

The Farm.

AUTUMN PLOUGHING.—We all know the old proverb, "a stitch in time saves nine," and to nothing would it be more applicable than to autumn cultivation. In the good old times, as they are called by many (though, as far as Ireland is concerned, for the last 900 years, we think that the good in them was far exceeded by the bad), people did not begin to prepare the land for crops till far into the spring. Weeds were let establish themselves all through autumn, winter, and early spring, and then a kind of ploughing, which only deserves the name of scratching, was given. Everything was done in a hurry, as all the work came on at once, and everything was done in a slovenly manner, from necessity. During the summer and the winter there was a fierce competition between the weeds and the crop, in which the former frequently got the advantage. The winter was a lazy time, devoted to courting, shooting, story telling round the fire, and now and then, for variety's sake, a bit of a row. The cattle, when spring opened, were all skin and bone; the horses not much better; and it took a deal of feeding to get them again into fair condition. What was gained in one season was lost in another, so like the boy who in frosty weather, from slipping backwards, could only get to school by turning his back on it, for one step forwards two steps were made backwards. Young says "Procrastination is the thief of time," and we all know that time is money. Under the above circumstances money was accordingly scarce, improvements scarcer, but spare time was plentiful. The landlords, to be sure, were as easy-going as the tenants, and did not expect high rents, though, like the soldier in the song, they spent half-a-crown out of sixpence a day. But adversity has its uses. Among other things it has taught farmers "to take time by the forelock," and not to wait till spring to do their stubble ploughing. There are, however, a few of the old school who stick to the old ways, and who are being gradually pushed to the wall. The old ways, though in some few respects good, will not enable them to hold their own against modern innovations, however shrewd and hard-fisted they may be. We desire on this occasion to show them, if they are willing to hear a little reason, the great advantages of early autumn or winter ploughing, and of deep ploughing, in comparison with the disadvantages of shallow spring ploughing, and we shall endeavour to state our reasons in as plain and simple words as possible. There are some parts of the country where the soil, that is, the top or surface soil, is deep, while in others it is shallow. In some parts, too, the soil is rich and in good heart, in others it is poor, or perhaps, though not naturally poor, it has been exhausted by heavy cropping. But whether it is deep or shallow, rich or poor, there is no ordinary tilled land in Ireland that will not bear a depth of furrow of from seven to nine inches. Three and four inches used to be a very common depth in many places. Now, if a deep furrow is ploughed before winter sets in, such a furrow will give during that season a better surface drainage than a shallow one, leaving the soil drier on the approach of spring, and we all know how much this is required in our climate. Besides, the earth being opened up to a greater depth, the air penetrates further down into it, and along with the air the frost. As soon, then, as a thaw comes all the earth that had been frozen is broken up into fine powder, at least this happens after a few alternate frosts and thaws. This reducing to powder is done better than by a hundred spades at work at once, for the spades, while they might break up the lumps, would not take the sourness out of them which often exists when the season has been damp. But the air and frost does this and a good deal more besides. The soil is so broken up that very little work remains for the spring, no obstacle is left for the roots of the coming crop to find in their search through it for food, annual weeds are killed by the frost, and so are many grubs and other larvae of injurious insects that thought to escape the winter by burying themselves in the hard earth. As scientific men express it, the soil is improved mechanically and chemically, that is to say, it is powdered and it is unsoured, or freshened, in ordinary language. There is, therefore, no doubt as to the advantages of a good deep autumn ploughing, and the earlier the better; for if it is put off too long the soil becomes sodden with the winter rains, and does not get sun enough during that season to dry it sufficiently, and of course it is better to have it as dry as circumstances will permit for ploughing. So much for the ploughing of the top-soil. Whether the sub-soil is to be stirred or any of it mixed with the top-soil is quite another matter, and deserves, before attempting it, careful consideration. When it is merely loosened, without bringing any of it up and mixing it with the top-soil, the operation is called sub-soil ploughing. When it is brought up and mixed it is called trench ploughing. Now, the latter operation is seldom quite safe, and when not performed judiciously is apt to injure the surface soil. But sub-soil ploughing, in conjunction with drainage and liming, is almost always good, and if properly managed facilitates, after a few years, partial trench ploughing, by which means the available soil can be considerably deepened and improved. Cross-ploughing should never be attempted before spring, because it prevents the drainage use of the furrows, and if the soil is in the least stiff leaves it in hard clods, which have to be broken up in spring. If the soil is what is usually called kind and in fairly good heart it would not be advisable in spring to bury the rich pulverised surface by cross-ploughing. In this case the grubber would do the work the better at that season. The land having been deeply ploughed, say in the beginning of November, and having been well powdered down during winter by alternate frosts, thaws, rains, snows, and winds, a few turns of the grubber during the first dry weather in February will reduce it to a level and even surface without burying any of the good soil. Then rollers, harrows, weed-gathering and burning will soon finish the tillage earlier, more easily, and more

completely by far than if the first ploughing had been put off till February or March. There will also be more time and a better opportunity for applying dressings of clay to sandy land, of sand to clayey or boggy land, of lime to land requiring it, of farmyard and artificial manures for the succeeding crop, and of salt, ashes, soot, compost, and such like where these come useful and handy. If the ploughing be put off till spring everything must be done in a hurry, and consequently done badly. Besides, on well-ploughed land, powdered before spring, manure goes farther and dressings of all kinds are more easily mixed in a uniform manner in the soil. So that there is every inducement for autumn ploughing and every reason against putting off preliminary tillage till spring. We trust our farmers, even those wedded to the old ways, will take the above plain facts into consideration and proceed from reflection to practice.—*Dublin Freeman.*

BEE-KEEPING.—Beekeepers of the old school are not at a loss for objections to urge against the modern and intelligent system of beekeeping commonly called the moveable comb system. Not a particle of reason can be adduced in support of the objections, as we shall endeavour to show. Some few weeks ago a beekeeper of the "brimstone" school stated in the course of a discussion on the old and new systems that he objected to the latter on the grounds that—

1. The bar-frame hive and necessary comb production are far more costly than the old straw skep.
2. The sectional supers (*i.e.*, the supers in which the bees fill the section frames with one, two or more pounds of honey-comb, according to size) are troublesome to make, and the sections, which are sold with the honeycomb, are expensive.
3. Artificial swarming, as generally practised by advanced beekeepers is much more troublesome than allowing the bees to swarm naturally; and
4. The expense of feeding the bees through the winter, which is of course avoided when they are smothered at the end of the season.

Not to speak of sentimental considerations such as the cruel and unnecessary destruction of the industrious insects, it can be clearly shown that the "humane" system of beekeeping is by far the most profitable, and that not one of the above-mentioned objections will bear examination. On the ground of expense, it might seem at first sight that a comparison between a straw skep, costing about 1s 6d, and a bar-frame hive at 8s to 12s was all in favour of the skep; but it should be borne in mind that the skep is, as a rule, sold and weighed with the honeycomb, and that if the original proprietor wants it back he must pay for it; consequently it may be said to last only for a single season. On the other hand, the wooden hive, if well painted every other year, will last a lifetime, not to speak of its greater convenience. To understand the advantage and economy in using comb foundation, it should be known that to enable the bees to secrete a single pound of wax for comb building, they must consume 20lb of honey, and as it takes about 1½lb. of wax to fill the hive with comb, it follows that to make that quantity the bees have consumed 30lbs of honey; if available for the beekeeper, it would be value for 30s. The beekeeper who uses frame hives avoids said loss by giving his bees a full sheet of comb foundation in each frame. The cost of doing this in an ordinary hive, containing 11 Woodbury frames, is about 3s 9d, taking the foundation at 2s 6d per lb. In this way he not only saves the difference between 3s 9d and 30s, but, in addition, his hive is filled with comb in about half the time it would take had he not supplied this aid, and consequently, the bees are free to gather honey. Practically speaking, it may be said that the use of sheets of comb foundation lengthens the honey gathering season by a couple of weeks, no inconsiderable addition when it is remembered that the season in most districts only lasts a month or six weeks altogether. There are several other advantages to be gained by the use of comb foundation, such as ensuring straight combs for use in the extractor, &c., &c., but enough has been said to demonstrate the advantage which the beekeeper who uses it has over his old-fashioned brethren. The objection to the use of sectional supers, on the grounds of their being troublesome, is the only one which has the slightest foundation to excuse it, but the high price at which section honey sells amply repays the beekeeper for the extra trouble. This will be best understood by a comparison between the two systems. A straw skep in a good season will have about 50lbs of honey, &c., stored in it. If the stock has been a strong one, and the queen prolific, nearly all the comb will be dark in colour, owing to its having been used for breeding, and such a skep will not bring more than 3½d per lb, gross weight—14s 8d, and this small sum represents the entire value of skep, honey, comb, and bees, the latter being destroyed by the sulphur fumes. Now, take the case of the moveable combhive, with sectional supers, the frames being filled with sheets of foundation. In a good honey district, and in good weather, the bees will have worked the sheets of foundation out into comb, and the hive will be ready for supering in a fortnight or three weeks. Suppose a crate holding 21 sections of 11b each now put on, it should be filled in less than a fortnight. At the end of this time the sections, at least some of them, can be removed, and empty ones put in their places. In this way, perhaps, 50 or 60 sections can be taken from the same stock, and these can be sold in any large town to the shopkeepers at 1s per lb, say £2 10s, from which must be deducted 2s 6d, the cost of 50 sections. At the end of the season four or five of the combs can be removed and the honey taken from them by means of a machine called an extractor, which will leave the combs uninjured for use next season. In this way about 16lb of extracted honey can be obtained, which is worth 10d per lb, 13s 4d, which with £2 7s 6d for section money, makes a grand total of £3 0s 10d. The produce from after-swarms has not been taken into account in either case, as it would not affect the calculation. To show that the estimate of money taken from the moveable comb hive is not an exaggerated one, it may be mentioned that at the late Bee Show in Exall-hill, county Dublin, Brother Joseph, of Loughrea, stated that he had taken 180lbs (over £9 worth) of extracted honey from a single stock this year, besides leaving sufficient to keep the bees for the winter. After this there can be no doubt in the mind of any beekeeper, as to the relative advantages of the two systems.—*Dublin Freeman.*