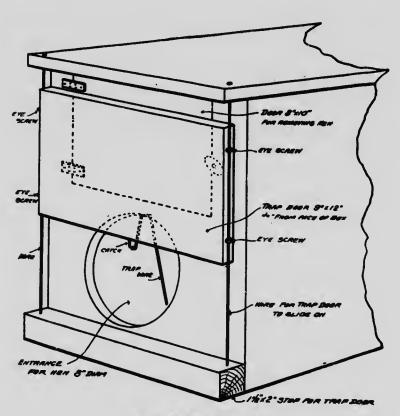


Figure 6. Foley Trap Nest.

During the breeding season birds showing the best conformation should be separated from the rest of the flock and "trap-nested." Each bird should have a leg band bearing a number. These bands can be had from any dealer in poultry supplies for about 11/2 cents each. The nest closes automatically when the bird enters, but her only means of exit is with the assistance of the operator or owner. It is at this period that her number is taken and subsequently placed on the egg and egg record. The stock produced from such eggs can be followed from year to year and the selection continued. An astonishing improvement in the build and conformation of the birds is quite possible within a short time. Associated with this improvement there is less bone and offal and more meat in proportion to the total weight, better satisfaction to the trade and more profit to the producer.



Figure 7. Birds in the Crate

#### CRATE FEEDING.

The term "crate feeding" when applied to poultry has the same meaning as "stall feeding" when applied to steers. It is not a new process by any means, but is not generally followed by our farmers.

## Dimensions of Crate.

The dimensions of the fattening crate in which chickens may be cooped for fleshing are as follows:

Length	6 feet
Width	14 inches
Height	20 inches

## Material for the Crate Frame.

- 4 pieces 6 feet long, 2 inches wide, % inches thick. 8 pieces 14 inches long, 2 inches wide, % inches thick. 4 pieces 20 inches long, 2 inches wide, % inches thick.

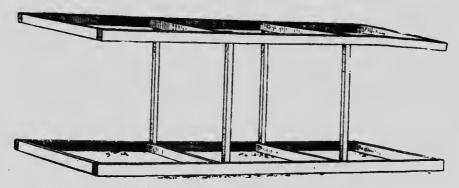
# Slats to be Nailed on Crate Frame.

Back	
Brackets for holding feeding trough two pieces 4 7 12 7 14 inch thick.	

# Division and Construction of Crate.

Each crate is divided into three compartments and four birds are confined in each compartment, or twelve in one crate. All slats are placed lengthwise of the frame except those on the front which are placed upright and two inches apart to enable the chicken to fe from the trough held in place by brackets nailed to the ends of the crate.

The general construction of the feeding crate is simple and the material is easily within the reach of any farmer. For general guidance the dimensions of the regular fattening crate is given, but it will not



Figare 8. Shows the Frame of the Fattening Crate

detract from the quality of the flesh or the efficiency of the system if material of somewhat different dimensions be used.

#### CONFINING BIRDS IN LIMITED RUNS.

Those who find it impossible to use the crate will find it to their advantage to confine the birds in a limited run and feed as per crate menu. Under no circumstances should poultry be marketed without first fleshing them by feeding a fattening ration and preventing exercise.

#### REASONS FOR COOPING.

When preparing for any event where science coupled with powers of endurance and muscular development usually decide the contest, every precention is taken in dicting and exercising so that the maximum strain may be endured. The muscles are hard and firm. Bone and muscle forming foods constitute the daily diet, and by judicious and vigourous exercise the food consumed is directed to build up the muscles and frame.

Crate feeding chickens has the opposite effect. They do not get exercise because four birds are confined in a space of 16 x 20 inches and stand on elats. There is little growth of bone and practically no growth or development of muscle and tissue. This result is accomplished by feeding a ration of mash, a large portion of which is composed of flesh-forming constituents, together with the preventing of exercise being taken. The object is to produce the maximum amount of tender flesh in the shortest time at the least expense.

#### FEEDING RATION.

Any one of the following meals can be recommended for eding chickens in the crate:

Finely ground oats with the coarse hulls removed.

Fine oatmeal siftings.

Finely ground oats and barley mixed in equal quantities.

A choice of these mixed with sweet or sour skim milk or buttermilk in the proportion of about ten pounds of meal to seventeen pounds of milk makes a very suitable ration. Clean sour skim milk or buttermilk gives better results than sweet skim milk, as the acid tends to keep the birds in better health and assists in making a whiter and cleaner looking flesh.

#### PREPARING THE FEED.

The mash should be mixed about twelve hours before feeding. This leaves it in better condition for easy assimilation by the birds' digestive organs. To state the desired consistency of the mash when prepared would probably be a more satisfactory guide to the beginner than giving the proportions in which it should be mixed. The best description I can give is that the mash should readily find its own level in the feeding trough, or have the consistency of thin porridge.

#### FEEDING.

From the unlimited run on the farm to the close confinement in the feeding crate is a change in conditions from one extreme to the other. To meet these changed circumstances the birds must be fed carefully until they become accustomed to their new environment. Heavy, or overfeeding during the first week is almost certain to ruin c e's chances of success. The secret of the whole process is to keep the birds in good physical condition and with keen appetites. Feed twice a day and at regular hours. For the first week administer half rations following which the quantity may be increased to all they will consume readily. Observe from day to day the condition of the birds' health and if any show signs of sickness or being off feed separate them from the other birds and feed separately until their health is restored. Trials, with small lots, have established the fact that, under the best conditions and with birds of a good type for fleshing, the greatest profit is obtained from a period of three weeks' feeding. Beginners, with grade birds, may not be able to flesh them properly in this time, in which case it is advisable to prolong the feeding period. The profits may, to some extent, disappear, but "quality" must be the first consideration. If the customers be satisfied the profits will come late:

During the entire feeding period ever, preeaution should be taken to keep the birds quiet and induce a drowsy sleepy condition. If possible darken the house, but in doing so do not neglect ventilation. Do all necessary work during feeding hours so that they will be left in absolute quietness between meals. After each meal give them a drink of water, then clean the feeding troughs. The droppings should be removed regularly every morning.

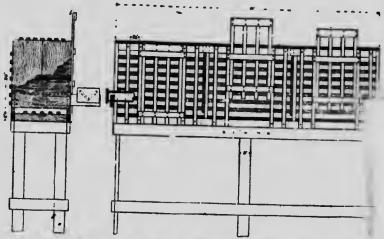


Figure 9. Front and End View of Fattening Crate

#### WEIGHTS OF MEAL AND MILK.

The following table shows the approximate quantity of me at and milk that may be fed safely to a crate of twelve birds for the teeding period. The ration for the evening and morning meals is the same. The table gives the ration for one meal.

DA	YS	Meal per Lbs.	12 birds Ozs.	Milk per Lbs.	Dirds Ozs,
1st			12	1	10
On A	***************		12	i	
442		1	0	i	10
4th		1	2	9	12
5th		1	4		4
6th		1	6	2	8
7th		1		Z	12
8th		1	12	8	0
9th		9		8	4
		9	0	4	0
		9	8	4	8
		2	10	4	10
		2	12	5	0
	• • • • • • • • • • • • • • • • • • •	2	12	5	o
PAR		2	12	5	0
AAL.	• • • • • • • • • • • • • • • • • • • •	2	10	4	ě
7+h	••••••	2	8	4	
OA S	• • • • • • • • • • • • • • • • • •	2	4	Ā	
DAL		2	4 1	Ž.	0
		2	ō	7	4
0th		1	12	-	U
1st		1	12	•	8

#### GRIT.

With a ration of mash very little grit is 1 eded. The birds however should have an opportunity twice a week of helping themselves. Nature governs their requirements in this regard. Oyster shells make a splendid grit, but sharp gravel, sifted, will do.

#### STARVING.

Heretofore the producer has not given sufficient consideration to starving the birds before killing. In fact, some object to starving on the ground that the weight is reduced and money lost in consequence. This is an outstanding instance of refusal to recognise the trade requirements. Starving precautions are necessary in marketing drawn or undrawn poultry. In the former case the flavour of the flesh is liable to be spoiled by contamination from broken intestines when partially full of excreta. In the latter, the best trade will not accept birds and classify them as first quality unless they have been well starved. The large dealers are now asking for "undrawn poultry" and the best price cannot be obtained if they are marketed with a full crop of undigested food. The flesh of such chickens is likely not to be wholesome. Yet they are exposed for sale continually in an absolutely disgraceful state, with their alimentary tract full of decomposing material. Toxins are produced by the partially digested food which affect the condition of the flesh and re er it undesirable for human food. The fasting period should extend over a period of thirty-six hours. During this time give them plenty of fresh water to drink up to within eight or ten hours of killing. This assists in freeing the intestines of foreign matter.

#### KILLING OPERATIONS.

· Two methods may be properly resorted to when killing, viz., dislocating the neck, or cutting the arteries in the mouth and piercing the in by sticking through the roof of the mouth. Wholesale dealers prefer the latter because it leaves the birds in better shape for placing in cold storage. For a beginner the former method is advisable because it is simple and easily performed. If one contemplates killing by piercing the brain it would be a humane practice to first kill a bird by dislocating the neck and subsequently dissect its head for the ourpose of ascertaining the exact location of the brain and in what direction it may be reached from the mouth. This is preferable to gaining one's experience by practising on live birds. When dislocating is done properly there is a space between the neck and the head which is quite noticeable. Here the blood accumulates and to insure proper bleeding the head should be held downwards for a short time after the neck is broken. Either operation kills the bird at once. In case one should think the bird is not dead because there is a certain amount of muscular action after it has been killed let me state positively that the bird is dead as soon as the neck is snapped. Take hold of the neck with the little finger placed below the break and snap the joint down and back at the same time and it is all over. It is a good plan to allow the wings to flap a little. It helps the passage of the blood into one neck and drains the bird as effectively us it would be drained by bleeding and yet one do so not have that disagreeable experience of having the blood spatter in every direction.

#### PLUCKING.

Each bird should be plucked at once, or immediately following killing. If left for a time, or until the heat leaves the body, plucking is rendered exceedingly difficult and it is scarcely possible to complete the work without tearing the flesh, to say nothing of the extra time necessitated. Immediate plucking was, at one time, condemned and its opponents based their arguments on the fact that the bird was still living. That there are signs of life cannot be disputed, but when the operator does the killing properly all sense of feeling is dispelled at once.

Piercing the brain or dislocating the neek has the effect of relaxing all muscles, including those at the roots of the feathers, and dry plucking is an easy and simple operation when done immediately. These muscles contract as the flesh cools, which explains why plucking is more difficult if not done until after the bird becomes cold.

#### DRY PLUCKING.

Dry plucking is the only proper method. It is not a disagreeable operation, and the appearance of the flesh is much more attractive, providing of course, that the plucking is done carefully and the skin not torn. Some of the best dealers are now stipulating that "all birds must be dry plucked." The wing and tail feathers are removed first; then the rough feathers and finally the pin feathers. Some buyers are now asking for a row of feathers to be left around the neck and on the leg and wing joints. Some prefer clean plucking. In this matter be guided by the buyer's wishes.

#### SCALDING FOR PLUCKING.

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To facilitate plucking, the practice of scalding is the general rule at the present time. So far as the trade is concerned it is not acceptable and this should be conclusive proof to the producer that this method is obsolete. Scalding birds should be discontinued. It is difficult and disagreeable and one's labours terminate with the bird's appearance spoiled and the flesh discoloured. Less money is obtained for the product and the comments of the buyer are not likely to be of a complimentary nature.

#### SHAPING.

Dealers like to obtain chickens that can be exhibited in their windows and that from their attractive appearance will draw custom. Shaping the birds to give them a plump, well rounded frame will do a great deal to make the dealer smile. When plucking is completed, and a force the bird's joints become set, fold the legs and wings closely to the body and place it breast down in a "shaping board." This board may be made of two pieces of 1 x 6 inch lumber nailed at right angles. A



Figure 10. Position in Which the Bird is Held When Dislocating the Neck



Figure 11. Killing the Bird by Bleeding and Piercing the Brain

weight of two or three pounds is then placed on top of each bird, and for this purpose a common building brick is suitable. They are left in this position until cooled thoroughly when they will present a much more attractive appearance because of the compact form into which they have been moulded.



Figure 12. Chicken in the Shaping Board

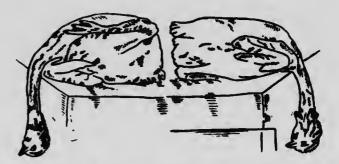


Figure 13. Properly Shaped Chickens, Breast Up and Breast Down

#### PACKING.

When at all possible the farmer should market his birds in a suitable shipping case. This, however, at the present time, and under prevailing conditions in Saskatchewan, may be difficult, but it is something that should be kept in mind and adopted when circumstances will permit. It might be wise to go to some trouble in order to market birds in suitable shipping cases. These cases are made of basswood and spruce and are bought in knocked-down condition. They are then nailed together as required for packing. The boxes vary in size to accommodate weights of birds and from the dimensions given below one can readily select the case that will meet his particular needs:

Case	Inside measurements in inches	Thickness of wood		
No.	-notes mensurements in menes	Sides	Ends	
0	19 <sup>12</sup> / <sub>16</sub> x 15 <sup>5</sup> / <sub>16</sub> x 4	7/16	9/16	
1	$21\frac{1}{2} \times 16 \times 4\frac{3}{16} \dots$	7/16	9/16	
2	$23\%_6 \times 16\%_8 \times 4\%_6$	1/16	9/16	
3	24 <sup>13</sup> / <sub>16</sub> x17 <sup>5</sup> / <sub>16</sub> x 4 <sup>5</sup> / <sub>8</sub>	7/16	9/16	
4	26½ x 18 x 5¼	7/16	9/16	

Case No. 0 is for 12 birds weighing (plucked) from 2½ to 3 pounds each. Case No. 1 is for 12 birds weighing (plucked) from 3 to 3½ pounds each. Case No. 2 is for 12 birds weighing (plucked) from 3½ to 4 pounds each. Case No. 3 is for 12 birds weighing (plucked) from 4 to 4¾ pounds each. Case No. 4 is for 12 birds weighing (plucked) from 4¾ to 5½ pounds each.

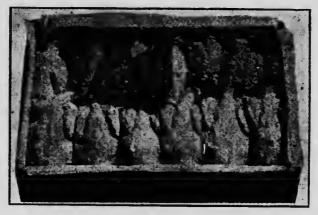


Figure 14. Shipping Case Ready for Cover

The cases should be lined neatly with parchment paper cut to the size of the case. Small quantities of parchment paper can be purchased through the local dealers who are usually glad to order any quantity desired from the wholesale stationers.

Each shipping case holds two rows of birds and they are put in place with backs down and heads extending across the case. They are packed from the bottom of the case and on this side the feet are exposed. The other side should be marked so as to indicate which cover should be removed when opening the case and have the backs of the birds for exhibiting to the public in a dealer's window. It will present a more pleasing appearance than if the feet and breasts were exposed.

On one side of the case should be stencilled the name and address of the shipper, the number of birds, the gross, tare and net weight, and

whether the contents are fowls or chickens.

#### UNDRAWN AND DRAWN BIRDS.

Generally speaking, most Western poultry is marketed drawn. Local dealers may offer objections if a customer delivers undrawn birds.



Figure 15. Chickens Ready for Shipping

But if they are well starved, show plenty of flesh and look good there is not likely to be any difficulty in finding a purchaser. Furthermore, if the advantage that such a bird possesses over a drawn bird in the matter of "keeping" or preserving that fine flavour of poultry meat is thoroughly understood, the practice of marketing undrawn poultry will soon become general. The larger dealers are now making this a stipulation for number one birds. One Western firm sent out a circular to the farmers and among other things stated "all poultry must be undrawn" and "all poultry must be dry plucked and clean."

#### GENERAL.

The requirements of the trade should be ascertained by each and every producer and local dealer and an effort made to meet its wishes. The retailers in the large centres are the men who have most to do in fixing the standards of the grand markets. They ask for, and in many eases insist that, the wholes rehant supply birds of a certain weight.

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done up in some particular form, neat, clean and well fleshed. He is willing to pay the price if his requests are complied with. The wholesale dealer in turn will look to the various merchants throughout the country for his supply and will issue instructions in keeping with those of his customer. He is usually patriotic enough to buy at home if the product be suitable. Failing this he has no scruples about going abroad or to any point so long as he can procure what he wants and meet the requirements of his trade. This fact should be constantly borne in mind by the producers, because each year it is becoming more of e fixed factor. At all times let one's chief aim be to meet the demands of the trade and the dealers' requirements. Endeavour to please the customers with respect to "appearance" and "quality" and there will be no difficulty about finding a buyer who is willing to pay a satisfactory price. I am a firm believer in the quality of one's product acting as the selling agent and this principle I have always followed.

#### FOUR CLASSES OF CHICKENS TO MILK-FEED.

- 1. Squab Broilers—Plump bodied chickens which weigh from 11/2 to 2 pounds a pair (dead). One chicken is served to each guest. Many caterers prefer them to the regular broilers, because of their better appearance on the platter and the belief that they are more economical. This class is not generally known or called for at the present in the West except by some of those catering to a special or fancy trade. Ten days milk feeding gives the proper finish to the bird. No other method will turn out as plump, evenly-fattened broilers, or at as small a cost. They are deliciously tender and the delight of epicures.
- 2. Broilers—Weight, two pounds ach and under. Each chicken is split in half and served to two guests. The demand for this class is increasing rapidly and could be extended very readily if the producers would specialise on this line. A milk-fed broiler is a great delicacy and as palatable as a squab broiler. Feed for two or three weeks before killing. The chicken will show marvellous gains in this time. The approximate weight of squab broilers and broilers is given under "Poultry Terms" on page 29.
- 3. Chicken Roasters—The greatest number of young chickens are marketed weighing from 2½ pounds each and over. By reason of their being more or less suitable for roasting this name has been applied to this class. Chickens sold as roasters can be hatched in the natural spring season and marketed in the fall. They are the usual chickens to milk-feed, and as they have wandered over the fields and are lean when placed in the feeding crate they require from three to four weeks feeding to store up flesh.
- 4. Fowl Roasters—All birds more than one year old. The best time to sell fowls is immediately after the breeding season, and before the chickens are brought on the market. No hens used for table egg producers should be kept more than two years. Fatten and kill them and replace with pullets. Lean fowl may make a gain of about 20 per cent., but it seareely pays to feed hens that are in good condition. They may not gain enough to pay for the food and labour.

#### POINTERS FOR POULTRY FATTENERS.

Birds of the utility breeds (see page 12) arc easily fattened and are in demand by the general trade. They should weigh from 3 to 3½ pounds when put into the feeding crate.

The egg laying strains are not suitable for fattening.

The most profitable period for fattening is from three to four weeks.

Be careful not to overfeed chickens the first week. Feed lightly and remove any feed left in the trough half an hour after feeding. Keep the troughs clean and sweet.

After the first week give chickens all they will eat, regularly twice

a day.

The oats or mash must be ground very fine. Oats ground for horse feed are not suitable.

Feeding skim milk or buttermilk whitens the flesh, which is desirable.

Put a little salt in the feed.

Give water in the trough twice a day.

Give some form of grit twice a week. Sifted gravel will do.

Feed tallow during the last ten days. Begin with one pound per day to 70 or 100 chickens and increase to one pound to 50 or 70 chickens.

To prepare tallow: Weigh quantity required for three days, melt it, and thicken, while hot, with ground oats. Mix one-sixth of this paste with the morning and one-sixth with the evening feed.

If a chicken gets off its feed, remove it from the fattening pen

for a few days, allowing it to run free.

Do not allow birds any food for thirty-six hours before killing.

Kill chickens by dislocating the neck or by bleeding in the roof of the mouth. Usc care so that no outside blemish is made.

Market birds with heads and feet on.

Dry pluck at once, while the bird is warm. Observe the buyer's wishes as to whether the bird should be stripped of all feathers or a rim left on the first wing and leg joints. Leave about two inches of feathers around the neck.

As soon as plucked, place the chicken in the shaping board to give it a compact, square appearance

Chickens should not be drawn.

When cold, wrap in clean parchment paper, and pack tightly in shipping case to prevent injury by knocking about.

See that chickens, paper and cases are kept perfectly clean.

#### POULTRY TERMS.

A cockerel is a male bird less than a year old.

A cock is a male bird over one year old.

A pullet is a female bird less than a year old.

A hen is a female bird over one year old.

A yearling is generally one counted as having laid twelve months.

A setting of eggs is thirteen. Some poultrymen have increased it to fifteen.

A squab broiler is a bird weighing from one to one and one-half pounds and from four to six or eight weeks old.

A broiler is a bird weighing about two pounds and from six to twelve weeks old.

A spring chicken is a bird weighing over two pounds.

A capon is a male bird deprived of its genital organs for the purpose of improving weight and delicacy of the carcass.

A roaster, or roasting chicken, weighs from 21/2 pounds upwards.

A poularde is a pullet deprived of the powers of producing eggs, with the object of securing great size.

A trio is a male and two females.

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A breeding pen is generally made up of from six to fourteen females and one male.



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