

THE FARM.

Hill-Planted vs. Drill-Sown Corn.

Readers will recall that last year we carried on a rather interesting experiment at Weldwood with drill-sown and hill-planted corn. The experiment has been carried farther this year, and we hope in the near future to have some interesting figures to report. In the meantime some might be pleased to read an account given by C. C. Miller, in the Michigan Farmer, dealing with hill-grown and drill-sown corn, presumably at the same rates per acre. The corn at Weldwood is sown more thickly in drills, and the figures this year have been very carefully taken, and when published we feel sure will contain considerable food for thought. Read this article from the Michigan Farmer as a preparatory step:

The culture of corn in Michigan has undergone some important changes for the better during the past few years. The selection of the seed, the preparation of the land, the cultivation and harvesting of the crop have all received much study, with the result that there has been great improvement in both the yield and the quality of this most important of our farm crops.

But notwithstanding all the attention and the discussion to which this crop has been subject, there is still great diversity of opinion as to whether the method of check-rowing corn is more desirable than drilling it. Some farmers are so fanatically in favor of the check-row system that they still mark their fields and plant with the old hand-planters though they can well afford a horse planter. Some check-row the corn intended for husking, and drill that intended for the silo.

The arguments advanced in favor of check-rowing are (1) the corn germinates and appears above the surface more quickly; (2) cultivation can be made more thorough; (3) corn stands up better against the wind; (4) the fodder is more easily handled when cut by hand; (5) the yield is just as great.

With respect to the first argument it is true that corn "in the hill" will appear at the surface from one to two days sooner than that drilled one kernel in a place, but the growth of weeds and grass during that time is very little, and this advantage is so slight as to afford little basis for argument. The statement that cultivation can be made more thorough in check-rowed corn has some foundation. On a heavy, clay loam soil two-way cultivation will doubtless prove best in eradicating weeds and keeping the surface soil mellow. On other types of soil, however, one-way cultivation will prove just as good if done with a reasonable amount of care. All parts of the cultivator should be in good repair. Then, with the shovels and shields properly arranged, the soil can be stirred right up to the planter mark and a thin layer of dirt thrown in to cover up the sprouting weeds in the corn row. By exercising some care, the first two cultivations can be made very close to the growing corn—closer than could be done with corn in the hill. Again, whereas one is prone to delay cultivation of check-rowed corn because he is so sure of being able to clean it up later, in the case of drilled corn, one is always ready for the first moment when he can begin work, and the several cultivations are made with more care and thoroughness. Lastly, unless check-rowing is done very accurately, it is impossible to cultivate crosswise the planter rows. During the latter part of August I have visited scores of corn fields and have found the drilled corn no weedier than the fields which have been check-rowed. I am willing to concede arguments three and four, but they seem to me to be minor considerations. The great bulk of corn is cut nowadays with some form of horse-drawn machinery, and drilled corn is much more easily handled than that which is check-rowed.

The final argument in favor of the check-row system is the weakest of all, for it is a statement entirely contrary to fact. When corn is drilled the seed should be dropped ten to twelve inches apart in the row. To secure the same number of stalks, check-rowed corn would require four kernels to the hill. But every corn grower in Michigan knows that when there are more than two stalks to the hill, crowding and diminished grain production results. Experience proves the reasonable supposition that such a rank-growing and gross-feeding plant as is corn must suffer when three or four plants occupy the same square inch of soil. When drilled, each plant has three to four square feet of soil to itself. It has no legitimate rivals. This system makes every foot of soil in the field available to the roots of the corn. Check-rowed plants, on the other hand, are rivals and a hindrance to each other from the beginning, for their root systems occupy the same area of soil. They cannot reach all the plant food available. By this method, then, either the yield of fodder or that of grain must suffer. A fair comparison of these two systems will show that corn properly drilled will yield at least twenty-five per cent. more of both grain and fodder than will that which is check-rowed.

In conclusion, I would say that drilled corn can be just as easily and thoroughly tilled as check-rowed corn; drilled corn is more easily handled by the corn binder; and, finally, drilled corn yields more fodder and grain, other conditions being the same. Since yield is what we are after, it will surely pay many farmers to study this matter fairly and carefully on their own farms.

Let Plenty of Light into the Stable.

Light is free, but, judging from the size and number of windows in stables that were built a quarter of a century ago, the impression is given that it is an expensive luxury. Stockmen are beginning to realize that light and sunshine in the stable aid in keeping things sweet and clean, and tend to keep down disease. Apart from this, it is much more pleasant doing chores in a well-lighted stable than in a dark one. Animals require light and sunshine during the six months they are stabled, the work is facilitated by having it, and the health of the animals is improved. The direct rays of the sun are powerful enough to destroy practically all disease germs that commonly lurk in dark stables. The number and size of windows required in a stable depends on location, amount of stock housed, and the thickness of the walls. Stables that are built to-day usually have a large number of big, deep windows. As more light comes from the upper portion of the sky than from the horizon, a window long up and down admits more light than one of similar size placed horizontally. In order to give ventilation, some have the windows hinged at the bottom so they will open in at the top. This permits fresh air to enter without causing a direct draft on the stock. If the window sash is in two sections the upper part may be made to open inward. As a rule windows on hinges are much more easily opened than those made to slide.

Before winter sets in, the windows in some of the old stables could be enlarged. An expert mason or carpenter is not required; any handy man can do the work. The window frames and sashes can be secured from the planing mill, and they can be put in by the farmer himself. If the wall is of stone or concrete the opening can be enlarged to the desired size, the frame set in position and the wall built to it with concrete. Boards fastened around the frame will hold the gravel and cement in place until they harden. More light can be let into the stable at very little expense. Arrange to have plenty of light on the south side of the stable so that direct sunshine may enter. Sunshine, light and fresh air are necessary if stock is to be kept in a healthy condition and give the largest possible returns for feed consumed. Why

allow your stock to spend the entire winter in a dull, poorly-ventilated building, when both fresh air and light will enter freely if given a chance? It pays the stockman to have plenty of large windows in his stable.

The Sod Field.

With fewer hands than ever to do the work of the farm, the sod field which should be broken up for next year's crop presents more difficulties than it ever did. However, modern implements have made it comparatively easy to put a sod field in good tilth, provided the owner can find time to get it broken early enough in the fall. This fall has presented even more difficulties, because the ground in many districts has been so hard that plowing, particularly of sod land, has had to be delayed. As a general thing it does not pay to plow too deeply. From five to six inches should be deep enough for sod, and, to make the after-cultivation lighter, fairly flat turning is now preferred to the process of "setting it up." We have seen fields handled very nicely by being plowed to the depth of five or six inches fairly early in the fall, and thoroughly cut to pieces by the use of the disk harrow both ways, followed by a stroke or two of the smoothing harrow. It is necessary to work the sod down well in many cases because of the danger of its growing up either late in the fall or before seeding can be done in the spring with seams of grass, usually Canadian blue grass, very hard to kill, and, if allowed to live, equally hard on the grain crops. So it is important that the sod field be well worked. Much land, however, will not do its best when left flat over winter, it has a tendency to run together. To get around this, some ridge up very lightly, not disturbing the bottom of the turned-down furrow. Where this is done some prefer to plow a little deeper in the first place. Some use the cultivator as the last preparation for winter, setting it fairly deep and relying upon the light ridges that it throws up to be sufficient to prevent the land from running badly. Water furrows help in such a case. Others have good success by plowing twice, shallow immediately after the hay is off, followed by thorough cultivation to rot the sod, and then deeper later on and much as stubble land is handled. Very little of this will be accomplished this year. No matter how it is accomplished the sod must be rotted and the grass killed, otherwise a good crop cannot be expected next year. Sod for corn or roots, in some districts, does better when plowed in the fall, while in others spring plowing is preferable, but this is a subject by itself.

Crop Costs.

It takes 30 bushels of corn or 12 bushels of wheat at ordinary prices to pay for the production of an acre of corn or wheat on a Minnesota farm. Such yields of corn or wheat pay the farmer for his labor and for rent on his land, but give no profit in addition, says A. C. Arny of the Minnesota College of Agriculture. It is evident, adds Mr. Arny, that it is not profitable to farm a large number of acres in such a manner that the yields secured barely pay for the actual cost of production.

The sure way to secure a profit is to increase the yield. This may be done by making the soil more productive through the growing of leguminous crops such as clover or alfalfa, through the keeping of live stock, systematic crop rotation, through better cultivation, and through the use of better seed.

The time to consider cultivation and better seed is right now. The farmers who are most successful are those who make preparation in the fall for the next spring's planting.

Automobiles, Farm Machinery and Farm Motors.

The Ins and Outs of Upholstery.

About a month ago a well-known automobile firm put out a small car that has since attracted considerable attention. When this model was exhibited at the Toronto Fair, it was, of course, subjected to the most careful scrutiny. Men familiar with motor cars looked upon every part, and did not fail to express any adverse or favorable criticism that came to their minds. We remember standing by the auto one evening, when at least six farmers were discussing the quality of the upholstery. One man made a positive statement to the effect that the seat coverings were not genuine leather. His opinion prevailed until a salesman of the concern interested appeared upon the scene and gave the positive statement that the goods were exactly as the firm had advertised. Bets were talked about, and the argument was rapidly assuming a heated stage, when someone suggested that the front seat be turned upside down and the exposed edge of the covering examined as to its quality. This inspection resulted in an unanimous verdict to the effect that the goods constituted an excellent quality of leather. We tell you this story because it seems strange that the

average agriculturist who has been accustomed to handling harness and other leather goods all his life, should not have a wider knowledge of hides, and of their preparation and uses. Nevertheless, it is a fact that people who should be accustomed to the use and the abuse of leather, know very little about it, in fact, cannot be relied upon for accurate judgment. The marvellous processes of tanning and finishing have been with us so long, and have developed by such easy stages, that even children should be well informed as to their history and methods. This article will serve a good purpose if it brings home to the owner or prospective buyer of a motor car, some idea of how large a part leather and filling play in the maintenance of comfort and luxury.

The average skin is composed of several layers, every one of which must be given separate treatment, as it yields to chemical and manufacturing processes in different ways. That outside portion of the skin which carries the hair, has always been regarded as the best leather for fine purposes, and is known to the trade as the grain side. The inside portion has been designated the split and the middle section, for some reason or other, is called the moose. Of

course, you will readily understand that grain leather is preferable in every instance because it is more pliable, preserves the most even quality and gives maximum wear. Manufacturing leather consists of three departments, the first is the preparation of hides for tanning, the removal of the hair and the soft connecting tissue or adhering flesh, the second constitutes the tanning which frees the skin from any danger of decay or putrefaction, and the third is the finishing process. Barks are chiefly used in the last respect, and when the skins have been in the tan liquor for a long enough period, the splitting process into the grain, moose and the split sections is done by a revolving band or belt knife. If your car has grain leather, you can rest assured that the equipment is as good as money can buy, but if a moose or split section has been used, you are not getting all that the best service demands. The average person tells real leather by the soft, easy feeling it gives to the finger tips; then, too, a perfect grain side should never crack or become stiff and brittle. Perhaps this can be brought home more closely to you by stating that arm chairs dressed with the poor brands of leather wrinkle and crack, but a similar piece of furniture covered with grain leather should become