

EFFICIENT FARMING

THE BACON HOG IN PRESENT-DAY DAIRY FARMING.

The prevailing low prices of dairy products make it imperative that the dairy farmer dispose of his produce in such a manner that the maximum return will be forthcoming. Although the cost of milk production has materially decreased within the last two years, the market for whole milk, which has also decreased, is still incapable of absorbing this milk at a figure that will net the producer a reasonable profit, more particularly when the milk, in order to reach its market, must be shipped considerable distances.

The dairy farmer who is so located where he can cater to a city's whole milk trade is in a better position to solve the difficulty than one at a considerable distance from such a market. Under the latter circumstances, cream can be more profitably disposed of than whole milk. On the other hand, separated or skim-milk has a very high feeding value for live stock, particularly for the feeding of hogs, and can be used very profitably for this purpose.

It is frequently stated that approximately 5 pounds of meal are required to produce a pound of pork with hogs finishing about 220 pounds in weight. For hogs finishing at 180 pounds, the meal required should not exceed 4 1/2 pounds, while hogs around 150 pounds should not need more than 4 pounds of meal per pound of gain, these figures being averages, when no milk products are fed.

It has been found that the feed cost for a ten-week-old pig during the last year averaged about \$3.08. Assuming that this pig weighs 40 pounds, and in order to reach market weight it must gain 110 pounds, and also assuming that this hog will consume an average of 4.5 pounds of meal per pound of gain, this meal costing \$30 per ton, the hog will then cost \$12.53 when 180 pounds in weight.

It has been repeatedly demonstrated that the addition of skim-milk to a meal ration reduces the meal consumption per pound of gain. An experiment recently completed at the Central Experimental Farm demonstrated that in a ration in which skim-milk and meal were fed, the feed required to produce a pound of gain averaged 2 pounds of meal and 4.8 pounds of skim-milk, with hogs averaging 125

pounds at the end of the test. Assuming that without milk these hogs would have consumed 4 pounds of meal for each pound of gain, it may be concluded that the 4.8 pounds of skim-milk effected a saving of two pounds of meal. With skim-milk worth 20 cents per hundred and meal worth \$30 per ton, a pound of gain would show a feed cost of 2.96 cents as compared with 6 cents for a straight meal ration, the milk thus effecting a saving of \$2.04 per hundred of pork.

Another test conducted for a period of 90 days with 17 Yorkshire hogs, which averaged 170 pounds live weight at the end of the test, showed an average meal consumption of 4.87 pounds per pound of gain. Comparing these feeds on the same cost basis, it is found that these gains would cost \$2.96 cents per pound of gain as compared with 6.75 cents for a straight meal ration. The hogs on this test were about three months of age when placed on the test, while in the former test the hogs were fully a month younger.

A further test with Berkshire hogs (5) fed from weaning to the time they attained 175 pounds in weight—a period of 153 days—showed an average feed consumption of 1.6 pounds of meal and 5.4 pounds of milk per pound of gain, this ration costing 3.5 cents per pound of gain, which is exceptionally low.

It may be deduced from these tests that milk products lower meal consumption; that when fed to bacon type hogs, milk products ensure a select finished product, other things being equal, and that, particularly for young pigs, milk products are invaluable.

While these tests are valuable as an indication of what can be done with skim-milk and milk products in the production of bacon, the sure criterion of profit lies in the ability of the sow to farrow and raise a large number of pigs to six or eight weeks of age.

The utilization of dairy products for such a purpose would seem to offer a practical solution for the marketing of these products as well as deflecting the whole milk into another channel, and thereby permitting of further development of the dairy industry without fear of the markets becoming congested and resulting in a still further drop in prices.

Fall Planting.

There is such a rush of work in the spring that it is desirable to do any planting in the fall that can be done, with a reasonable chance of success, in order to relieve the pressure in the spring. Further, there are some plants which are more likely to succeed if planted in the fall.

The spring is, however, the best time to plant trees which are above the snowline all winter and exposed to drying winds. They do not usually become sufficiently established before winter sets in for them to take up moisture, the result being that a drying out of the trunk begins, and by spring the trunk has become so dry that growth is prevented except from the lower part which is not a satisfactory condition sometimes; also, trees planted in the fall are heaved up to some extent and are then not in the ground deep enough; and they do not do well afterwards, even supposing they live. In the milder parts of Canada, such as in the coast climate of British Columbia, trees can be planted successfully in the fall, and in some seasons they can be planted quite satisfactorily in other parts of Canada in the fall, but, taking one year with another, it is safer to plant in spring.

In the case of bush fruits, such as currants and gooseberries, which begin growth early in the spring, it is much better to plant them in the fall. If they can be obtained during the latter part of September that would be the best time to plant.

Raspberries may be planted with about equal success in fall or spring, but the advantage of fall planting is that, should any of the plants die, they can be replaced in good time in the spring, so saving a season; whereas if the main planting is delayed until spring it will be too late to replace that spring when it becomes known which are dead.

If strawberries are planted in the fall they will become well rooted before winter. It would be advisable, however, to use pot plants and plant in August; then one might get some fruit the following spring. But early in the spring is the ideal time to plant strawberries, as the few fruits which are obtainable from fall set plants make planting them hardly worth while.

Spring is the proper time to plant ornamental trees and shrubs; although, as it will not matter much if the branches of shrubs are killed back at first, should the fall be found more convenient they can be planted quite satisfactorily then. There would be the same objection to planting ornamental trees in the fall as with fruit trees. Conifers should not be planted in the fall.

Roses may be planted quite successfully in the fall, but, considering the fact that so many rose bushes are killed outright each winter, especially in Eastern Canada, it seems scarcely worth while to buy plants and then to take this risk of losing them. It is important, however, to have rose plants on hand to set out at the first opportunity in spring, in order that they might be well established before hot weather.

The fall is the best time to plant most herbaceous perennials, and the earlier these can be set out after the soil is likely to remain moist, the longer plants they will make and the greater display of bloom there should be from them the following season.

The peony should be planted in September if possible.

Getting Rid of the Loafing Hen.

BY C. S. PLATT.

In every flock, regardless of the age of the birds, there are some each year that quit laying during the summer, and will not begin until late the next winter. These hens can never make up the loss completely, and the good manager weeds them out as soon as they become unprofitable.

Several years ago I attended a poultry demonstration on culling. That evening I picked over my eighty-six hens and took out twenty-six that I thought were through laying for the season. This was in the latter part of August. Inasmuch as I was a little skeptical, I placed these twenty-six birds in another coop and kept them for a month longer.

I got more eggs by culling—During August I had received sixty-one dozen eggs from the eighty-six hens, or about eight eggs per bird. During September I received forty-two dozen from my sixty good birds, or again about eight eggs per bird. From my twenty-six culled I received four dozen eggs, or less than two eggs per bird, in September, and I noticed that these were laid by only a few individuals. I was so impressed by the practical possibilities of the proposition that I resolved then and there to practice thorough culling the next year, which I did.

Profits per bird increased—My flock the next year consisted of over 300 birds, and my summer egg production was increased approximately 15 per cent. per individual. My profits, per bird, from June to November, amounted to sixty cents more per bird than they had even been before, and as the prices had even about the same during that season as they had been previously, I gave all credit for the increase in profit to the simple fact that I had not been feeding loafers.

In order to get the best results from

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culling, start about July 1. At that time all hens that are molting, and all that show yellow legs (the latter applies more to the Leghorns than it does to American breeds.—Editor) should be carefully picked out and examined to see whether or not they are laying.

How to pick out loafers—To determine this, note the distance between the pelvic bones and the condition of the vent. The pelvic bones lie on each side of the vent, and a hen in high production naturally spreads these apart. The best means of measuring the distance is by using the fingers.

If two or more fingers can be placed side by side between these bones, the bird is probably still laying. If in doubt, examine the vent. The vent of a laying bird is large, white and moist, while that of a non-layer is yellow, small, dry and wrinkled.

In all culling work the age of the bird should not be considered. Any bird that is laying in November can be profitably kept over the winter, regardless of her age.

HOGS

I have never seen a more practical, effective, and at the same time economical farrowing outfit, especially for the hog raiser who has not more than a dozen or fifteen sows, than that used by a young Hampshire breeder in Indiana.

A dozen individual houses, a strip of concrete 12 feet wide and 70-odd feet long, and panels is all there is

to it. The total cost was less than \$300.

For the spring farrowing season the houses are arranged end to end along the north side of the strip of concrete. There is no projection to the roof at the ends of the houses. They can be butted right up against each other.

Straw and manure are piled up along the north side, making a snug, warm place for the sows and pigs on cold March days.

The houses are rectangular, with gable roof, the long slope to the back of the house and a shorter, steeper one to the front.

Both front and rear sections of the roof can be lifted. It is convenient to work around the sows at farrowing time, and the sun shines into the houses on the nice days.

After the houses are placed along the concrete, the panels are set up, dividing the strip of concrete into a dozen open lots that are 6 feet wide. The sows are held in place by slip-lows, small, dry and wrinkled.

"I used different outfits for farrowing quarters, but this is the best one of all," said Mr. Gardner. "I had 12 sows that farrowed 110 pigs last spring, and I still have 95 pigs, although the weather was cold and rainy."

The Sunday School Lesson

SEPTEMBER 2

Paul the Apostle. Acts 7: 54 to 8: 3; 9: 1-31; 11: 25-30; 13 to 28; Phil. 3: 4-14. Golden Text—I press on toward the mark for the prize of the high calling of God in Christ Jesus.—Phi. 3: 14.

LESSON FOREWORD.—This week we study the life of Paul. Paul is, after Christ, the most conspicuous figure in the New Testament. It was the great achievement of Paul to lead Christianity to a world-wide adventure. Paul was led by his experiences to see that the light of the world, and to so understand the world as to see that its deepest need was for that light. His whole life was dedicated to bringing Christ and the world together.

I. HOW PAUL FOUND CHRIST, ACTS 22: 3, 6-10.

Vs. 3. I am verily a man . . . a Jew. Paul speaks these words in Jerusalem, where he had come for the fifth and last time, after the third missionary journey. Friends in Ephesus, Hierapolis and Caesarea had tried to dissuade him from this journey, while Agabus, the prophet, had said his going would mean imprisonment to him, Acts 21: 11. But Paul would not be persuaded.

Vs. 12-14. Not as though I had already attained. Paul has not yet reached all his desires. I follow after . . . that I may apprehend; he seeks to attain what has not yet been attained. He holds it as a prize, just as Christ had laid hold on him for this end. One thing . . . forgetting . . . reaching forth . . . press toward the mark. A high call has come to Paul from God, through the earlier period. He has a pre-eminence desire of Paul. So like a runner in the race, he never looks back nor thinks back, but thinks only of the goal to be reached and the prize to be won. These words show the earnestness of Paul. He is Paul the prisoner. But his spirit is as eager as ever in the service of his Master.

II. HOW PAUL SERVED CHRIST, PHIL. 3: 7-14.

Vs. 7, 8. It came to pass, that, as I made my journey. Paul, having declared himself a Jew, now proceeds to tell how he became a Christian on the way to Damascus as a persecutor. There shone . . . a great light. Even at noon, when the sun was at its height, this greater light shined. He heard a voice. The original words make it clear that Paul heard words, while his companions heard only a sound without hearing the words. Saul, Saul. They were words, not of anger, but of loving reproach.

Vs. 8-10. Who art thou . . . I am Jesus of Nazareth. It was Jesus whose Messiahship and resurrection Paul had denied. Whom thou persecutest. The persecution of the disciples of Jesus was a persecution of Jesus himself. What shall I do? These are the words of surrender. His proud will has been broken by love. His hard heart has been melted. Go into Damascus . . . It shall be told thee. The persecutor enters Damascus led by the hand. There in the dark he received his great commission.

III. HOW PAUL SERVED CHRIST, PHIL. 3: 7-14.

Vs. 7, 8. This passage is taken from a letter written by Paul, a prisoner in Rome, to the Christians in Philippi, in acknowledgment of their kindness in sending a gift to him. Among other things he warns them against teachers who would make Judaism greater than Christianity. What things were gain . . . counted loss. As a Jew, Paul had all these things which the false teachers counted important—was a Hebrew of the Hebrews, a Pharisee, he was zealous under persecution, he was blameless in his observance of the law; but when he came to Christ, all these things, on which he prided himself, were as nothing. All things . . . loss; not only the things of his past life, but anything in his present life in which he might glory, were also counted loss. For the excellency of the knowledge of Christ; for the supreme worth of all these things that he had learned in Christ and learned

of Christ. The knowledge of which Paul speaks is the knowledge of the heart rather than that of the mind. Count . . . but dung. Paul does not seek to possess, not the righteousness for Christ and his gains in Christ. His losses are not worth counting. They are like things cast on the rubbish pile.

Vs. 9-11. Be found in him . . . righteousness which is of God. At death, Paul wishes to possess, not the righteousness which comes through seeking to keep the law in one's own strength, but the righteousness which comes through the power of God in his heart, which power faith opens the door to him. Know him . . . conformable unto his death. Paul desires to share in the sufferings of Christ, so that his death would conform in spirit to Christ's death and that so in turn he might share in the power of Christ's resurrection.

Vs. 12-14. Not as though I had already attained. Paul has not yet reached all his desires. I follow after . . . that I may apprehend; he seeks to attain what has not yet been attained. He holds it as a prize, just as Christ had laid hold on him for this end. One thing . . . forgetting . . . reaching forth . . . press toward the mark. A high call has come to Paul from God, through the earlier period. He has a pre-eminence desire of Paul. So like a runner in the race, he never looks back nor thinks back, but thinks only of the goal to be reached and the prize to be won. These words show the earnestness of Paul. He is Paul the prisoner. But his spirit is as eager as ever in the service of his Master.

APPLICATION.

Paul, the Christian. The pre-Christian days of Paul are full of interest for us. No man leaves all his past behind him. The interests of the earlier period have a modifying effect on all subsequent experience. Paul, the Christian apostle, seems, and is, a very different person from Paul, the Pharisee; and yet it is possible to unduly minimize the things that are common to both periods. We can be sure that it was not only as a Christian missionary, under obligation to defend himself, that he was glad and proud to remember and tell of his status as a citizen of Tarsus, and moreover that he enjoyed the privileges and immunities of a Roman citizen. And again, whatever emancipation of thought there was when he heard the Gospel and learned the truth of Christ, there can be no doubt that what he earlier learned at the feet of the great Rabbi, Gamaliel, tinged his doctrine.

Paul, the Christian. Paul was a great Christian. Everything else seems subordinate to this great determinative fact. Christ was everything to him. The love of Christ constrained him, urged and impelled him to all that heroic missionary life of privation and peril.

Paul has no honor and no friend but Christ. Christ was to him both Saviour and Lord. "I live, yet not I, but Christ liveth in me; and the life which I now live in the flesh I live by the faith of the Son of God, who loved me, and gave himself for me." Gal. 2: 20. "For to me to live is Christ." Phil. 1: 21. In his letters he likes to introduce himself as the servant, the slave of Jesus Christ. In all this he is an inspiring example to modern Christians. Personal loyalty to Christ—this was the outstanding fact in Paul's life. (See 2 Cor. 5: 14, 15.) It may be that sometimes this important aspect of Christian life has degenerated, and become too sentimental, but in the manly, wholesome, reverent, passionate devotion of Paul is to be found the secret of his marvelous power, and the church's great need today.

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THE LAWN -- A FOUNDATION FOR THE LANDSCAPE SCHEME

By F. H. Present, Department of Horticulture, Ontario Agricultural College

No other part of a landscape scheme is so much a feature as the lawn. It is the foundation, as it were, upon which the scheme is built and its importance is first, last and always. However well executed the rest of the plan may be, unless the lawn is well made, well cared for and well arranged the whole scheme loses some of its effectiveness, often too much.

Good lawns do not just happen; they are made and developed and yet with very little trouble often they can be brought about. Where horse-power and farm implements are available lawn-making can be easily handled by just applying the same principles as would be used in making a small lawn by hand work.

Drainage is necessary but in many cases is cared for by the natural slope of the ground or the type of soil, for usually the house site has been chosen on well-drained land. Preparation of the land by plowing, harrowing, grading and rolling, etc., follows. And here a point should be strongly emphasized: It is that care must be taken to remove all stones, sticks and rubbish before preparation is completed. In regard to grading, where the lawn is large and not desired perfectly level, the natural contours of the land may be followed more or less. Long, swelling, easy lines of grade are desired where space admits, although in general a level effect is maintained. When the grading has been accomplished and the seed bed put in the very finest possible condition by cultivation and if the land should be poor, 10 to 15 tons per acre of well-rotted manure plowed under or a good leguminous cover crop plowed in will help bring this about, it is ready for seeding.

Now, as to time of seeding, there is always a variety of opinion expressed. Almost any time would be all right, provided the proper conditions of moisture and temperature could be obtained. The spring offers the best time for this temperature-moisture relation and is usually the best time to sow lawn grass seed. Success is often attained through summer or fall seeding or sowing just before the first snow in the fall. Careful work is needed in sowing the seed so as to get an even and sufficient distribution of the seed.

For a good lawn grass seed you can make your own mixture. Remember that those grasses with underground stems are best as they spread quickly, are tenacious and succeed on a great variety of soils. Of these, Red Top (Agrostis alba) and Kentucky Blue (Poa pratensis) are about the best for general purposes. The following mixture, including English Rye Grass, which lends quality, and White Clover—the latter may or may not be used according to your own desire—is recommended: Amount per acre: Kentucky Blue Grass, 30 lbs.; Red Top Grass, 20 lbs.; English Rye Grass, 10 lbs.; White Clover, 2 lbs. After sowing, the grass seed should be lightly covered. In the case of small lawns a fine-toothed rake is very effective for this. Rolling after seeding, is a desirable point, let your own farming practices guide you in this matter.

When the grass has reached 4 to 5 inches in height it should be cut with a scythe. If a lawn mower is used it must be very sharp. Weekly cuttings in moist damp weather should follow, as frequent cuttings thicken

and strengthen the growth of the desirable grasses while tending to keep down weeds.

Once the lawn is established it must still be cared for and to properly maintain it the following things must all be considered:

1. Weeding—A weedy lawn is undesirable; dandelions and plantains are usually the most troublesome weeds. Both may be spudded out, or for dandelions an effective treatment has proven to be a 25 per cent. solution of iron sulphate applied in three applications during August or September. The grass does not appear to be injured and the dandelions are very noticeably reduced.

2. Renewal of Bare Spots and Re-seeding—If bare spots should occur on the lawn fill them in with good fertile soil and re-seed. Likewise it is often necessary and desirable to apply new seed at intervals over the whole lawn, giving a crop of new and fresh plants to fill in any weak spots and to strengthen the whole lawn surface.

3. Use of Manure and Fertilizer—After a dry summer it is often particularly desirable to use an application of manure in the fall. The best form to apply this dressing is as compost or very well-rotted, short manure. Weed seeds are to a great extent eliminated, the appearance is not so unsightly and it is not hard to clean up in the spring after such a dressing. In the spring, frequently, about 100 lbs. of nitrate of soda per acre is used just when growth is first starting. This may be followed in two weeks by another application and a month later by a third. But if for the second application or it might be combined with the first, some such fertilizer as tankage or fish meal were used it would come into availability over a long period and as the grass plants needed it.

4. Rolling—At least each spring rolling should be practiced, when the ground is moist and during the summer also, if possible. Sometimes, if grubs are bothering the grass roots, rolling during the summer with a heavy roller on moist ground tends to control this pest to quite an extent.

5. Watering—Facilities for watering are often not available but during very dry seasons if the lawn could have just a very few good soakings it would be able to come through the season in good shape and to this even under difficulties would often pay for one who appreciates a beautiful lawn.

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CARING FOR SHOW HORSES

BY A. S. ALEXANDER.

First of all, get the horses used to stabling. Cool out the system by giving a few daily two-ounce doses of Glauber's salts dissolved in the drinking water. Give each treatment again, in the show stables, if at any time the horses' feces become mushy, foul-smelling or pale-colored and slimy.

Keep the skin clean and at each grooming throw the weight of the body into the brush or wiping cloth that the muscles may be vigorously massaged. Use the curry-comb to clean the brush, and keep the brush off the skin. Put a little table salt in the drinking water.

USE ONLY FIRST CLASS HAY. Take along old, sound, whole oats and as much home-baled hay as can conveniently be accommodated in the car. Use it immediately to replace any poor hay supplied on the fair grounds and to feed when any derangement of the bowels is seen. At one large fair, years ago, the hay in bales furnished exhibitors was found white with mold and caused serious sickness. Carefully examine all feed and reject that which is questionable. Make no sudden changes in feed.

Bandage the legs lightly when loading or unloading, and also bandage the dock of the tail. Before loading, carefully examine the car and remove all loose nails or those projecting from the walls or fixtures. Also, remove the big sharp slivers. See that head-stalls are in perfect order and tie-rope strong.

KEEP THE HORSES COOL.

Place a big chunk of ice in the manger for the horse to lick during transit. It will slake thirst and do much to prevent over-heating. Have the car well ventilated, but no matter how hot it is, never allow a horse to stand in a cold draft. The attendant may sit between two open car doors for hours without ill effect, but such exposure has caused fatal pneumonia in many a fat show horse. Blanket the chest comfortably if night and mornings are chilly, but leave the hind quarters bare.

When the horses reach the fair-ground stables, again examine for nails and other sharp objects. Before using the stalls, have an attendant spray the manger and walls with a 5 per cent. solution of commercial coal-tar disinfectant. (This should also be used in the box cars or special horse cars). This spraying should be done daily. It is well also to sponge the muzzle of each horse twice daily with a 1 per cent. disinfecting solution. A little fresh chlorid of lime sprinkled on the floors of all old or dirty cars and stables also helps to prevent infection.

Give small amounts of feed often. Never let the horse fast for a long time and then eat heavily. See that each horse is given regular active daily walking exercise in addition to that done by showing in the ring.

Take the horse's temperature night and morning. The average temperature is 100 deg. F. If a rise occurs, at once dissolve a teaspoonful of saltpeter in the drinking water at intervals of four hours and if it persists give two ounces of the following mixture every two, three, four or six hours according to the degree of fever found present: Powdered saltpeter (nitrate of potash), one ounce; fluid extract of belladonna leaves, two drams; fluid extract of gentian root, two ounces; pure water, one pint. Add two or three drams of sweet spirits of niter at each dose, as this stimulant can not safely be mixed and corked in a bottled solution during hot weather. The dose is best given by means of a short-nozzled, strong-barreled, hard-rubber syringe. If complications occur, a graduate veterinarian should at once be employed.

Starting Troubles.

One damp, rainy morning Farmer Brown was having difficulty starting his light delivery truck. Finally he appealed to his neighbor Jones. Jones immediately examined the ignition system closely. Then taking a soft cloth he looked over the ignition coil, carefully wiping all around the centre, or high-tension, terminal which connects to the centre of the distributor cap, taking special care to remove all moisture around the centre terminal. Next he removed the distributor cap and wiped it out on the inside.

Replacing the cap, he next wiped off the porcelain or insulator of the spark plugs. That finished, Jones stepped on the starter, and after a few turns the engine started. Brown was astonished that a dry cloth could cure the trouble, and Jones explained: "On a damp, humid morning like this, after a car or truck has stood all night in the garage, the moisture or 'sweat' will often collect on the spark plugs or other parts of the ignition system so heavily that instead of jumping across between the spark-plug points in the engine cylinder the high-tension current will leak across or through the accumulated moisture, with the result that though the engine is in perfectly good running condition it will not start. Sometimes after a damp, foggy night the condensed moisture will collect like drops of sweat on the spark-plug porcelain of my car, making starting impossible until it has dried off; so after a damp night I always examine the ignition system."