

## CULTIVATION OF FLAX.

SUFFICIENT has been said through the columns of the *Cultivator*, to convince any man of a discriminating mind, that the business of growing flax and hemp as articles for the manufacture of cordage for domestic purposes, and also as articles for export, is one which would handsomely remunerate the producer, manufacturer and exporter.—We conceive it therefore unnecessary to enter into any disquisitionary remarks, which would have for their object the effect of convincing the intelligent reader that, the cultivation of these plants would prove a safe business. The best guarantee that we can at present give on the subject, is, that we have made up our mind to enter into the cultivation of both of those plants on an extensive scale, the results of which will be subjects of communication for the benefit of all as soon as the proper season arrive for their publication. As a matter of course we have made ourselves thoroughly acquainted with every department of the management of these plants, and as we do not believe in the doctrine of withholding light from the populace, or in keeping the poor and uneducated in total ignorance about matters and things connected with their own and their children's welfare, we shall endeavour to convey information on these subjects through the columns of our journal that will be adapted to the comprehension of the illiterate as well as the learned.

The remarks in the April number, were written in a style that the reader would be enabled to form a pretty correct and ledge of the mode of cultivating the land for flax and hemp, we shall therefore confine ourselves, at this time, almost exclusively to the after management of the crop. The management of these plants differ a little from each other, and as we conceive flax the most profitable crop of the two, as the seed is more valuable, and the crop may be safely brought into a regular course of rotation throughout the entire farm, without any risk of seeding the ground; we shall give a brief detail of the best mode of preparing the fibre of that plant for market, and also a few seasonable remarks upon the management of hemp.

A good crop of flax may be expected from any strong land which is fit for the growth of wheat,—a crop admirably adapted for a preparatory crop of flax. On light sandy lands, that have been under a long course of tillage, the crop very seldom comes to maturity, or is subject to blight, which renders it scarcely worth manufacturing. The best description of soil for its culture is a deep vegetable mould, resting upon a calcareous or porous clayey subsoil—a quality of land which is to be found in abundance in almost every District of Canada.

The best mode of tillage, was given in the April number of this journal. The whole process may be embraced in a few words—deep autumn ploughing—thorough spring culture—laying up into narrow flat beds—and a light covering of the seed.

The crop should stand till the lower part of the stalk gets a yellowish cast, and the under leaves begin to wither; except when the flax is designed for an extraordinary fine manufacture, in which case it would be better to pull it in a green state. The former is the best time when the fibre is intended for twines, the finest description of cordage, and second rate jennies,—the latter for the finest linens. But when the seed is intended for exportation, or

for sowing, it should be allowed to stand until it is quite ripe.

The buds or seeds should not be removed until the plants become perfectly dry. The best mode of drying the seed, is to bind the plants into sheaves the thickness of a man's thigh, which should be set up into long stocks, and allowed to remain until dry.

The proper method of separating the seed from the stems is by a process termed 'rippling' which is performed with an instrument formed of a flat board of about twelve inches wide,—with iron teeth fixed near the end like a comb. The implement is fastened to any standing block, and the stems are repeatedly drawn by hand through the teeth until they are completely cleared of the grain. Threshing with a flail would answer, if carefully performed. It is then to be again bound into small sheaves as before and either dew or water retted, operations on which the price of the flax more depends, than almost any other which the grower has to perform, the object being to loosen the rind and separate it from the stalk. For common purposes the former way answers, but if an article be required for market, the latter should in all cases be practiced.

The process of *water retting* is one which could be more easily taught by practice than described on paper, as there are so many circumstances which would influence the operation, which it would be impossible to anticipate unless by actual investigation and supervision. We shall notwithstanding venture to give a cursory description of the best method of performing this department of the business. Artificial pits are to be formed at the side of a river, or in such a location that it may be filled with soft water which may be withdrawn when the plants have become sufficiently retted. The depth of the pit should not exceed four feet, and if six feet wide and forty long it will contain the produce of an English acre. The water should stand in the reservoir about a fortnight before the flax is put in, so that it may be of an equable temperature, which must be evenly stored sheaf by sheaf direct and across,—something after the style of mowing away sheaves of wheat; and after it has been heaped to within about six inches of the surface it should then be covered with fine brush and loaded with blocks of wood or stone to keep them down. The depth and choice of the water, and time of steeping, are all matters of more importance than are generally imagined, for if too deep its action upon the surface and at the bottom will not be equal; if hard or taken from a spring impregnated with mineral substance, it is found to injure the texture of the flax; and the time of drawing it from the water depends both upon those circumstances and upon the state of the weather, hence the water should be clear, but stagnant, and free from mixture with mineral matter;—neither should it be shaded by trees as some have foolishly supposed, as the sun and air should freely act upon it.

The latter part of September and the first of October are the most suitable pe-

riods for steeping in this country, as the farmer would have leisure time, and the weather would be most likely to be of a suitable temperature to give an equal and rapid retting to the plant. No exact time can be fixed for the flax to remain in the water, as it has in some cases been found sufficiently steeped in five days and in others it has remained ten and even longer without injury to the fibre. It requires considerable skill and attention to carry out the process of retting, for if it be left in water too long, the thread becomes soft, weak, and comparatively useless to the manufacturer; it would therefore be better to take it out too soon, than to leave it too long in the pits. This process like every thing else, is governed by certain rules, which if carefully observed, will enable the operator to perform his work with accuracy.

The two best rules with which we are at present acquainted, and which will be a means of avoiding all mistakes, are to remove the plants from the pit when the bubbles of the air disappear from the surface of the water, and the flax seems to have settled to the bottom—and to break some of the stalks about six inches distance, and if the heart of the stem can be easily drawn out of the bark, or lint, then it is time to remove it from the pond; but if it still adheres to the pith, it must be continued in the steep until they are found to part freely. The plants at this stage will have a slimy disagreeable appearance.

When removed from the pit or pond the sheaves are to be unbound and spread upon close-fed grass land to dry—the mode of placing should be similar to the swaths of grain after being laid with a cradle—a shower or two of rain while in this state will cleanse and make the flax more valuable.

An improved mode of retting is practiced in the best flax districts of Germany which differs from the above, which may be summed up in the following:—In placing the bundles in the ponds vertically as close as they can be possibly packed, instead of horizontally; in immersing the flax by means of transverse sticks, with that degree of weight annexed which shall not push it to the bottom, but leave it the power to descend spontaneously towards the conclusion of the steepage:—by leaving at first a space of at least ten inches between the bottom of the pond and the roots of the flax, and by renewing the water, at intervals of two days each. A few experiments would soon decide the difference between the two plans.

The Preparation of the Flax consists in breaking, scutching or swingling as it is generally termed in this country, and heckling, which is the final preparation for market. As the business is yet in its infancy, it will be unnecessary to give a description of expensive machinery for dressing—which will at some future period form a subject of communication for the benefit of the grower of flax on an extensive scale.