

instance, as a dressing for tares, to any combination, however rich it might be in the other manurial constituents if it were devoid of nitrogen. Why, the very reason for not using nitrogen for turnips—the over-luxuriance of leaf—is a reason for using it to produce luxuriance in a fodder crop.

I do use nitrogen for turnips, if the land is poor, but cautiously. An over dose often causes rotting after an early frost, and the quality of swedes is never so good as when plain superphosphate and wood ashes are used. However, if bones contains $3\frac{1}{2}$ per cent of nitrogen, and 16 bushels are the usual dose, it is clear that 24 lbs. of nitrogen are added to an acre of land when this manure is used. With guano, the case is still stronger, and with farm-yard dung, the quantity of nitrogen used is enormous—at least 90 lbs. supposing only ten tons are given to the acre. In the last case, the nitrogen must be in a peculiar state, as it never injures the root-crops.

My own formula for tares is this :

Superphosphate (plain).....	200 lbs.	per acre.
Wood-ashes.....	20 bushels	“ “
Plaster.....	2 bushels	“ “
Sulphate of ammonia.....	1½ owt.	“ “
Or Nitrate of soda.....	1½ “	“ “

This is for poor land where no farm yard dung is to be used. With dung, half the respective quantities will suffice. Harrow the superphosphate and ashes in before sowing, and when the tares are well up, add the plaster and nitrate of soda. If the sulphate of ammonia is used, it can be harrowed in with the ashes and superphosphate. By plain superphosphate, I mean that made from Carolina rock or coprolites dissolved in sulphuric acid. It is a great pity that the Americans have given the name of superphosphate to manures containing all sorts of constituents. As I think I have said before, all Europeans understand the original term to mean a mixture of phosphoric acid and sulphate of lime, but here it conveys quite a different idea.

Preparation of land—In the case of heavy land, I should plough the dung in before winter. There may be a loss in this mode of farming in countries where the land is unfrozen throughout the season; but here, when for six months the soil is bound as with iron fetters, there is not much chance of the nitrogen escaping. The furrow need not be deep, as regards the tare-crop alone, but as you will probably follow it with roots, or rape, or mustard, you had better plough as required for those plants; seven or eight inches deep will do. Why don't people get some *real ploughs*? The flatness of the furrows I see every day is really shocking; no harrows can work the land properly with such ploughing.

Will any one, please, tell me whence the word *tare* is derived? *Vicia* is, of course, the parent of *velch*, from *vincio*, to bind, because the species have tendrils by which they bind themselves to other plants.

Quantity of seed.—Never sow tares alone, and don't mix rye with the seed, unless the crop is to be out very early. Rye is the hardest of all white-straw crops and shoots up into ear with great rapidity, when it is worthless. The mixture I recommend is, per acre: Two bushels of rye, one bushel of wheat, and one bushel of oats. This, where the crop is intended for mowing green or for hay. Where it is meant for sheep-feeding, I should omit the oats and wheat, substituting three pounds of rape-seed per acre. I see a lot of nonsense in some of the American papers about tares being cut several times in the season! It is not so: they should be fed off when young by sheep, and then they come again; but when mown for cattle or horses, they should not be touched till in blossom, and only one cutting can be had.

I do not recommend any one to trust to tares for a sup-

plementary hay-crop. Not that good tare-hay is not famous fodder, but if nearly cured and a shower comes on, it is almost worthless. Hungarian grass is quite as easy to grow and much easier to make into hay.

How and when to sow.—I don't see anything gained by drilling tares: they may be sown broadcast and harrowed in, or, preferably, let in with the grubber. At any rate, the harrowing should be continued till the land is fine and equal to the tread all over. The roller should follow immediately on light land; but on clay soils, the rolling may be delayed until the plant is up, and if a good rain has fallen, every clod irreducible by the harrows will moulder down in powder. If the land is at all bound by hot sunny weather after much wet, it might be as well to pass a light set of harrows over it before rolling, as recommended in the case of cereal crops. If the rolling is omitted, your mower will waste many a minute in sharpening his scythe.

Tares should be sown at intervals, beginning as early in the season as possible. A fortnight is sufficient between the sowings at first, and three weeks, later on. Every animal on the farm will rejoice when the tares come in, and none more than the pigs. They will eat up the leavings of the horses and cattle with avidity, and with a little meal or a few pease will do satisfactorily. To consume them in the most economical fashion, I should have two yards, or rather one yard divided by bars; one for the cattle and the other for the horses, with free access for the pigs under the bars. The tares, or any other green-meat may be given in cribs, and each division should have a shed—any rough affair will do—for the stock to run under, as a protection against rain or a hot sun. If you have a very luxuriant crop, you had better begin to cut early, as it will probably go down on its knees after even a moderate rain, and the lower half will be worth little or nothing. We have a prejudice in England against giving tares to milk cows, but I don't think they can injure the milk, and, theoretically they ought to increase the percentage of cheese. One thing is certain: they ought to be mown some time before they are eaten, or they are apt to cause *hoven*, like almost all green-meat, particularly clover.

Seed.—I see by the circulars that seed-tares are \$2.50 a bushel, so you had better grow your own. In case you determine to do so, I recommend you to sow two bushels to the acre with one bushel of beans. Horse-beans, I mean, called frequently in this country, *Cafe du pays*. The tendrils of the tares will bind themselves round the beans and be thus kept from sprawling about, and the beans can easily be separated by a sieve. If you have more seed than you want, the pigeons will be very grateful for it.

There have been many inquiries this year about tares, and so I have written the above, containing pretty well all I know on the subject. As a general rule, tares are rather a disappointing crop in this country. I have seen them come up—on good land in good heart, too—and then die away in a most mysterious manner. Anyhow, it is hopeless to grow them unless a great deal of labour and pains are expended, and I do not think many of our people are likely to fulfil these conditions.

ARTHUR R JENNER FUST.

De Omnibus Rebus.

I see that my friend Mr. James Cheesman has taken in hand *The Dairyman*. The paper, which is in its infancy, is very well got up, the engravings particularly, and the printing is clear and the matter well arranged. I hope the future life of this new brother will be long and prosperous.