Experience in Fruit Culture.

H. C. Adams—I get enough berries from ten rods of ground to bring one hundred dollars.
Question—What kind of soil?
Answer—Clay and sand. These berries are as much superior to blackberries as a strawberry to a turnip. They have great size and are more pulpy. We take those berries into the Madison market and when strawberries are only eight cents per quart we cannot get dewberries enough to supply customers at twenty-five cents per quart.

Experience in Fruit Culture.

By A. L. Hatch, Ithaca, Wis.

How to grow fruit successfully, and how to make money out of it, is a subject always in order at horticultural meetings. My own experience is quite varied and yet I have made a success of some things in fruit culture, not brilliant by any means, but still quite tolerable. My apple orchard in 1886, gave me a crop of over 2,000 bushels and in 1887 it gave me 1,000 bushels. Of grapes I had 1,000 vines, occupying a little over an acre, and of 40 kinds. During the last two years I have reduced the number to about 600, and the kinds to about half a dozen in the main. I estimate the net yield to average $125 for the last ten years. In the last dozen years I have fruited each season from ten to fifteen kinds of strawberries, and perhaps half as many kinds of raspberries. Besides I have planted plums, pears, cherries, and other small fruits, of many kinds and in considerable numbers. The pears have gone the way of all the earth and passed to cremation long ago. The cherries are mostly alive and tantalizingly hopeful. The plums have mostly stood by with good crops for cultivated native sorts.

From my experience let me note some of the things I think I would do, when I venture more in fruit growing. In planting an apple orchard I would set such trees as Tetofsky and Duchess deeper than others because they sprout so much from the root if set shallow. If for money
making I would set but few kinds and would set McMahon's White as one of them. I would not replant an old orchard site. When I had fruit in abundance, I would not buy a cider mill nor an evaporator for the purpose of working cull or windfall apples into vinegar or drying the fruit. If I could not sell the fruit at a paying price I should not attempt to compete with southern dried fruit in the market. I look earnestly for cold storage to help me out in saving fruits for favorable markets and to prevent loss of perishable kinds.

As a rule I would push fruit to market when in best condition, sort, push and handle carefully and trust to the seasons to bring average returns.

I would not top graft or prune trees after a very cold winter. I would not depend upon top grafting for an orchard even though I had many large trees to graft. I might graft a few crabs for variety, and perhaps venture some Wealthy and Longfield in that way. I would prefer to plant young root grafted nursery trees.

If I had trees that made a good growth each season, but refused to bear I would change their management. If cultivated, I would seed to clover. If very bushy, I would thin out the tops. The great trouble with such trees is that they do not mature buds properly the season before they should bear. Whatever will cause maturity of buds will tend to fruit the next season. The ends of all twigs should fill up full of starch grains in the latter part of each summer. The starch so stored up serves as a food and stimulus for growth next spring. From effects of drouth in 1886, my 150 cherry trees in orchard had none of this starch and I did not get a cherry last season.

I had Golden Russet trees, three to six inches through, winter kill, while those of two inches or less in diameter are still alive. Is this because the older trees have exhausted the soil and do not mature their wood as the younger ones do? Away off east, in the province of Ontario, I last fall saw the finest Fameuse and the best crop I ever saw. From a bank where a cut had been made for a road I picked up stones whose surfaces were crusted over with lime from the
leeching water of ten or fifteen feet of earth above. If so small an amount of soil could furnish so large an amount of lime, is it not probable that right there lay the secret of the wonderful success of the Fameuse? In our section of Wisconsin we have lower magnesian lime—thirty to forty-five per cent. magnesia. In this county (Grant) and in Sauk county, there are other varieties of limestone, and will not that account for some of the differences in apple culture? Would such facts suggest the possibility of improving the soil for apple trees by applying lime of the proper purity? Who knows?

I often hear the remark that certain kinds of fruit trees and plants are gross feeders and require rich soil and plenty of manures. This is often said of the Wilson strawberry, the current and native plumbs. This is a mistake. They are all light feeders and have so low feeding powers, that they often suffer for growing material while others make a good growth on the same soil. I have always had the best success with them on rich soil and well fertilized. I get the most and best DeSoto plumbs and currants from trees and bushes fed up to fruitlessness with plenty of strong fertilizers and good culture, and they soon become exhausted if not so fed. At the same time I have had varieties like the Windsor Chief strawberry that our soil just feeds up to fruitage, and I should get less fruit if I gave them stronger soil. Right here is a fine point in horticulture that must be mastered by any one who would be completely successful. Some varieties must be fed to bring them up to fruitfulness, and some we may feed past fruitfulness, just as President Smith does his dahlias, and perhaps several kinds of small fruits that others on less fertile soil may succeed better with.

The true measure of success in fruit culture is not necessarily the largest yield per acre, however desirable that may be. To many who have cheap lands and homes they do not care to burden with boarding more help. The true measure of success will be the best returns from labor invested even though at greater expense of field room. To such persons

10—H.
the variety that will feed itself to full fruitfulness on his soil is the one to plant.

Among strawberry plants what variety has the best foliage and what treatment will give the most healthy plants?

Of fifteen kinds of strawberry plants we now have, the Manchester has the most rust, indeed we believe it is wholly ruined, for fruit next season. Although we see no difference in the four different plats I have of it, I shall give a portion of it a very heavy dressing of wood ashes next spring and try it for a crop. I should say that these four plants were planted in the spring of 1886 and fertilized under direction of Prof. Henry as part of an experiment. On account of the drouth no results were yet obtained, so I shall try it another year. I do not know that ashes are a remedy for rust, but I do know that it will add greatly to the vigor of a strawberry plant and help in time of drouth.

Among our raspberries we find some mistakes. We have some rows five feet apart—far better if seven feet. My blackcaps are mostly in rows by themselves. I thing it would be better if every other row was red as it would be easier to cultivate and manage. Many of my plants were set too shallow, I wish I had planted so I could have filled in around the roots after they had started so the crowns of the plants would be just below the surface. They would then be stronger in hard winds and when being covered for winter. Another mistake I have made was in not giving winter protection to my raspberries and blackberries. This has been a mistake not because they winter kill every winter, but because I make a larger crop more certain. The bugbear has been the work of it. Last fall, however, I changed my tactics, and buried all I had. One acre I buried in six days' work including shortening in the bushes and removing the brush cut off. This shortening is I consider, very essential as putting the plantation in better shape to cultivate, making the bushes more nearly self-supporting and giving a crop of larger size and uniformity and avoiding a host of small, poor berries that usually grow on the slim ends of the bushes. Besides this it will ripen a crop in a shorter time. I did not pinch off the new growth of
either my blackberries or raspberries last season, but allowed the new sprouts to grow at will, as I thought they would be more easily handled in burying them than if much branched, as they would be if the tips were pinched off early in the season. Some of the blackberry bushes I put under were \( \frac{3}{4} \) of an inch through, by using a common four-tined fork to lift under the roots while bending the bush I got them down in very fair shape. Another tool I used was the round pointed shovel, and found it very handy for the purpose.

While speaking of tools I ought to say a word about the style of hoe I use in cultivating all small plants and very specially handy among strawberry plants. Take a common hoe and cut off the upper corners from the shank to the lower corners of the cutting edge. File smooth where cut and sharpen the edge on a straight line and keep it so. You will find it far superior to any other tool for hand use among strawberries and small plants where close work is so desirable.

There is a point or two in grape culture I wish to note and that is the desirability of getting good pliable trunks on all vines. These should be from three to five feet long from the roots to the branches, where fruit is borne. Such trunk will enable the grower to handle his vine easily in giving winter protection, permit the vine being put high enough to keep the fruit clean and also make it less liable to mildew. For trellis I use only white oak stakes seven and one-half feet long, as I determined not to put up costly wire or other fixture until my bank account derived from the vineyard was greater than I had use for. On the same plan I have pursued a conservative course determined that after a reasonable start my fruit should support me rather than be a constant sink for hard work and money otherwise needed. These deductions of my experience I leave at your mercy.

Mr. Hatch — My orchard has paid me, and I have never been without fruit.

Everything has paid me that I have attended to, and I
have made a great many mistakes. When I go into the orchard in the summer time and see the trees so loaded with the fruit, I cannot see how people can complain and grumble so.

APPLES IN WISCONSIN.

BY GEO. J. KELLOGG, OF JANESVILLE.

Mr. President, Ladies and Gentlemen:—I have been assigned this subject: "Will it Pay to Raise Apples in Wisconsin?"

Yes, sir; no, sir.

And yet, that hardly answers the question. There have been so many more failures than successes, that it would seem that the negative must be the answer. How many of you have made orcharding pay, count cost of trees, labor and land? I venture to say that not a man west of the twenty-five-mile lake shore fruit belt in Wisconsin, and I might add in any other state west, till you reach the Pacific slope.

What are the causes for failure? First, our sudden changing, cold, dry winters. Second, poor locations. Third, varieties not adapted. Fourth, poor culture. Fifth, our insect enemies; and, lastly, the want of shot gun and bull dog statutes, protecting our fruits and orchards. Every man growing fruits ought to be compelled to keep a shot gun, well loaded, and a bull dog for the moral effect it would have upon society.

Now, with the experience of the past fifty years, can we not plant to profit? Do you know of an orchard or a single tree west of the lake shore belt that has paid for twenty years? If so, mark its surroundings. Is it not on clay soil, high ground, and usually on north side of a hill? Can you find an exception, unless it be an occasional Duchess? If there is such an orchard or such a tree, it is reasonable to suppose that it will bear twenty years longer without cultivation and manure. Are there not hundreds of trees now dead, which, if they had been properly pruned, cultivated and manured, would have been alive and healthy today?