

# Efficient Farming

## DON'T FEED CORN ALONE.

It is surprising how many folks persist in feeding corn, or corn and oats, to young pigs throughout the year, oftentimes without salt or other minerals. A good many of these same folks feed corn, or corn and oats, sometimes with salt, to the brood sows in the wintertime.

Now young growing pigs which have access to the high class forages such as alfalfa, clover, alsike clover and rape can do fairly well on just corn, or corn and oats, yet experiences teach us that they do not do nearly so well as they should. Let us examine the proof.

One year we carried some brood sows on corn. These sows gained approximately a third of a pound a day and they farrowed litters which averaged 13.2 pounds. Where meat-meal tankage was fed in addition at the rate of two-fifths of a pound a sow daily the sows gained better than three-fifths of a pound daily and gave birth to litters that averaged close to 20 pounds.

The corn-alone sows produced pigs averaging 1.7 pounds in weight, whereas sows that received corn and meat-meal tankage produced pigs that weighed 2.2 pounds.

The addition of meat-meal tankage to the corn ration was instrumental in causing stronger pigs.

Where meat-meal tankage was used a greater percentage of pigs were enabled to get into the strong class.

The corn-alone sows had only 68 pigs out of 100 farrowed in the strong class, whereas meat-meal tankage and corn feeding resulted in putting 93 out of the 100 in the strong class.

We tried adding oats to the corn to see what it would do in helping to balance the ration. The addition of just oats to just corn, though helping some, is not the best way by a long way. Some oats added to a corn-and-milk ration or a corn-and-tankage ration is much more beneficial than where they are just added to corn.

Where just corn and oats are fed to brood sows carrying pigs in the wintertime the litters aren't any stronger or larger at birth than where just corn is used.

The remedy is obvious. In both summer and winter add green pasture, milk products, packing-house by-products, alfalfa hay or a combination of these feeds with a good mineral mixture.

A good mineral mixture carries salt; a phosphorus-carrying, bone-building product, such as bone meal; a calcium carrier, such as lime; and an iodine carrier, such as potassium iodide.

One year we fed some young growing pigs for five months in dry lot, one group receiving shelled corn, 60 per cent. protein meat-meal tankage and block salt in separate self-feeders, with another group receiving shelled corn, 60 per cent. protein meat-meal tankage and block salt in separate self-feeders, with another group receiving the same feeds but with the tankage omitted.

These pigs weighed 42 pounds at the start of the experiment. At the end of the five months the corn-and-salt-fed pigs weighed only fifty-seven pounds.

During the whole period they averaged in consumption only 1.56 pounds of corn a head daily, which is a low consumption. Although they had all the corn they wanted they wouldn't eat any more than that, and on this consumption they gained only a tenth of a pound a day.

Was it a case of too much corn that these pigs did not gain better?

These pigs didn't receive too much corn, because if the corn was properly balanced the pigs would have eaten more corn than ever and would have done much better. As it was, these pigs took 1,446 pounds of corn plus two pounds of salt or a total of 1,448 pounds of feed for the hundred pounds of gain.

Contrast this poor showing with that of litter mates fed alongside but getting tankage in addition to corn and salt.

These pigs ate almost three times as much corn, or 4.4 pounds daily. The reason why they ate three times as much corn was because their digestive and assimilative capacity was enlarged due to tankage feeding. They averaged three-fifths of a pound of tankage daily a head.

By feeding three-fifths of a pound of the seemingly high-priced tankage it was made possible for these pigs to practically triple their consumption of the very cheap corn and do so economically. The tankage was an economical investment.

The tankage-fed pigs weighed 226 pounds at the end of the five months of feeding as compared to fifty-seven pounds where no tankage was allowed. The difference in weight of the pigs at the end of five months was exactly 169 pounds a head on the average, and the feed requirement for 100 pounds of gain was very much lower—less than a third.

We have noted that the corn-fed pigs took 1,448 pounds of feed for a hundred pounds of gain. These tankage-fed pigs receiving corn and salt in a similar manner took only 409 pounds of feed for the hundred pounds of gain. This 409 pounds was distributed as follows: shelled corn, 362; tankage, 47; and salt less than a seventh of a pound.

The forty-seven pounds of tankage, less than a bushel, saved 1,084 pounds

of corn grain as well as two pounds of salt, a total of 1,086 pounds of feed; but even this does not tell the whole story because these fifty-seven-pound pigs would need to be fed much longer in order to bring them up to a marketable finish and acceptable weight.

We took these fifty-seven-pound pigs and added tankage to their ration, and finally after 249 days of feeding they made the required weight; instead of taking five months to get the required weight it took better than eight months. Instead of taking 409 pounds of feed for the 100 pounds of gain it took 459 pounds of feed; here was a loss of forty-eight pounds of feed on the hundred pounds of gain as well as three months' loss in time.

It pays to balance the corn properly.

## The Fall Fattening.

Too often the process of fattening consists of feeding the flock heavily on corn for about ten days or a week before marketing. This sudden dose of an unaccustomed feed usually gives turkeys the scours, or at best results in the deposit of a thin layer of fat around the intestine.

The process of fattening turkeys must be more gradual than for other poultry. For Thanksgiving marketing the fattening should begin about the middle of September.

A light feeding of grain in the morning and evening should be gradually increased until toward the end of the fattening period the birds are fed, three times a day, all the grain that they will clean up in four or five minutes.

At the beginning of the period equal parts of wheat, oats and corn make a very good ration. The proportion of corn should be gradually increased until it makes up the main part of the diet during the last two weeks before marketing. New corn should never be given, as it almost invariably results in scours.

Kafir or milo are good substitutes for corn, ten pounds of either of these grains being equivalent in feeding value to nine pounds of corn.

## Pen Fattening Turkeys.

Pen fattening has not proved very popular in this country, though several experiment stations have found that turkeys can be successfully fattened in pens.

In England turkeys are regularly penned up for fattening, apparently with success, and in Normandy the birds are actually crammed twice a day with dough composed of barley and boiled potatoes. The secret of pen fattening seems to lie in giving the flock plenty of room and in maintaining a balanced ration.

In Normandy the turkeys are driven out to range after the morning feed, and though they do not wander far enough to work off the effects of the heavy feeding, they secure enough exercise to keep them in a healthy condition, and at the same time pick up enough insects and green food to balance the unaccustomed diet.

If turkeys are penned up for fattening, a supply of green food should be kept constantly before them, and animal food in the form of meat scrap should be given.

The period of pen fattening should not exceed two or three weeks.



When lime is lacking the feed a drain is made on the reserve supply in the bones and soft tissues of poultry, which interferes materially with egg production in mature hens and in the development of growing chicks. Another important fact is that lime is more easily taken from the bones of the living bird than from dead ground bone fed to the chickens.

Many rations fed to poultry under present conditions contain much less lime than is required by the body.

It is suggested that poultrymen meet this demand by adding lime to the ration in the form of oyster shell or some other inorganic form for mature birds, and in the form of vegetable feeds rich in lime for growing chicks.

Young clover, alfalfa and similar feeds are excellent sources of lime for the young chick or duckling.

Ground bone is not a very satisfactory source of lime, however, either for young birds or for mature fowls.

Neither hen nor duck can consume enough of the bulky feeds to meet the lime requirement of the laying period, and most grain feeds are deficient in this element.

But the mature fowl can make use of lime in an inorganic form, such as oyster shell, without much difficulty.

Young birds cannot so freely supply their needs from such sources, so it is highly desirable to provide a regular supply of vegetable feeds rich in lime for them.

Though it is unlikely that the flock would ever lack the small quantities of calcium required for the normal functions of the body, such as maintaining the heart action and imparting the necessary properties to the blood, it is unwise to allow the reservoir of the important mineral elements to become much depleted, particularly during growth or egg production.

Hundreds of thousands of farmers, and practically every experiment station in the land have proven the efficiency of the silo.



Queen's University, Belfast, Ireland, recently conferred honorary degrees of Doctor of Laws on the Duke and Duchess of York. They are shown in their gowns and hoods after the ceremony.

## PLEASANT COUNTRY KITCHENS

BY SYBILLE MAYER.

No matter how efficient a workshop her kitchen may be, how well stocked with adequate utensils, with fine labor-saving devices and the like, every woman who wants her home to be attractive knows that the effort at decoration should not stop at the kitchen door.

The old, grim, dark green or brown, dull pattern wherein the cooking used to be done has now given way to a colorful, cheerful room in which it is a real pleasure to spend even a whole day, canning or baking or preparing meals.

Furniture is painted, closets are decorated, aprons, towels, curtains are all planned to harmonize with the chosen color scheme—and the effect is so pretty, though so simply gained, that the kitchen becomes one of the most admired rooms in the house.

The color scheme is deft blue with orange or yellow, though the same plan of decoration may be followed in rose with a lighter blue, Chinese red and gray, or any desired combination of shades.

The window curtains are mere panels of unbleached muslin, gayly embroidered in rather bold effect. There is a one-and-a-half-inch border of blue denim stitched about the edges of the curtains, and also across the valance.

The large bird-and-flower motif used for decorating the curtains is quickly worked in threads of yellow wool laid flat, and couched down with blue mercerized cotton; two shades of blue and henna wool are used in the ordinary simple stitches to complete the design. The two motifs are arranged along the centre of the two side panels about five inches apart.

Any other design may be selected for the curtain decoration, or one may prefer to use merely the bands of blue for a finish. This effect will be very pretty.

## DRESSED-UP FLOWER POTS.

On the window sill in this attractive room are two plants, each in its attractively dressed flower pot. Cut a strip of buckram the height of the pot, allowing a bit for lapping over, glue it together, and cover with a length of yellow oilcloth, turning it in at the edges all around.

Line with a piece of heavy wrapping paper. A piece of wire of the same circumference as the cover, snapped into place at the top and bottom makes an excellent re-enforcement.

Stencil decorations are the prettiest and most simple for these flower pots. Any small simple design may be used for the stencils—flowers, butterflies or whatever one's fancy may dictate. Or we may cut the design of blue oilcloth and paste a bit of black oilcloth to show through the open work, making a very good-looking decoration.

A paper punch from the five-and-ten-cent store will make small round holes in a narrow strip of blue oilcloth for a border at the tops of the flower pots.

When finished, these covers are merely slipped over the flower pot, and may be removed when the plant is watered.

Tin cans from the grocer's can be covered in like manner and used as containers for dry groceries. Placed on shelves in the kitchen cupboard, they are not only most convenient, but add a cheerful note of decoration as well.

While one is covering the cans and flower-pot holders, it will be well to make a good strong waste-paper basket to catch odds and ends of string and wrapping paper.

The foundation of the basket is made of very heavy cardboard, cut 16½ inches by 10 inches, with a ten-inch base. Each side is joined to the next with a narrow piece of strong paper glued down securely. The base is likewise glued to the sides.

Yellow oilcloth cut 41 inches long by 19½ wide is used as the outside covering for the basket. It is glued on with all the edges turned in neatly. A band of blue oilcloth wider than that used on the flower-pot holder, but ornamented with cut work, is glued about the basket near the top and adds much to the attractiveness.

For the shelves of the kitchen closet or dresser an edging of unbleached muslin buttonhole in heavy old-blue mercerized cotton in a Greek-key design is made. The upper edge of the shelving is neatly hemmed. When soiled it may be easily washed and

ironed, so it is practical and durable. This pattern comes in strips of two and a half yards.

If additional shelving is required the design is simply laid on the material over a piece of carbon paper, and thus traced on the muslin. With this design a number of others are to be had, so that one has a wide choice. Tack the finished edge to the shelves with small tacks that may be readily removed.

## TEA TOWELS TO MATCH.

Tea towels to match the pretty kitchen must be made next, and two neat and dainty designs are used. They are each made of a yard of white toweling.

One towel is offset by a neat inch-and-a-half blue-denim border at one end. Above there are two bits of embroidery done in orange and blue.

The second towel has a novel alternate orange-and-blue crochet edge below a basket-and-flower wreath of embroidery done in the same colors. Crochet is worked as follows:

Make chain about one inch long, turn, make double crochet into seventh chain, make ten double crochets into chains, chain two, double crochet one, turn, chain five, ten double crochets, chain two, one double crochet.

Third row repeat, same as second; fourth chain five, one double crochet, chain two, one double crochet, all the way across. Change cotton when made in two colors. Picot—one double crochet, chain five, double crochet backward into first chain between holes on one edge of lace.

Of course one must have a becoming house dress to wear in this pretty kitchen. A short-sleeved model seems most suitable. This dress might be made of the unbleached cotton, trimmed or buttoned down the entire length of the front with large dark-blue bone buttons and bound with blue bias bands.

Then some rainy afternoon cut yourself out an apron of unbleached cotton. Bind the edges in old-blue cotton bias-seam binding. At each shoulder point and the three corners of the apron work a small lattice-and-flower design.

The lattice work is done with the blue, and a yellow seam binding folded in half through the centre and threaded into a very heavy needle. Follow the lattice design, alternating the blue and yellow, interlacing them, and sticking the needle through the material at the end of each row, and sew it down on the wrong side.

The three small flowers are done in blue, rose and pink wool, with green for the leaves.

When and How to Pick Apples.

For obvious reasons, as the Dominion Horticulturist says in his bulletin on "The Apple in Canada," it is difficult to give exact information as to the best time to pick apples. Some general suggestions can be given. Early apples which are intended for near markets should be picked when almost mellow and disposed of as soon as possible. The best way of putting up early apples is in 6 or 11-quart baskets with leno covers, or in boxes. Winter apples may be left on the trees until there is danger of injurious frost. In large orchards it is necessary to begin picking in good season, taking the different varieties in succession, beginning with the early winter sorts and varieties that drop easily. An apple before being picked should have its seeds almost mature and have taken on most of its color. Always remember that apples are easily bruised and that bruises lead to early rotting. Apples should not be picked and piled in the orchard, as they are liable to heat in the piles and ripen rapidly, and thus have their keeping quality impaired. Don't adopt the practice in picking of shaking the fruit from the trees. The stem should remain on the apple, as if broken off decay is more likely to set in. Half-bushel baskets lined with soft material are convenient receptacles for the apples as picked. They can have a hook fastened on the handle, so as to be suspended while the picker is at work.

Thongs gather annually at our agricultural fairs in anticipation of seeing the best that man has accomplished in the various phases of farm activities.

# The Sunday School Lesson

AUGUST 24

Jesus Talks With Nicodemus, John 3: 1-17. Golden Text—For God so loved the world, that he gave his only begotten Son, that whosoever believeth on him should not perish, but have eternal life.—John 3: 16.

## ANALYSIS.

I. THE NEW BIRTH GIVING ENTRANCE TO THE KINGDOM, 1-6.

II. THE REGENERATING POWER OF THE SPIRIT, 7-11.

III. THE LOVE OF GOD TO MEN, 13-17.

INTRODUCTION.—The great theme of Jesus' preaching, both in the earlier and in the later stages of his ministry, both in public discourses to the multitude and in the private instruction of his disciples, was the coming of the Kingdom of God, the revelation of God's almighty will to save and redeem Israel. See Mark 1:14, 15; 1:11; 4:25, 34, etc. Occasionally an individual inquirer would come to him and Jesus would speak to him of the inward personal mystery of the Kingdom. Such an inquirer was Nicodemus, who comes before us in the present lesson. He is a Pharisee, a Rabbi, and a member of the Jewish Sanhedrin, or legislature. He is in earnest about the Kingdom, but he thinks of it externally and materialistically, not inwardly and spiritually. Like the Jews of the time, he thinks the Kingdom will come suddenly from the skies by an outward miracle of God. Jesus, on the other hand, teaches that the Kingdom comes inwardly by a miracle of the soul. This is the subject of the present talk with Nicodemus. Jesus speaks of the new birth from above, by which men enter into spiritual life.

I. THE NEW BIRTH GIVING ENTRANCE TO THE KINGDOM, 1-6.

Vs. 1, 2. Nicodemus came to Jesus by night, under cover of darkness, because he wished to escape the notice of men. He is afraid to show openly his interest in Jesus or to come without reserves. On the other hand, he is sufficiently in earnest to come, and to come without further delay. He has been impressed by Jesus' "signs." He believes that Jesus is a divinely-sent teacher, and he is willing to accord him recognition.

Vs. 3. Nicodemus, though interested in the Kingdom of God, has not questioned his own qualifications to belong to it. He thinks that as a Jew and as a correct Pharisee, he will certainly see the salvation of God. But Jesus at once declares that there is no entrance to the Kingdom along the line of such expectations. The Kingdom of God does not come to men by outward happenings, but by an inward change of the soul. Men inherit it not by Jewish birth or by descent from Abraham, but by a new personal birth of the Spirit. A man must lay down pride and self-will, and enter the Kingdom of God like a little child. He must begin life over again by personal surrender to God. Just as we enter on the physical life by physical birth, so we must enter on spiritual life by a spiritual birth. "Solemnly I say to you, unless a man is born from above, he cannot see the Kingdom of God."

II. THE REGENERATING POWER OF THE SPIRIT, 7-11.

Vs. 7-9. This astonishes Nicodemus, and he covers his disappointment by asking how a man in adult life can possibly experience a new birth. Jesus admits the mystery, but calls attention to the power of the Spirit of God, which in its operation on the souls of men is mysterious as the night wind rustling among the trees. It is real and present everywhere, yet none can tell "whence it comes, and whither it goes." Nicodemus should not forget the unseen power of that spirit when he speaks of what is possible or not possible for men.

Vs. 10-12. As a teacher in Israel, Nicodemus should have known that regeneration is an actual fact of experience. Though he has been living by tradition, and therefore lacks direct personal experience of the power of God, yet all around are men who can testify to having been brought out of spiritual darkness into the light of life. Among these are the disciples and converts of Jesus, and if Nicodemus will openly give himself to Christ, he, too, will experience the new birth from above. Not till he has taken this step, and realized that regeneration, the emergence of a new life in the soul, is a fact of experience (v. 12), will he understand the still higher, heavenly mystery of the love of God in the redemption of men.

III. THE LOVE OF GOD IN REDEMPTION, 13-17.

Vs. 13-15. On this subject, Jesus alone has a right to speak. He, as the Son of man, that is, the heavenly Messiah, has come down from heaven to show to men the love of God. In order that men may see that love, he must be "lifted" on the cross. Face to face with the cross men will see at last how utterly great is God's yearning to bring men to eternal life. Vs. 16, 17. For that cross shows the love of God. God loved the world so much that he gave up his only Son that every one who believes in him may have eternal life (the life of the Kingdom). The Jews believed that the Messiah, when he came, would be an executor of justice. They did not dream that he would be a sacrifice of holy love. But Jesus says that his cross will be a throne from which he will reign.

## APPLICATION.

The Highest Faculty. Nicodemus is a very up-to-date type. He has wealth, position, leisure, scholarship and morality. If any man could do without the new birth, Nicodemus was the man. He was moral, religious and sincere. He admired Jesus and had it in his mind to give him some good advice. He will offer to Jesus the judgment of his trained intellect. He is stunned to be candidly told that "man lives first and thinks afterwards," and that he had not yet begun to live. Life cannot be taught, and goodness is a life that must be grown, not a lesson that can be learned. Intellect is a high faculty, but at its highest it may

be "icily regular, faultily faultless, and splendidly null." Culture cannot create goodness, and the education of a bad man will only add cleverness to his baseness.

Becoming a Christian. Desire to find the best kind of life and live it will be awakened when we have learned that even the good is not the best. Painting the pump will not purify the water. To become Christian is to live a new life in a new way. Consciously or unconsciously this new life must have a definite beginning. There is a world of difference between a tiny seed and a grain of sand. The sprouting of the seed is the beginning of the plant's life. The child, like a little seed, holds a thousand green leaves folded tight.

Holds a thousand flowers, pink and white, Hold a tree with its branches all complete, And fruit that is juicy, golden and sweet.

But before all this can be, there comes a day when soil and sun and shower have all done their part of preparation, and the new tree begins to be. This is its birth, the starting point of a new life. Growth follows, in body through exercise, in the mind through education, in the soul through aspiration, "unto a perfect man, unto the measure of the stature of the fullness of Christ." But, just as the seed must have the sun, before the dormant life, as it becomes the life it was meant to be, so the soul must be quickened "from above" by the power outside ourselves that makes for righteousness. This is the plain words and unforgettable phrase of Jesus, spoken to a good man whose life was not the highest possible, as the "new birth."

## Right Weight for Marketing Hogs.

Mr. A. A. McMillan, Chief of the Sheep and Swine Division of the Dominion Live Stock Branch, has this to say regarding the right weight for marketing hogs: Farmers who aim to market a high percentage of hogs of the select bacon grade, after first having made sure that their breeding stock is of the right type and conformation, should feed in accordance with recognized and approved methods, and aim to market each litter at an average weight of two hundred pounds. There might, of course, be times when a falling market would warrant selling at slightly lighter weights, whereas a rising market might be an inducement to feed somewhat longer. Any great deviation from the two hundred pound average will undoubtedly result in the sale of under-finished hogs if early marketing is practiced; whereas, if it is exceeded to any great extent a percentage of heavy hogs will result.

In another part of his "Handbook on Hog Grading," from which the foregoing extract is taken, Mr. MacMillan, dealing with heavy and extra heavy grades, remarks that when closer attention is paid to finishing at the 200-pound average, very few hogs will be marketed at over weight, and the extra heavy grade, with few exceptions, will include only those held for breeding purposes which have proved sterile.

## Comparison of Red, Alsike and Sweet Clovers as Pasture Crops.

In each of two years the experiment was conducted at the College comparing the amount of pasture crop produced by sweet clover, by alsike clover and by common red clover. The yields per acre were determined at each of six cuttings in each of the two years. Three weeks were allowed between each two cuttings. The results are very interesting in furnishing definite information regarding these three crops in the production of green clover which would correspond pretty closely to the relative amounts of pasture produced. The following table gives the average of the two years' experiments in tons per acre of pasture crops:

Periods	Variety of Clover	Tons of pasture crop per acre	
Cutting	Red	Alsike	Sweet
1st	18.5	11.0	11.0
2nd	1.4	2	1.5
3rd	2.9	4.0	2.5
4th	4.6	1.7	3.0
5th	2.0	3.4	1.9
6th	1.6	1.1	.9

## Feed Sour Milk.

While the turkeys are ranging and there is a plentiful supply of insects and of weed seeds, the birds will require very little extra feeding. If any special feed is to be recommended, it is sour milk.

A trough of sour milk, kept where the birds will have access to it, will do much toward keeping them in a good condition. Care must be taken that the sour-milk supply is kept fresh. Milk that is allowed to stand for days at a time in unsanitary troughs will do more harm than good.

If the natural food supply is cut down on account of drought, a light feeding of grain both morning and evening may be necessary. Or if the flock ranges too far, a regular feed at night will get the birds into the habit of returning to the home roost every night, and is a very effective curb to the turkey's natural wanderlust.