

The Field of the Horticulturist.

Horticulture, one of the oldest of arts... is yet as progressive as many more modern ones. Its development has been gradual, and as in all histories, the first pages of the history of horticulture are wanting. A twin sister of Agriculture, she combines with its practicability, an ardent love of the beautiful, and has always worked to unite the useful and the ornamental.

Always an active agent in supplying that most urgent demand of man's nature, hunger, the horticulturist, through his work of providing a variety of good things has been an important factor in the great aggregation of forces we call civilization. Yet the field of horticulture is essentially a practical one, all the great army of workers, from the scientist in his laboratory, down through the ranks of experimenters, orchardists, gardeners, to the freckle-faced boy in the onion bed, are working for practical results. The application of the power of knowledge to the work is direct and any increase of power is felt immediately.

The progress of the science of botany has had a great influence on horticulture. That which was once only known to be fact, and which if explained at all was by theories both wild and absurd, is now known to be the effect of causes which the student has learned from that reticent yet most thorough teacher, Nature.

The processes of fertilization, development of fruit and seed, the causes of variation, the growth of tissue and the union of different tissues, are to some extent at least understood, and the careful work now being done is slowly but surely unfolding the pages of the wonders of plant life.

The culture of fruits, one of the most pleasant as well as useful employments is a very broad field. The differences in soil and climate, the varying habits of the different plants, the development of species under cultivation, the possibilities of cross fertilization offer abundant opportunities for workers in horticulture. The wail of the disappointed planter and the malediction hurled at the "tree-pedlar" have often been because that which grew to perfection in the moist climate of the east could not stand the stimulants of western air and sunshine. Yet Nature has so provided that species are capable of being greatly changed to meet the varying conditions of soil and climate and this with the future interference by man may yet give us varieties which shall be more hardy and not less desirable than those which now fail.

The apple, Pyrus malus, one of the oldest of fruits, came from Europe with the early colonists. The ease with which it was naturalized is not strange when we remember that the wild crab, Pyrus coronaria.

a species nearly identical with the one from which the apple is supposed to have originated, is a native of nearly all parts of America. Our American varieties have all come from the European stock in most cases from chance seedlings and these multiplied by grafts.

Careful cultivation has operated to improve both size and flavor, and while there are many varieties there is yet work to be done in improving the fruit and obtaining varieties suited to the various climates and conditions under which we wish to grow them.

The peach, Amygdalus Persica, is a native of Persia, and needs no recommendation as to quality, though varieties differ widely. While the problem of protecting it against the vigors of our winters is being solved the work of acclimating, and selecting for greater hardiness, and for fruit with the best keeping and shipping qualities as well as flavor, is one of the chances for future growers.

Plum, Apricot, and cherry, species of the genus Prunus come in the improved forms from Europe. These like the apple have very near relatives in our native varieties, and the fact that these natives are more hardy and certain to bear, would seem to indicate that the native varieties may be so improved as to give fruits that will be more

hardy, and more likely to resist fungus diseases and the onslaught of insects than the thinner skinned varieties from the east and at the same time possess a flavor that shall not be inferior to the older sorts,

The blossoms of the order Rosaceae, to which all the above named fruits belong, are much easier to fertilize artificially, than many others partly because of their greater size and of the ease with which the stamens can be removed without injuring the pistil. These facts are favorable for the crossing of varieties and the originating of new seedlings and these can be tested in a comparatively short time by top grafting cions of the seedlings on old stocks.

Our grapes unlike most of the other fruits are native, or have been originated from seedlings of native species. These have by selection, cultivation and cross-fertilization, with varieties of the European wine grape, Vitis Vinifera, and with the different species of our native grapes, given us grapes of beautiful appearance and delicious flavor.

While the crosses with the Vinifera have given the most delicate flavor, they lack the hardy nature of grapes of only American blood, being more tender and more susceptible to dis-

ease. The native American species vary greatly and nearly all have been improved by cultivation and selection. The returns to the grape grower come more quickly than do those of the orchardist, and the field for improving native grapes by crossing selection and improved culture is a wide one. While there is an abundance of varieties there must still be ample room to combine hardiness and vigor with quality and appearance.

The greater, or seemingly greater ease with which new fruit can be introduced from other countries as against the slower process of improving native species has led horticulturists to devote more attention to the former than the latter. The great uncertainty attending both has tended to make fruit growers conservative. No one cares to work for years to grow seedlings that may prove worthless and the chance for acclimating seems much greater.

The establishing by the government of permanent stations for experiment may have a tendency toward developing some of the hitherto neglected fruits. The most noticeable wild tree fruits besides those already named are the persimmon and the papaw.

The persimmon, Diospyros Virginiana, is a fruit native in a large part of our country. It is of the same genus as the Japanese persimmon, which is one of the most important of the fruits of Japanese fruits, and though neglected as fruit, except by children, opossums, and negroes, is worthy of more attention than has ever been given it. The fruit of different trees vary considerably in size quality and time of ripening, some being very palatable before frost, others requiring a sharp frost to eliminate the historical "persimmon pucker", which has made a "persimmon mouth" a synonym for pininess. The fruit which hangs on the tree for a considerable length of time is suitable for packing and shipping, when dried somewhat resembling the date.

The introduction of the Japanese persimmon has attracted some little attention. It is not nearly so hardy as the native and the most successful method has been grafting them upon American stocks. The fruit is not very widely known as yet, but planters are confident that so good a fruit will prove profitable. The Japanese varieties are not hardy in our climate, but some of the better kinds found in our woods are surely worthy of attention. The timber is quite valuable and

The appearance of the tree is attractive and symmetrical, and is worthy of a place in the list of ornamental trees.

The papaw, Asimina triloba is found nearly all the rich bottoms south of here and in this locality often forms a symmetrical tree. This tree belongs to the order Anonaceae, a genus of which produces the custard apple of the tropics, said by tourists to be a most delicious fruit, and the papaw which somewhat resembles it is the only species of this order in America.

The fruit of the papaw is even in its wild state much liked, being a rich custard-like pulp containing many seeds, which last is a somewhat objectionable feature. It is quite probable however that under cultivation it would as many other fruits have done, lose this characteristic and the vitality which now goes to produce seeds would be expended in increasing the quantity and quality of the pulp.

Of the smaller fruits the Missouri currant, Ribes aureum, is perhaps as worthy of attention as any. The eastern varieties of currant do not take kindly to our climate, and while the Missouri currant may be lacking in flavor it has the requisite hardiness and the probabili-

ty of its being greatly improved by cultivation and perhaps by crossing is very good. The cultivation of wild gooseberries has already given results that are more satisfactory than are the results from planting varieties from the east.

The necessity of giving more attention to our timber supply is admitted by all. The influence of timber plantations on climate is known to be beneficial and the question for the horticulturist to decide is, what species are most profitable and best suited for different situations. Nature gives many valuable hints as to species best suited and a knowledge of the distribution of species, their habits and growth is invaluable. The idea cherished by the early settlers that a tree was a tree and as such worth planting was in a measure correct, but when there is a choice between a really valuable tree and a cheap, though comparatively worthless one, he was not always very far-sighted.

The difference in value between a walnut or pecan, which in a few years will yield annually a crop of no small value as against a cottonwood or poplar which after all is of but little value as timber is easily seen. Even in the walnut pecan and Hickory a

selection of good varieties is of prime importance and the question of improvement by cultivation and selection is one yet to be answered, and one which it is worth while to determine.

In planting where both utility and ornament are desired there may be a great advance. Our wild cherry, Prunus serotina, and chokecherry, Prunus Virginiana, are trees which are truly ornamental for their shape and foliage and with attention paid to selecting varieties and cultivating them, their utility may be greatly increased.

The scope of the horticulturist's work can not be bounded, nor the importance of his work overestimated. His is truly an art related to science, botany, entomology, chemistry, and meteorology all closely interest him.

And what of it as a means of making a living? It is true there are probably no wonderful fortunes strewn along his path as may be stumbled upon by speculator or perchance by merchant or professional man, but far better than ~~this~~ glitter of much gold is his assurance of pleasant, healthful, and interesting employment, and the certainty of remunerative returns. So long as men live they must eat, and what market so sure as that for food?

Here as in all else the best wins, the best fruit and vegetables are the first sold and at the best prices.

It is not a business that can be started in a day nor can its markets be made in a single season. Customers must be educated their tastes developed, and that never satisfied appetite for something new is the staunch ally of the fruit-grower and gardener.

The desire for beautiful homes is worth money to the nurseryman, and it is but right that he should think of these things. The great brotherhood of man is not yet and each must look to his own interest or be neglected.

Get back of and more lasting than the number profit, more conducive to real happiness than a princely income, though unfortunately, too often lost sight of, is the realization of filling in some degree a useful place in the great machine of society.

Is there nothing in the thought of being the producer of food which must make others the stronger and better fitted for their work in life?

Is there nothing more in a basket of luscious peaches or tempting grapes than so many cubic inches of provender? What makes you

as you say, hate to spoil the beauty of the large red apple or yellow pear? Is there not a thought, vague though it be of the beauty of color and the bounty of Nature? The work of the horticulturist may not be very poetical there are doubtless some disagreeable features about it, but there is an almost certain assurance of profitable, healthful employment, an occupation of use to his fellows and which in making food more palatable, home more beautiful, and life more comfortable and interesting must surely give an upward tendency to the race.

Give fools their gold, and knaves their power
 Let fortune's bubble rise or fall;
 Who sows a field, or trans a flower,
 Or plants a tree is more than all.

For he who blesses most is blest,
 And God and man shall own his worth,
 Who toils to leave, as his bequest,
 An added beauty to the earth.

Albert Dickens.