

male is pulled. After being pulled, the male plants are laid out to *ret*, or, as it is more generally called in the country, to rot, either on the ground, or in water like flax. The same process of retting is followed both in the European and the Kentuckian treatment of hemp. When destined to be retted in water, hemp is put up in bundles, which must not exceed ten inches in diameter or thereabouts, at the thickest part, so that the water may act easily on the centre of the bundle. Five or six days in stagnant water, when the weather is still warm, is generally sufficient. It takes much longer in running water. When the water is cold, owing to the lateness of the season, it is better to ret on the ground. It takes from one month to six weeks to ret on the ground, the time depending completely upon the greater or lesser frequency of rain.

When the bark which contains the fibre can be easily detached from the wood, in long strips uninterrupted, from the root to the top of the plant, the retting is completed. Hemp ought not to be spread upon the field to dry the moment it is taken out of the water, for it is then soft and brittle, and might be injured. The bundles must be put up standing along a fence, a wall, or, if neither be quite convenient to the pond, some light scaffolding erected for the purpose, after slackening the ties, which can be readily done by pushing them up towards the thinner part of the bundles. They are left standing for a day or two, until the water has run out of them. The plants are then fit to spread on the ground in thin layers. When dried on one side, turn them over, and a few hours of sunshine will complete the operation. Do not take them in unless thoroughly dried.

When the seed hardens, the female plants ought to be pulled. It would not do to wait until the seed is quite ripe, because the bags containing it will then burst, and the seed drops on the ground, and is lost. The seed is allowed to ripen for a few days on the field, care being taken to prevent the head of the plant, which contains the seed, from resting on the ground. It must not be beaten out with the flail. It is too soft for that, and would be crushed. The best plan is to bring barrels or boxes to the field, hold the handful of hemp with one hand, the heads of the plant placed inside the barrel or box, and with the other hand, armed with a small stick, beat the heads until the seed drops, after which operation the female plants are retted in the same way as the male plants.

When the seed is extracted, it is taken under shelter, and laid in very thin layers, not more than a couple of inches thick, for it is very apt to heat when not thoroughly dry. It is well to turn it over from time to time. After a month or so, when well dried, the seed is winnowed and put up in bags or barrels.

Such is the European mode of harvesting. Now for the Kentuckian. In Kentucky,

Missouri, and other parts of the States, the whole crop of hemp, male and female, is pulled, or more often cut, at one and the same time. The period chosen is about halfway between the maturity of the male and the female plants, say about ten days after the male has ripened. The instrument used for cutting hemp is something like a reaping hook, only the blade is much stronger, nearly straight, with the slightest inward curve, and about twenty inches long; the handle is straight, two feet in length.

If the crop is to be cut with the hemp-knife, the operator is required to cut at once through a width corresponding to the length of the hemp, and as close to the ground as possible, spreading his hemp in his rear, in an even, smooth swath. It is afterwards spread out on a meadow for retting. This is "dew retting."

I think you will agree with me that the Kentucky mode is preferable, for the following reasons:—

1st. Because it does not exhaust the soil, the seed not being allowed to ripen; but if it stands for seed, it is on all hands acknowledged to be an exhausting crop.

2nd. It saves one pulling, both male and female hemp being pulled or cut at once; and that one pulling saved amounts to more than one half the work of harvesting. It speaks to common sense that the first pulling alone, according to the European system, when you must choose and pull the plants one by one, takes more time than a general pulling or cutting of all the plants at the same time; and when they come in Europe to the second pulling, that of the female plants, as they do not stand quite close together (the male plants having been removed), the work does not proceed quite as rapidly, in proportion to the number of plants pulled, as it does in Kentucky.

3rd. When it is intended to ret hemp in water, the warmer the water is the more rapid and perfect is the retting. Now, as the season advances towards autumn, the water cools rapidly. The ten or twelve days during which the female hemp is allowed to stand after the male is pulled, and the time afterwards required for hardening and ripening the seed, and taking it off (which is often protracted to one or two weeks by rain, for the seed cannot be knocked off unless the plant is perfectly dry), may cause a long delay, during which the water often gets too cold for retting the female plant (as happened to me last fall), and then you must ret on the ground, when the colour is not so fine. This applies more particularly to Lower Canada, where the seasons are shorter.

4th. I think the fibre of the female plant is stronger when pulled before the seed is ripe.

The high price of labour on this continent accounts for the new mode of harvesting adopted in America. The Kentucky hemp is quite as strong as the Russian, but its colour is not as clear, owing to its being retted on the ground, and it accordingly compels the

rope-maker to employ far of a lighter colour, which is more expensive than that required for the Russian hemp. Their water in Kentucky is not soft enough for retting hemp.

The Kentuckians sacrifice the seed, but they have found out that the saving in labour both in the pulling, and afterwards in the curing of the seed, more than compensates for the loss of the seed. In other places, where labour is cheaper, it may be otherwise. We have still got a great deal to learn from experience.

For those who will try the European plan (as both plans ought to be fairly tried) and save the seed, I will state that, taken equal weights of flax seed and hemp seed, hemp seed will yield in oil two-thirds of the quantity that flax seed does. This statement, however, must not be looked upon as conclusive. It is merely a personal opinion, based upon the results of one experiment made this last fall at Messrs. Tarcotte's oil mill at Beaufort. Those gentlemen had never worked hemp seed before. As we gain in experience we may expect more favourable results. But, even calculating upon that, if an acre of hemp yields, say, twelve to fourteen bushels of seed, and I think it will do that if carefully worked, that yield would be an important item, well worth the farmer's consideration, where cheap labour can be obtained. The oil is employed, in Europe, for painting. I got ours tried here by a reliable painter, and it gave much satisfaction. It appears, however, to change the colour of white lead a trifle more than flax oil does, but it is just as good for every other paint. The hemp cake is fed out to cattle with the same results as flax cake.

We have seen that by following the Kentucky mode of harvesting, the seed is sacrificed. In order to procure the seed necessary for the next season's sowing, they lay out a small patch of good land in hills, a couple of feet in diameter, disposed in straight rows, three feet apart each way. They plant seven to eight seeds in the hill. The same rules observed for the cultivation of Indian corn will apply in the after culture of hemp seed. Those plants, with plenty of room to expand laterally, will throw out, in every direction, branches that get covered with seed. Of course, their fibre is quite worthless, owing to those same branches, but the yield in seed is extraordinary. I took myself, from two plants, about one pint apiece of clean seed. You can form an idea of how small an area of ground would be required in order to yield one bushel of seed.

As to the pecuniary returns from hemp, grown for the fibre, per acre, I must base my calculations upon the price paid our farmers last summer, namely, half a copper a pound for unretted hemp, and one copper for retted, delivered at the mill. One man was paid at the rate of sixty dollars per acre, irrespective of the value of the seed, but