Weeds and Early Fall Cultivation.

The season seems to be just suited for the growth of weeds. They are making their appearance in all kinds of crops, and the man who is going to give them a severe check must get ready now. There is one season of the year particularly suited to weed-killing, if one can only give a little time to it, and that is just after a crop is taken off. Then the roots and seeds of weeds are ready to start into new growth, or to lie dormant until next spring, just according as conditions suit, and it is for the farmer to decide which they shall do. When our land was newer, and weeds less common, there was no serious objection to leaving the hay and grain stubble lying after harvest for the stock to range over to get what they could, but now that practice must be abandoned. The stubbles furnish but little food for any class of stock where modern machinery is used, and food for stock must be furnished by some other crop—rape, corn, etc. In fighting weeds, one must make use of the growing season. Therefore, as soon as the crop is off, the seed of weeds that lie upon the surface must be covered in order to make them germinate. For this purpose the cultivator, disk or gang plow must be used, according to the condition of the soil. As shallow cultivation as possible should be given at first, then a little deeper, and, finally, late in the fall, the regular plowing or ribbing-up.

Scarcity of time is often offered for an apology for the neglect of this work, and, unfortunately, it is a work that can be neglected without an immediate apparent loss, but we must plan to get this work done as quickly as possible, compatible with thoroughness. For this purpose, we require large implements that cover a wide stretch at each round. In these days of hurry, we cannot afford to use two-horse cultivators on smooth, level land. A man might just as well drive four horses as two, and thereby do from two to three times as much work. In carrying out a plan of early fall cultivation, it is important to get started as soon as the crop is off, not only to secure the benefits of a longer season, but because the land works more easily just after the crop is removed than it does a few weeks later, unless the unusual happens, and we get a large rainfall. During the growing season, the crops shade the land, and, to a large extent, prevent it becoming baked, but as soon as this protection is removed the exposure to the summer sun will dry out all classes of soil, and bake those of a heavy clay nature. This early fall cultivation has the further advantage of setting free plant food for the following crop—no small consideration. Every day we have evidence of the need of drastic treatment to destroy weeds, so that it is imperative that every advantage should be taken to clear the land.

Sow Rape.

Although, so far this season, grass has been abundant, there is no guarantee that the supply will equal the demand later in the summer and during the long autumn months. To insure against a shortage of feed then, one must make provision now by sowing a good-sized plot of rape. It will be found that after the pastures are cropped short, rape will keep all kinds of stock thriving right up until the snow puts a stop to outside feeding, and even later sheep and young cattle will wander back to the rape field. Time may be valuable now in the midst of haying, but even after an early crop of clover is off the sod may be broken up and sown to rape during weather that is not fit for haymaking. Rape should be sown in drills about twenty inches apart and treated much like a turnip crop. When once grown on a farm it is not readily dropped.

Duping Farmers.

A letter from Marshalltown, Iowa, says that a number of farmers in Franklin and Butler counties have been duped by a stock-remedy company. A farmer orders $4 or $5 worth of remedies, and is asked to sign a contract before they are sent. On arrival there are more than ordered, and he finds the items listed by the dozen in his contract, but figures not carried out. The amount is over $100. If he does not settle, he is notified to appear at Algona and defend suit. In many cases farmers have settled by paying $75 and sending back the goods. Sometimes they stand trial, but rarely have a good defence, having signed the contract without careful reading. At one time there were 30 cases pending in the district court at Algona on contracts of this kind. Every time the court ruled against the remedy company on any point the form of contract was changed, until now a leading attorney says, "it is wonderfully and wickedly gotten up." Moral: Don't make contracts with strangers; pay cash for goods when you get them, if according to statements.—[Country Gentleman.

Head of the List.

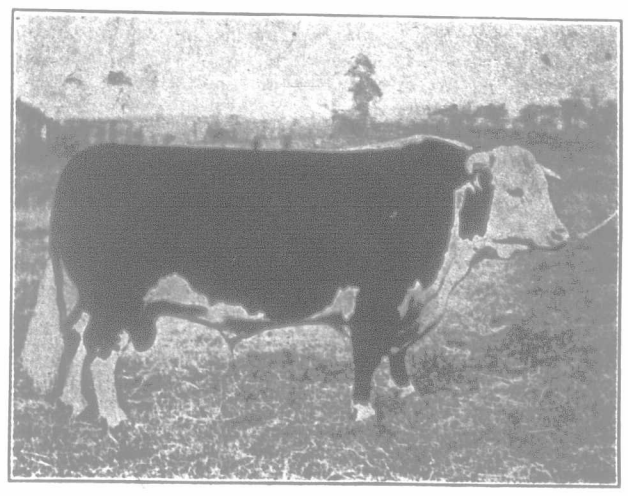
Allow me to observe that although everything in the Dominion is making rapid improvement, the "Farmer's Advocate and Home Magazine" still keeps ahead.

Grey Co., Ont. H. PALMER.

DAIRY.

Up-to-date Dairying.

The dairyman satisfied with anything short of the best cows obtainable may not be considered progressive. If the best native or grade cows are used for foundation stock, the herd may be very much improved by raising the heifer calves from these cows, if sired by pure-bred males belonging to one of the dairy breeds. These heifers should freshen when about two and one-half years old, and again twelve to fifteen months later. At the end of the second lactation period, all heifers which do not give at least 6,000 pounds of milk, or make 250 pounds of butter, should be disposed of, unless in special cases, when a third trial may seem to be advisable.



Fire King 22135.

Champion Hereford bull, Royal Show, London, Eng., 1904. Property of H. M. the King.

To find the individual production of the cows, it is necessary to weigh the milk from each cow at stated intervals throughout the year, and also to take samples for testing with the Babcock test, in order to determine the fat in the milk. The pounds of milk given in any period of time multiplied by the percentage of fat in the milk, plus one-sixth, is approximately the butter produced.

For example, if a cow produced 30 pounds of milk daily on three consecutive days in the month of April, the pounds of milk produced for the month would be about 900. If this tested 3.5 per cent. fat, the pounds of milk-fat would be 900x3.5, divided by 100 equals 31.5 pounds fat; 31.5 plus 1-6 equals 36.75 pounds of butter for the month. The sums of the individual monthly milk and butter production would be the approximate amount of milk and butter produced by each cow during the year.

Hereford Cow, Shotover, and Bull Calf by Royal Rupert.

Champion female of the breed at the Royal Show, England, 1904.

When cream is to be gathered for a creamery, not more than ten or twelve per cent. of the whole milk should be taken in the form of cream. Where scales are convenient, it would be well for those using the hand separators to weigh the milk and cream occasionally, in order to see how much cream is being taken. Where there are no scales, the cream should be measured. From ten gallons of milk not more than one to one and a quarter gallons of cream should be taken. Using too much water or skim milk to flush out the bowl will cause a thin cream.

The advantages of rich cream are:

1. The patron has more skim milk for feeding stock.
2. It costs less for hauling the cream to the creamery.
3. Less labor and expense are required in cooling the cream at the farm and factory.
4. Less vat and churn room are needed for a given amount of butter.
5. There is less danger of the cream becoming too sour.
6. There is less loss of fat in the buttermilk by churning rich cream, and the quality of the butter is better because it can be churned at a lower temperature than can poor cream, or cream containing a low percentage of fat. The cream at the farm should not test less than twenty-five per cent. fat from the hand separator.

Wooden stirrers should not be used for stirring cream in the can. These are difficult to keep clean, and often impart a bad flavor to the cream. The stirrer should be made of tin, with few seams, and all crevices should be filled with solder. The patron's cream can should be rinsed with very little water when it is emptied into the driver's pail, as this dilutes the cream. It is preferable to remove the cream adhering to the sides of the can with some sort of a scraper, but this must be kept clean. The ideal system of delivery would find its nearest approach in the use of separate cans for each patron. The measuring or weighing and sampling would then justly fall to the buttermaker, who would then be brought in close touch with the cream produced by each patron. This plan also enables the manager, if he wishes to do so, to grade the cream, and pay for it according to whether it is first or second class. When cream collectors are provided with a means of straining each lot of cream, a patron's attention may be drawn to any curd or other matter found in the cream. Cream varies in richness much more widely than does milk. The yield of butter per 100 pounds of cream sometimes goes as low as 12 or 15 pounds, and as high as 45 or 50 pounds.

When operating a hand separator the richness of cream produced may be caused to vary from day to day by a variation in one or more of the following conditions:

1. Speed of separator. A high speed produces a richer cream than a lower speed.
2. Temperature of the milk at time of separating.
3. The feed of milk to the separator. The faster the milk is allowed to enter the bowl of the separator the lower will the cream test.
4. The amount of liquid used to flush the bowl. The same amount should be used each time.
5. The percentage of fat in the whole milk.

The most accurate method of determining the richness of cream is by means of the Babcock test, which is becoming quite generally adopted by many progressive creamery managers.

The system may be briefly outlined as follows: The collectors are provided with suitable bottles to enable them to take a sample of the cream supplied by each patron. It is well to have the sampling done on some particular basis. The size of sample taken should be proportionate to the weight of cream supplied, say a fluid ounce for every 30 or 40 pounds cream. Upon arrival at the creamery these small samples should be examined for flavor and acidity, and then be transferred to composite sample jars, to which a small amount of preservative has been added. In this way the samples received during a month may be so thoroughly mixed together that a Babcock test made at the end of the month will give the average fat content of the cream supplied by a patron during that period.

As the Babcock test is based on weight, it is necessary to either weigh the cream or estimate the weight from the number of creamery inches. According to experiments conducted at the Ontario Agricultural College, an inch of average cream in a pail 12 inches in diameter will weigh 4.1 pounds. Thus, if it were found more convenient to measure the cream than to weigh it, the weight could be determined by multiplying the number of inches by 4.1. The number of pounds of cream furnished by a patron during a month, multiplied by the test, or the per cent. fat, and divided by 100, will give the number of pounds of fat which the cream contained.

REQUIREMENTS.—1. A Babcock tester. A 24-bottle steam turbine tester is the most satisfactory.