

HOW TO EMPLOY MANURE.

Referring to what has previously been mentioned and before terminating the brief considerations on the use and the effects of chemical manures, this is the place to give tobacco growers a little advice as to how to manure their land and carry on the cultivation.

A farmer able to consume 30,000 lbs. of good farm manure per acre will find himself in a very favourable position.

When winter ploughing can be affected, it is an advantage to bury part of the manure when ploughing for the last time, stocks of manure are at that time light, as the cattle are generally out to pasture, but they should be utilized; as to spring manuring, it should be done as early as possible.

Great inconveniences arise from spreading farm manures on the eve of transplantation; heaving of the earth produces a tardy nitrification at the time when the plant has already accomplished a great part of its development, and it delays maturing and gathering.)

Planters who have not sufficient farm manure at their disposal, can complete their manuring by the addition of commercial manure. This latter should be spread lightly before the last spring ploughing, and well mixed with the soil. The spreading of the manure has no inconvenience when the culture is somewhat close, and this will be the case with light tobaccos; tobacco roots cover a large surface and absorb to a very great extent, if not entirely the soluble matter placed at their disposal.

Good counsel given by certain authors, which has the object of specially hastening development at the beginning of vegetation, is to put a small quantity of manure at the foot of, or around each plant; in this case the manure must be mixed from five to six times its volume in earth, so as to avoid the burning of the plants, which might occur in case of a light fall of rain capable of concentrating dissolutions within reach of the roots. The spreading of furrows can be employed for cultivating with great distance between plants where it might be feared that the roots would not cover the extent of the field.

At any rate when artificial manure is employed with farm manure, the effect of the chemical manure should be especially to hasten the growth of the plant at the beginning, and to stimulate first vegetation; the tobacco having developed a powerful netting of roots is afterwards under favourable conditions for utilizing the stock of organic matter that the farm manure can put at its disposal.

In cases where commercial manure is employed exclusively, and supposing that the plant must nourish itself from the stock of fertilizing matter introduced, it would be necessary to furnish for each acre of ground, 75 lbs. of nitrogen, 20 lbs. of phosphoric acid and 125 lbs. of potash. In reality, lands are never absolutely sterile, and track should be kept of what they can furnish to vegetation from their own stock; these theoretical figures can be reduced by the proportion of three quarters which is already strong, and can be increased in the future, if the result does not come up to expectation.

Whenever one has to employ chemical manures, one should proceed by experiments. The intelligent planter should calculate the expense incurred for manure, and set against it the increased result obtained; he will then be in a position to find out the benefit of the operation.

It has already been said that it was preferable not to make tobacco a continuous crop, but to place this plant in a suitable rotation. The consumption by tobacco of phosphoric acid being comparatively small it is perfectly natural to have it followed by a crop of cereals, which will consume the stock remaining from the tobacco crop. (This stock inevitably follows the use of farm manure, as to commercial manures they also generally contain a surplus of phosphoric acid.)

If the cereal be followed by clover, a very fine grass crop and afterwards a good pasture ground will result; this rotation gives, one year in tobacco, one year in oats or some other cereal, one year in clover, which would be good for cutting, and another year in clover for pasture.