

"TRAILING CHAIN CULTURE."

ED. FARMER: I will now finish the "trailing chain" system of planting, pruning, and heading off.

Planting.—"The mode of planting most in use consists in digging trenches twenty inches wide and deep and twenty-six long. The fibrous roots are elbowed on the ground, raised up vertically, and the trench is filled up, but not packed hard. Some leave one, others two, eyes above the ground." A word.—This method of planting may do in France, but for Oregon, or at least the Willamette valley, I object strongly against such a method.—First, it is too much "like work"; deep planting, for this country, is far better, and easier. Secondly, these trenches or holes are mere tubs, to hold the cold water around the roots during our rainy season, and is a means of killing rather than benefiting the vines. It is a humbug to talk of, or do, so much trenching and digging, when a good two-horse plow, with subsoil after it, makes the ground in good enough order for vines or anything else. It is true, there may be steep, rocky hill-sides, where it may be necessary to "dig and delve," but in most cases the plow is all-sufficient. And my doctrine is to save human labor when and wherever we can; not, however, to the neglect of what cannot otherwise be done. Judiciously expended labor is far preferable to mere blind, brute force. Hence, I say, the easy, the practical, the beautiful.

Pruning.—"The canes are formed successively upon one, two, and three main branches. These produce shoots, among which one is chosen to form the leader; two spurs are also left to produce laterals the following season, and in this manner the main arms attain gradually to from fifteen to eighteen feet. These can be, and frequently are, shortened in, and allowed to grow up again in the same manner. The first year, only one spur is left to grow. The second, two fruit bunches are retained which have to be cut back to 18 or 20 inches, leaving only 4 or 5 buds to grow on each. The third year, of the four or five buds grown the preceding year, only two are kept on each branch. Each succeeding year two more bunches are added to the number until there are 50 or 60 of them, if the richness of the soil and strength of the plant admit of it. When twelve years old, the stock should be able to bear that amount. The arms are allowed to grow to 15 feet or more, leaving one fruit branch every 24 inches, and carefully removing all useless buds before the sap is ascending; and here is shown one of the immense advantages of the trailing chain culture for regions subject to frost. One-half, or at least fully one-third, of the numerous buds do not come out when the sap commences running upward, so that, should the early buds be swept off by a late frost, those that remained dormant come out and in their turn take possession of the sap. Experience has fully demonstrated this superior advantage."

Heading off.—"This important operation is performed three times during the season; first, as soon as vegetation starts; next, when it has attained four to six inches; and, lastly, at blooming time. As is well known, it consists in removing the non-bearing buds, which are not to be used in pruning the following year, and its object is to keep up the strength of the main stem and branches, and relieve them of a greedy and useless growth, thereby benefiting the fruitful buds, and those which are to extend the branches of the stump. The grape requires a denuded surface around it, always proportioned to its extension."

I wish now, Mr. Editor, to make some remarks on this system of pruning and heading off. There are certain physiological and vegetable laws which, to insure success in growing fruit, must be observed.

All who have had much experience in growing vines must have observed that in those on which the pruning knife or shears have never been used, as the vine grows older, there are many little dead limbs scattered over it. Now, why? For these clear reasons: First, the vine, while young and vigorous, especially when the sap is fresh in spring, makes more shoots than it can sustain, and ripen its fruit. And, secondly, in order to propagate itself through its seeds—for this seems to be the main object of all plants—it robs all little useless shoots of their nourishment and gives this to the seeds or fruit, to perfect their maturity. Here, then, we see the vine

naturally prunes itself. Now, then, we want fruit. In order, therefore, to get good fruit, we must heighten the process of pruning, natural to the vine, by artificial means; because we have heightened its whole nature by cultivation, which is an artificial process. Then, in pruning our cultivated vines, we carry out in detail, through artificial means, precisely what the plant does by a natural means. Hence, then, and necessarily, we see why it is good to prune. This, then, is firmly established; and no power on earth can alter this great law of vegetable life.

The pruning and heading off processes of the, so called, trailing chain culture, are, if not carried too far, most excellent, saving the exceptions made below. They are, in the main, fundamentally grounded in the nature of the plant. The heading off and pinching back processes are similar. We pinch back the terminal shoots which are so rampant in their growth as to absorb too much sap from the fruit, and we remove all useless buds and small shoots so as to throw more vitality into the fruit branches, and thus increase the size, beauty, and richness of the grapes.

The distance of sixteen feet apart giving full scope to both roots and main branches, the horizontal or trailing chain position, the pruning, &c., are so many means adapted to an end—a main end. That main end is fruit. The trailing chain culture is, I think, a good one, and worthy of extended trial by the grape-growers of Oregon.

Again: It is during fructification, or fecundation, and the formation of the seeds, that the vine is most severely taxed. While in inflorescence the whole powers of the vine are engaged in forming and perfecting this process, through the development of stamens, pistils, petalhoods, globules, and pollen from the anthers of the stamens. And, I think, at least so far as my experience extends, the vine and soil should be undisturbed while fructification is going on. Many prune and cultivate indiscriminately.—Why? Because the leaves, roots, &c., except the generative organs, seem merely passive, and ought not to be molested while in the state of inflorescence. Bees, however, should have free access, as they promote fertilization by carrying the pollen of the anthers from one flower to another, and dropping it on the pistils or globules, whence it flows to the ovula, and thus impregnation takes place. This, in warm, dry weather is done in a few days, or even hours; in damp, cool weather it is prolonged, and often imperfectly done at that. Hence the importance of the sun's chemical rays.—When the grapes are of the size of common shot then the seed and stone commence forming. During this process, which lasts eight or ten days, the whole vine is at a standstill until the seeds and receptacle are formed. Then the grapes, leaves, and branches grow rapidly to maturity. And while the seeds are forming, no pruning nor cultivation should be done. Hence the importance of a knowledge of botany, vegetable physiology, meteorology, agricultural chemistry, &c., for all these have a direct bearing on grape-growing. A. F. DAVIDSON. Salem, Nov. 6, 1872.

REPLANTING BULBS.—Those who are now about to replant bulbs grown in their own grounds should remember that a heavy clay is not suitable nor is a light sand. The latter, however, is better than the former, but in all cases the ground should be dug eighteen inches deep, and four to six inches of well rotted cow manure should be placed and intermingled with the base of the stirred soil. If the soil is a heavy clay, it must be removed, at least in part, and then sandy loam or leaf mould be mingled with the balance. If very sandy, then clay loam should take a half position. After planting, a dress of coarse fresh cow manure three inches deep should be spread over the bed, and as soon as cold weather sets in, cover again with leaves or loose straw to a depth of four inches. Early in spring take off the leaves or straw and as soon as the bulbs appear in their young growth, rake carefully the coarse particles of manure from the top. Add, in Cleveland Herald.

SINCE adjournment of Congress, the government printing office has been finishing the printing ordered during the late session. This amounts to 750,000 octavo and quarto volumes, varying from 300 to 600 pages each. Of this number 252 volumes are of agricultural and Ku

Klux report, the latter being 13 volumes, and the printing of the census reports is also in progress. Four thousand volumes in muslin are bound daily. Three hundred compositors, 30 pressmen, and 400 females are in the office, and the aggregate of all persons employed is over 1,000.

HOW MUCH A FLY EATS.—A curious calculation has been made by an eccentric individual, well known in Paris for his peculiar antipathy to the fly. He collected 3,000 flies in a room measuring 70 cubic feet. On the floor he spread a pounded loaf of sugar. At the end of four days he went to investigate the result of his experiment. There remained but a spoonful of sugar. This statistician thereupon calculates that, sugar being at the rate of 10 cents a pound, a fly costs the country 20 cents from its birth to its demise.

THE student who is not thorough is never well at his ease; he cannot forget the skipping problems; and the consciousness of his deficiencies makes him nervous and anxious.

Never laugh at the slow, plodding student; the time will come when the laugh will be turned. It takes time to be thorough—it more than pays. Resolve when you take up a new study, that you will go through with it like a successful conqueror, taking every strong point.

BE independent; a young house-keeper never needed greater moral courage than she does now to resist the arrogance of fashion. Do not let A's and B's decide what you shall have, neither let them hold the strings of your purse. You know what you can and ought to afford. It matters little what people think, providing that you are true to yourself, to right and duty, and keep your expenses within your means.—Rural New Yorker.

THE LOUISIANA GRAPE.—Frederick Munich, the veteran Missouri grape grower gives a history of this variety in the Rural World of October 12th. He pronounces it undoubtedly a French grape of the Burgundy family, related to the Rulander, but better, and one of the best for light wine. Its only drawback is that it is tender and requires covering in severe winters.

THE RINDERPEST.—Prof. Law expresses the opinion that the rinderpest, under our present laissez faire system, bids fair at no distant date to spread over the whole North American Continent.

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