

the tree killed or much injured by the severe cold of winter; and this shows the absolute necessity of spring pruning. To conclude the subject, the writer says no doubt pruning should commence in the latter part of the winter, or early in the spring, and continue as circumstances suggest through the whole growing season. If either spring or summer pruning be neglected, the trees cannot look so well or do so well.—*Ann. Agriculturist*.

PRUNING FRUIT TREES.—It will be found upon experiment, that a wound made on a tree in March or April, will look black as soon as the sap begins to flow, and that the sap will ooze out until the leaves have put out so as to receive it; while a wound made in June, will remain white and immediately commence healing. And a tree that has been broken by being loaded with fruit, or otherwise, while the tree is green with foliage, the wound will look white and the wood remain sound; while one broken in the winter by snow, or from any other cause, will look black and decline to decay.

It has been my humble lot to spend the most of my time in the spring and fore part of the summer in engrafting and pruning fruit trees, and my experience goes to prove that the best time for pruning is when the leaves are full grown, and the tree is vigorous and in a growing state. For at this season the sap has been spent in foliage, and the pores of the wood are filled, so that when the limb is taken off, the sun and warm weather will dry the end of the limb and close the pores of the wood against the weather, and the sap will keep the limb alive to the very end, and the healing will be perceived immediately.—*Boston Cultivator*.

TIME OF GRAFTING.—Some persons set scions in March, in order to have the work out of the way, and when well done they generally live, if the weather be not unfavourable; but when set so early they are not so likely to live. From that time till August, they may be set, but the later they are set after trees commence growing, the less the scion will grow for that season, and when set late they will be tender and of course more likely to be winter killed.

Should we choose a time most favourable for scions to take well, and to obtain a good growth also, we should take that when the buds were just bursting into leaves. At some seasons this stage of vegetation is much later than at others. From the middle of April to the middle of May is generally a good time for grafting in this climate. This season from the last of April to the last of May will be a good time.—*Boston Cultivator*.

CARE OF GRAFTED TREES.—Grafting is a matter of but little consequence unless they receive the requisite care and attention after the operation has been performed. It is not uncommon to see scions struggling year after year amidst a forest of suckers and the remaining limbs of the tree making scarcely any progress and producing no fruit, when if properly managed they would render a profitable return to their owners. No farmer would expect to gather a harvest by planting a field with corn and leaving the rest to nature. The same is true of the orchard; the cultivation of fruit is daily becoming an object of more importance on account of the increased facilities for transportation and the demand for it in foreign countries, as well as our own. Apples can now be exported to the East Indies with cargoes of ice; and even the early varieties to Europe in steam ships. There is no danger of overstocking the market.

The climate and soil of Massachusetts are peculiarly adapted to the growth of the apple, and its cultivation is universally acknowledged to be one of the most lucrative branches of agriculture.

In consideration of these facts, it is for our interest not only to graft trees with first rate varieties, but also to properly prune and cultivate in order to render them as productive as possible afterwards. My method of procedure, when giving a new top to the tree is as follows:

I cut off as many branches as is necessary for this purpose, leaving the rest to carry on the circulation of the sap; then inserting two scions in each stock, let it remain till the next year, when I prune off the remaining branches and suckers that may have protruded the first seasons, if the scions have had a rapid growth and are well united, with the stock, I generally remove one from each stock also, which will give top enough and prevent their entangling and crossing each other. If the suckers continue to grow in after years, they are removed, leaving the scions to take the entire growth. If branches are found interfering with each other one of them is taken off and proper direction given to the tree.

Some persons practice cutting off all the branches from a tree at the time of grafting. This I think is erroneous, the scions in this case do not start so early and a death blow is given to the tree. The shock is too great for nature to bear. The bark of the stock turns black, and frequently peels off, and the wounds do not heal so readily.

Small trees which are an inch or more in diameter, after grafting, must be protected in winter by tying them up to the stakes to prevent breaking down, by the drifting snows. You should guard against mice by treading down the snow about them or some other method, and also secure with stakes and boards a few years, to prevent the cattle from having access to them. Many young and valuable trees are lost for want of a little attention to these particulars.—*Id.*

NECESSITY OF A CHANGE OF CROPS.—*Messrs Editors.*—In a conversation the other day with an intelligent, I stated the remarkable fact, that if an animal were to be confined to one particular diet for a certain number of days, sickness, and eventually, death must be the consequence; when he immediately applied the rationale of the fact to a subject at once so highly interesting and natural, that I cannot help recording it. "Then," said he, "this shows at once the necessity of a change of food to the crop; or which is the same thing a change of crop to the soil—a rotation of crops, as it is called." Now in this little remark, a volume is thrown open to our perusal, and by studying it, I believe we may derive information and advantage at present unknown and unappropriated; and in return for the many useful hints and very pleasant ideas that I am continually reaping and garnering up from the perusal of your paper, I offer the above in grateful acknowledgement.—*Farmer's Cabinet*.

ADVISE ON THE CARE AND MANAGEMENT OF TOOLS.—From a new edition of the Cabinet Maker's Guide, we quote the following:

"The goodness of saws, chisels, and other edge tools, depends upon the quality of steel, which should be uniform throughout, and it is always better to have them tempered too hard than too soft, for use will reduce the temper. If at any time you wish to restore the temper, and to perform the operation yourself, the best method is to melt a sufficient quantity of lead to immerse

the cutting part of the tool. Having previously brightened its surface, then plunge it into the melted lead for a few minutes, till it gets sufficient hot to melt a quill, with which rub its surface; then plunge it in again and keep it there until the steel assumes a straw colour, (but be careful not to let it turn blue,) when that is the case take it out, rub it again with the tallow, and let it cool; if it should be too soft, wipe the grease off and repeat the same process without the tallow, and when sufficiently hot, plunge it into cold spring water, or water and vinegar mixed.

"By a proper attention to these directions, and a little practice, every workman will have it in his power to give a proper temper to the tools he may use.

"If a saw is too hard, it may be tempered by the same means; if you are near a plumber's shop, you may repeat the process conveniently and without expense, when they are melting a pot of lead.

"In other kind of tools you must wait till the steel just begins to turn blue, which is a temper that will give it more elasticity and at the same time sufficient hardness."—*American Mechanic*.

IMPORTANT IMPROVEMENT IN SELECTING SEED WHEAT.—In the selection of seed wheat, take at least six bushels of a good quality, then taken sieve or screen with holes sufficiently large, so that 5 bushels of the best will pass through it. The one bushel that remains will be kernels of the largest size, and this should be used for seed. When this seed is sown and germinates, it will be found that the blades which spring from it will be uniform, and present the same healthy appearance, and will maintain the same equality until the time of harvesting. Thus instead of having so great a proportion of small weakly stocks start from diseased or pinched kernels, which can never produce any thing but small straw and consequently wheat of an inferior quality, the whole will stand a fair chance to come to maturity, divested of all evils which attend the sowing of grain where sifting is neglected.

But, says the reader, this important discovery of which you speak, don't amount to any thing after all. It has been known for years, that to sift out the small grains from seed wheat is a good idea, and is now generally practised among our best farmers. I will respectfully ask such, have you ever knowingly carried to the extent I propose? If you have not, you know but little of the real benefits that will result from this discovery and practice in accordance with its reasonable theory.

I am informed that Isaac Howels Esq. of this town, tried the experiment the past season, and the result was what we had good reason to expect, the most perfect growth of wheat he has ever raised. I believe if this practice should be adopted generally by the farmers of this State, the quality and quantity of the wheat crop would in a very few years be increased one quarter by the simple process of sifting seed in the proportion I have named, and no farmer need be afraid of injuring his seed by carrying the principle to too great an extreme. The improvement is within the reach of every farmer, and he can satisfy himself of this point.—*Maine Farmer*.

CEMENT TO MEND CHINA OR GLASS.—Garlic stamped in a stone mortar, the juice whereof, when applied to the pieces joined together, is the finest and strongest cement for that purpose, and will leave no mark if done with care.