

## SECRETARY'S NOTES.

Irrigation. Have just received from the New Hampshire Experiment Station Bulletin No. 34, a very interesting and instructive document treating of surface and sub-irrigation, by F. Wm. Raue. At the first glance over it I concluded to publish some extracts from it in our magazine for the benefit of gardeners and fruit growers. But on looking it carefully through I find so much that is good and valuable that I have concluded I can do no better than to give the address so that any one interested can send and get it. It is sent to any one in their own state free, and I do not know the terms to outsiders, but it will be a good investment to enclose a stamp and find out. Address F. W. Raue, Horticulturist, Ex. Station, Durham, N. H.

Bulletin on growing nuts, by department of agriculture, has been received and is full of interesting data for the information of those engaged or about to engage in that business and as I have seen it noticed in many papers—many compliments given the present pomologist for the work as it appears. In justice to our esteemed ex-pomologist, H. E. Van Deman, I wish to say that during the latter part of his term of office I was employed in that office at the suggestion of Sec. Rusk, in the new apple department, and I know that Prof. Van Deman was working hard with an able corps of correspondents on the bulletin and had the work well under way at the time his valuable services were dispensed with, and I am well satisfied that much of the credit for compiling such a valuable bulletin justly belongs to him.

State Fair. The Wisconsin state fair will be held at Milwaukee, September 21 to 26, when it is hoped the fruit growers will unite and make the largest show of horticultural products ever exhibited in the state. The board very generously added to the premium lists in this department, and we expect to make improvements in the building to accommodate all in a way they will be satisfied. Several of our largest growers have already expressed their intention of being on

hand with a fine show. The outlook for apples is good, as already noted in our columns. Second premiums have been added to plates of apples and grapes, enabling the committee to give two premiums where competition is close. Clarence Wedge, an up to date horticulturist, of Albert Lea, Minn., who is a good judge of fruit, will place the ribbons in that department.

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It is always a pleasure to me to meet and converse with a man who, as Prof. Goff would say, knows something. I have several times in our meetings referred to the fact that a man living at Benton Harbor, Mich., had bought sixty acres of land near the city of Ripon in Wisconsin, and set it all out to apple trees. I have visited that orchard several times, but never had the pleasure of meeting Mr. Winans until May last, when I spent a day in his company visiting his and the new fifty acre orchard of our president and Mr. Reynolds. Mr. Winans had just returned from Missouri, where he had cleared the land, set and pruned seven hundred and eighty acres of apple orchard, and he had just finished pruning the orchard at Ripon, and I am free to say if a man can not learn something about pruning and caring for trees by watching and hearing his methods he must be a dull student, and if I learned anything new about trimming young trees my own new set orchard of four hundred trees and the new state trial orchard of six hundred trees at Wausau will have the full benefit of it, as I have gone over every tree since that time. I have thought and preached for years that we grow too much top for the roots to support. Two things should be kept in view, the shaping and forming of the tree and the production of fruit. After the top is formed, little cutting should be done. Winter pruning should be avoided. Do it when vegetation is active, and wounds heal quickly, is my plan, and doing it when sap is active promotes the forming of fruit buds.

It is a great mistake to leave too many main branches. We can in many young thrifty growing trees take off half the top and in five years it will not be missed. Cutting large limbs from bearing trees is a shock that takes a long time to recover from. Mr. Winans believes as I do in the plan of

planting what he calls fillers in the orchard, that is, trees that come into bearing quick and are liable to be short lived. Alternate with the later bearing larger trees the first will usually pay all expenses of orchard before others come into profit. In some places peaches are set in and pay all expenses of both orchards, before apples begin to bear. The Rhode Island station has found that about fifty per cent. more clusters of blossom buds grew on a limb of same size in the sun than on the one in the shade, showing that a conical tree like the No. Twenty, or a tree with plenty of room and sun light, will bear more apples than trees whose tops are crowded by too close planting. I have proofs of this in my own orchard.

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#### SPRAYING SMALL PLANTS, POTATOES, ETC.

The home made spraying machine shown in the accompanying cut is thus described in bulletin 113, Cornell University Agricultural Experiment Station:



“The greatest sensation of the day, however, was occasioned by the appearance of the home made sprayer of Potter and Ware. An ordinary barrel spray pump was fastened to