

# EFFICIENT FARMING

### Picking the Profit Producers.

"Poultry culling" is a comparative recent addition to the vocabulary of the poultryman. This term already means much to the poultry industry as poultry culling has become the best and most certain means of eliminating from poultry raising the enormous losses which have stood in the way of success and profit.

Poultry culling may be well compared with the Babcock test of the dairyman. By the use of the Babcock test and the scales, the dairyman has been able to eliminate the star boarders from his herd. Before it came in use, it was difficult for the dairyman to determine which of his cows were producing a profit and which were causes of losses. In the same way the practice of poultry culling enables the poultryman to select the hens which are his best layers, those which have a fair capacity for laying and also those of which it might be said that it would be throwing money away to feed except for fattening purposes.

The business of poultry raising has often been a haphazard affair. The few hens that were kept would be thrown feed of indefinite quality and quantity and often provided unsuitable houses both from the standpoint of sanitation and protection from the weather. Such conditions would make it impossible to produce profit from even the best hens. At first we learned of proper housing and the use of egg-laying rations and through these we would obtain increased egg yields, but we never could get down to what may be called efficiency in poultry raising until the poultry culling method became thoroughly established.

Poultry selection is based upon the conformation of the hen and her physical condition. One of the most important indications of the condition of the hen is the head. A study of its conformation will show many valuable points that will be substantiated by other examinations. For instance, if you find a healthy, refined head, you will be quite certain to find a similar body back of it. A head which indicates femininity, intelligence and alertness is one which will be found on all of the heavy producers. The skull should be moderately narrow and the face lean and delicate. A wide skull with hanging eyebrows and an indication of fatty wrinkles is common to the kind of bird which will put on flesh rather than to produce eggs. Preference should be given to the hen with an oval eye which shows considerable of the eye membrane directly in front of the eye-ball. The jaw should be refined, and not thick and heavy set. The beak should be short and strong and slightly curved, and the distance from the eye to the beak should be short.

The comb should indicate a good healthy red and should be of good size for the breed. When a hen is laying or is ready to lay, her comb and wattles are plump and full of blood and should have a somewhat waxy feeling to the touch. When she is not laying, she has a shrunken comb which is pale in color and hard, and is usually covered with whitish scales. A very dark comb is usually an indication of disease. A hen that has a crows foot of head will produce a producer and she might as well be consigned to the market crate right away.

On the yellow legged birds, the pigmentation test is also of value to determine the laying qualities of the hen, especially her past record. It is a proven fact that the yellow legged bird will "lay out" the yellow color in her legs, around the vent, the wattles, and in the ring around the eyes. The hen that has bright yellow legs has been a low producer, or to say the least, has been resting for a long time. The legs of a heavy laying bird become almost white, although a short rest may cause some of the yellow pigmentation to come back or to be restored. In the use of this test, one must guard against the freaks in the yellow-legged breeds which are sometimes born with light-colored legs. The use of the pigmentation test is usually supplemental to the other methods used in determining the laying condition of the bird.

### Easy Way to Mix Bordeaux.

A convenient modification of the safe way to make Bordeaux mixtures, assuring the most effective spray solution, is now recommended by several experiment stations.

The old method, long followed by careful and progressive growers, was to make the standard 5-5-50 Bordeaux by mixing five pounds of copper sulphate with twenty-five gallons of water in one container; by mixing five pounds of copper sulphate with twenty-five gallons of burned lime with another twenty-five gallons of water in another container; and by pouring the two dilutions together.

The modified method, said to be just as safe and more convenient, is described as follows:

Suppose you have a fifty-gallon tank to fill with 5-5-50 Bordeaux. Place in this tank five gallons of the stock copper sulphate solution, equivalent to five pounds of crystals, and then add thirty-five gallons of water. Next, take five gallons of the stock lime, equivalent to five pounds of stone lime, dilute it with five gallons of water, pour it into the copper sulphate solution, and stir the two together. Remember always to dilute the copper sulphate before mixing. Never add concentrated copper sulphate either to weak or strong lime solution.

## Picking Apples.

One of the most important operations performed on the fruit farm is the picking of the fruit, because in many cases the next year's crop of apples depends on the way the apples are picked. By all means do not allow the apple picker to pick two years' crop of apples during one season, which is often done if the apple picker is not careful in picking the fruit. The ladder should never be leaned into a tree, if it is possible to avoid it. Fruit spurs often cover the ground under such conditions, and not only is the crop for the succeeding year damaged, but openings for disease are left in the tree itself. The act of picking is a very simple one if correctly done. A simple twisting movement up and down on the fruit removes it from the spur without loss of stem, and this easy removal is usually a fair indication of the maturity of the fruit. The stem may be broken without hurting the stability of the fruit but should never puncture the skin or be pulled out of its socket.

The receptacle selected for picking should prevent all bruising, as far as possible, and should give ease in handling. Theoretically, it would seem that bags or canvass bottom pails would be the best for picking, but practically such is not the case. There is a bad tendency among pickers to let the fruit fall into the receptacle, and this is one of the many ways by which a great deal of fruit is injured during the picking operations. Bags allow the fruit to be damaged by not protecting it against bruising when coming in contact with the ladder or tree. When bottomless bags are used the pickers will often let the fruit shoot into the barrel with a great deal of force, thus causing a great deal of damage to the fruit.

## Lime in Agriculture.

The use of lime in proper quantity, in proper quality, and at the proper time will prove beneficial to most soils. Used otherwise, its effects are the reverse. That there may be no lack of knowledge on the subject, there has been issued by the Department of Agriculture at Ottawa a revised edition of a bulletin entitled "Lime in Agriculture," in which the Dominion Chemist, Dr. F. T. Shutt, has dealt comprehensively with the subject. From this bulletin it is learned that there are several classes of lime, such as quick lime, burnt lime, caustic lime, stone lime, etc., also that limestone of excellent quality is to be

found in many parts of Canada, especially in the East and at some points in British Columbia. Some exists in Manitoba in the vicinity of Lake Winnipeg and Winnipegosis. Otherwise there is none available on the prairies. What is known as lime kiln refuse is sometimes sold as "Agricultural Lime," but the advice is tendered that purchases should be made only on analysis as to the percentage of quick lime, carbonate of lime, etc. present. The chief objects of the application of lime or carbonate of lime, are the neutralization of sourness and the improvement of the mechanical condition of soils. The characteristic of the soils that should be treated are pointed out and the influence of lime explained. The comparative values of the different kinds are set forth as well as the methods of application. Attention is given to the use and use of lime and results from detailed experiments. A table shows the composition of limestone found in fourteen places in New Brunswick, nine in Quebec, six in British Columbia, nine in Nova Scotia and ten in Ontario. Prince Edward Island is also shown to have deposits.

## Hoos

Every year during July, August and September a lot of sows which produced spring litters of pigs are sent to market. Some of them are well fattened before shipment. Others are simply allowed to run out on grass and sent to market only partly finished, where they are known as "grass widows."

The carcasses of such hogs are suitable for the production of mess pork and lard rather than for sale as fresh meat. They sell at a big discount below well finished barrows and smooth young sows. "Butcher hogs" usually advance in price during the latter part of the summer but grassy sows advance but little after early July.

Is your farm losing its fertility? Did you do it? What? Let your son in as a partner in the farm business.

Do not stop with the spraying of the dairy cows. Calves will not make proper growth, beef animals will not gain flesh and horses will not be able to do their maximum amount of work if they are forced to fight flies.

# The Sunday School Lesson

AUGUST 21.  
Paul Prepares for World Conquest. Acts 15: 1-16: 5.  
Golden Text—Acts 15: 11.

Connecting Link—The one great fact which this first adventure of the apostles of Christ into the great world outside of Palestine and Syria proved was that Gentiles as well as Jews were ready for the gospel, and that wherever they had gone men of all races had listened eagerly to their message, had believed and entered into the household of faith. This meant surely, if Christianity were to be triumphant, that the world of the future would not be a Jewish world only, and that the long expected salvation would embrace both Gentile and Jew. It meant the yielding of those national hopes and ambitions which the Jews held so tenderly, and the realization of a larger and more splendid ambition in the prospect of a united world, the old barriers broken down, and peace, brotherhood, and goodwill taking the place of enmity, strife, and jealousy. It is no wonder that the telling of their story shook the church both at Jerusalem and Antioch, and that those who held the old and narrow national ideas should have been stirred to active antagonism. The opposition which Paul now encountered was to follow him with increasing bitterness for many years.

When Paul, with his little company of missionaries, reached Paphlagonia, he found himself on the great Roman road which ran east and west through Asia Minor, along which came heavily laden caravans, and Roman legionaries, and many a traveler and scholar seeking to know more of the world of their time. With these he must sometimes have conversed, and we can imagine his gaze turned westward to the rich cities of the Lycus valley, to Ephesus the great seaport, meeting place of east and west, to the ships which sailed over the sea to Greece and Italy and far off Spain, and to Athens and Corinth and Rome. Already he must have entertained the hope of some day carrying his victorious gospel along that westward road, and of winning the Roman empire for Christ.

15: 1-36. Certain men which came down from Judea. These were Jewish converts who held that all who believed in Jesus should conform to the Jewish laws. For them faith in them was not enough for salvation. They were willing to admit the Gentiles, if the Gentiles would submit themselves to the Jewish customs, and in particular to circumcision.

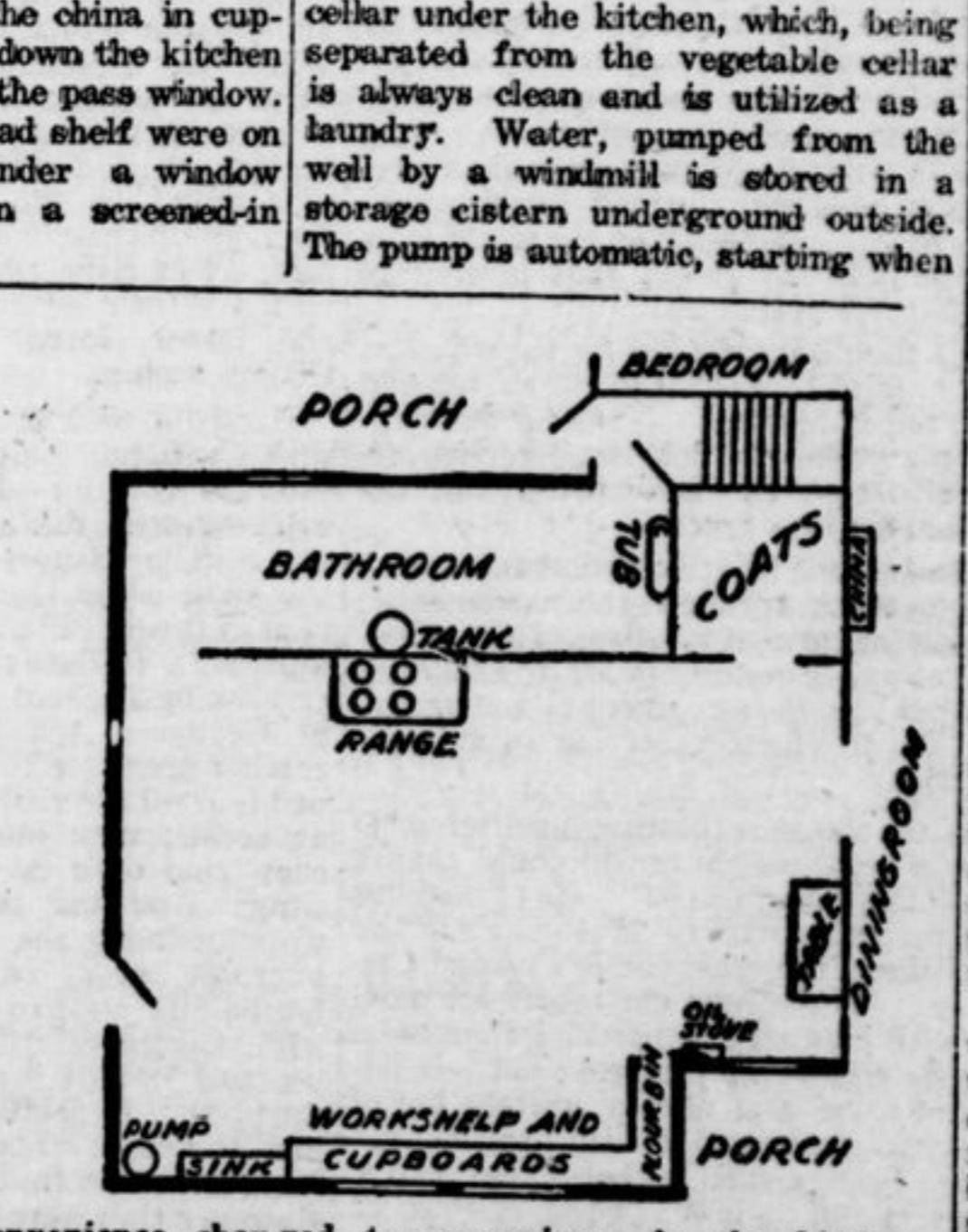
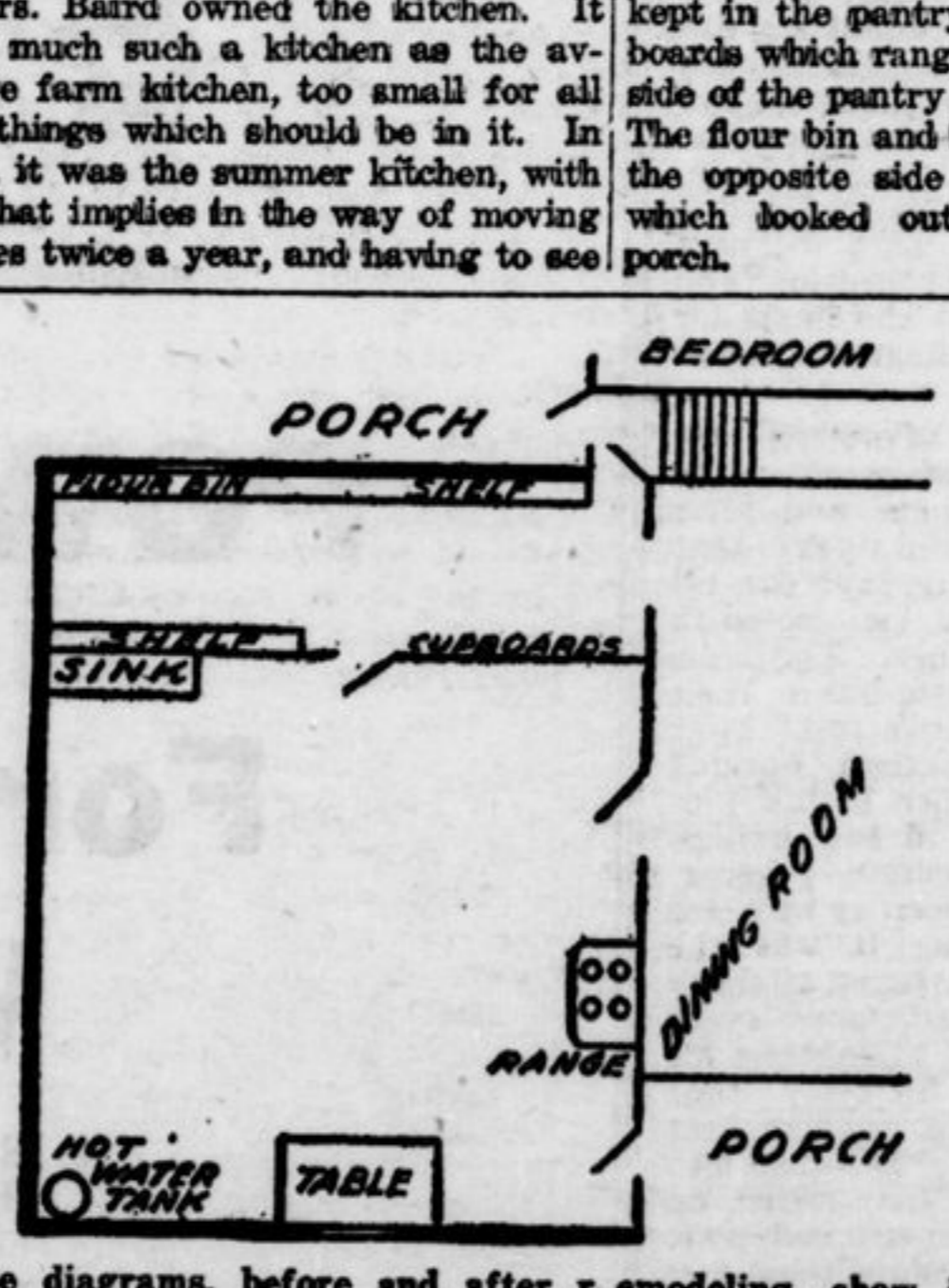
# Why Women Stay on the Farm

If you are one of the many women whose work is made ten times as hard as it need be by an inconvenient kitchen and a misplaced pantry, this story of how another farm woman completely changed her home by moving a partition along five feet, and eliminating the pantry altogether, may give you an idea of how you can overcome some of your difficulties. You wouldn't believe unless you saw it, how much difference just changing that partition and altering the position of stoves, tables and cupboards could make in a day's work.

Mrs. Baird owned the kitchen. It was much such a kitchen as the average farm kitchen, too small for all the things which should be in it. In fact, it was the summer kitchen, with all that implies in the way of moving stoves twice a year, and having to see

corner. A door led from the kitchen into the pantry. The alteration was made by taking five feet off the large dining-room, thus making the kitchen irregular in shape, but giving room to bring the cupboards from the pantry into this workroom. Not all the space taken from the dining-room was needed for kitchen space, so this was made into a closet for the men's outside garments, the entrance being just at the south of the door between kitchen and dining-room.

In the old arrangement of rooms there were no cupboards in the kitchen. Dishes and supplies were all kept in the pantry, the china in cupboards which ranged down the kitchen side of the pantry to the pass window. The flour bin and bread shelf were on the opposite side under a window which looked out on a screened-in porch.



These diagrams, before and after remodeling, show inconvenience changed to convenience in the kitchen.

The cupboards were torn out of the pantry and taken to the kitchen. A second window was cut through along the side of the pantry, and a work-shelf with cupboards beneath built along this fire north wall, with the exception of space enough for the sink and cistern pump. The door leading onto the porch was walled up and boards built in this niche, with flour bin and moulding board beneath. This brings the things for baking altogether. The old pantry was then converted into a bathroom. The range was moved from its position by the dining-room wall, and set next the bathroom wall, where the connection could be easily made with the hot water tank in the latter room. The tank was placed in the bathroom to assist in heating it, as the house has no furnace.

The table, little used as the work-shelf under the windows takes its place, was put in the space to the left of the dining-room, with the oil stove on the porch side of this alcove. In the dining-room a china closet was built on the wall space formerly taken

up by the pantry door, the cupboards coming out of the coat closet in the kitchen.

A door which in the old arrangement led from the pantry to the cellar has been utilized to give an outside entrance to the bathroom so that workmen may enter that room and wash up, without bothering workers in the kitchen. This door opens into a little vestibule, which opens out upon the screened-in porch. The window in the old pantry has been made into a half-window in the new bathroom.

The electric light system and the pump for the water supply are in a cellar under the kitchen, which, being separated from the vegetable cellar, is always clean and is utilized as a laundry. Water, pumped from the well by a windmill is stored in a storage cistern underground outside. The pump is automatic, starting when

## MENED FOR GOOD

Alice had broken one of her most cherished belongings, an antique vase that had been her great-grandmother's. She wept disconsolately over the jagged pieces and then, although they seemed useless, she laid them carefully away.

A little later she told the mishap to her aunt and showed her the pitiful fragments. "I know an expert mender of glass and china," her aunt said when she ended. "Let me take the pieces to him."

Alice consented eagerly. For several weeks she heard nothing. Then one day aunt and vase came back together. Alice fairly gasped in astonishment; so cleverly had the mender mended the vase that she could hardly see where it had been broken.

"It does look pretty good, doesn't it?" her aunt said, smiling. "And he says it is so strong that it will never break in the same place again."

The old vase may be taken as a symbol of a life that sin has marred. The vase seemed past all mending, yet the expert made it whole and strong again. Many a drunkard has seemed past reforming, yet by the grace of God he has been redeemed. Many a sin has made jagged scars in some poor soul, yet salvation has made it whole and beautiful again.

Even for young Christians the mended vase holds its inspiration. Little faults mar the beautiful perfection of their lives. But there is One who, if they will go straight to Him with their broken resolutions and ideals, can and will make them whole and strong and beautiful again. He can make the weakest spots in any life so strong that never under any temptation or under any crash of disaster or force of evil will they break again.

## Machines Must Run at Proper Speed.

A machine is designed to be operated at a certain speed or with only a limited variation either above or below this speed. It will do its best work when operated at this speed and if it is operated at any other speed, the best results will not be secured and often serious failure will result.

For instance, the gas engine may be designed to operate at a maximum speed of five hundred revolutions per minute. It may be unaccountably and perhaps dangerous to run it at a speed faster than this. The lubrication, the reciprocating parts, the flywheel and the bearings have all been designed for pressure and strains resulting from this speed, and if it is exceeded, something is likely to break.

With power units and power driven machines fast coming into wide use, it is necessary to give careful consideration to the matter of speeds. Tractors are made with different sized pulleys, running at different speeds. The same is true of power-driven machines of the same class. For instance, one engine-cutter may have a ten-revolution pulley, which runs at 700-revolutions per minute, while another one may have an eight-inch pulley, supposed to run at 900-revolutions per minute. It is clear that confusion is sure to result if the machines are connected up without looking to see what size pulleys they possess.

Manufacturers, engineering societies and users are all interested in the proposals which are being made to standardize belt speeds and final action is very close on the adoption of the following speeds: 1,500, 2,000, 3,000, 3,250 and 3,500 feet per minute.

It means that manufacturers will have to carry fewer pulley sizes in stock and buyers of machines will obtain not only the direct advantage resulting from this, but the great advantage of not having to change pulleys when it is desired to use certain machines.

## Getting Rid of Rats.

Sometimes a good cat or a rat terrier is all that is necessary to rid the premises of this dangerous pest. There are various rat poisons on the market which have proven very successful. The following home-made poisons are probably similar to some commercial ones, and equally effective.

One-quarter of a pound of carbonate of baryta, six ounces each of sugar and oatmeal or wheat flour, and ensure a strong odor makes a very good poison. The advantage of this poison is that it works so slowly that the victims generally die in the premises in search of water. Barym carbonate and oatmeal is also a good remedy. One part poison to eight of the oatmeal, made into a stiff dough by the use of water is all that is necessary to have the poison ready for use. This is also a slow-acting poison. What is called French paste is also used to rid the premises of rats. This is made of three pounds of oatmeal or wheat flour, one-half ounce of powdered indigo, four ounces of finely powdered white arsenic, and one-quarter gram of oil of aniseed. These ingredients should be mixed and then worked into a paste with two or one-quarter pounds of melted beef suet or mutton tallow.

To get the best results from any of these poisons, they should be put in places in which the rats are likely to frequent. Care should also be taken to keep them from other animals and poultry.