

Horticultural Notes

By F. WALDEN.

Judge J. H. Forney, of Moscow, Idaho, is a progressive fruit grower. We have published communications from him in these columns before. The following letter from him is instructive as well as interesting and especially so when accompanied with the diagram that he incloses:

"When in Portland, at the meeting of the Northwestern Horticultural Association, I had a very interesting conversation with you in regard to the keeping qualities of apples, with special reference to the time they were picked. After careful observation, I find that all the apples, as a rule, on a tree do not mature at the same time, but like pears and plums, some ripen much earlier than others. And also that after the ripe apples are gathered those remaining on the tree grow rapidly and often become first class apples. Here in Northern Idaho, at an altitude of about 2,700 feet above the sea, we pride ourselves on growing a first class winter apple, and one whose keeping qualities can hardly be equaled. We further believe that our apples, grown without irrigation, and with adequate water supply, are superior, as keepers, to those grown in sections where irrigation is practiced. We have kept Jonathans for one year in our ordinary cellars in and around Moscow. Hon. Theo. Reed has succeeded in keeping Jonathans, Ganos and Newton Pippins for sixteen months in an ordinary brick cellar built on the ground, the apples being placed in an ordinary paper sack. Those gathered October 1st proved much better keepers than those gathered November 1st. I send herewith a very interesting table on this point."

Judge Forney in the foregoing has made it quite clear that early picking of apples tends to long keeping. This position has been maintained by others, but so far as I know no one has furnished as good proof as the judge has, as to the correctness of this position. We are glad to have such tables as he has furnished. Actual facts discount guesses very greatly. I think he is quite correct in claiming that apples raised where he lives, if picked at the same time in the year, will keep much longer than those raised in the warm valleys like Snake River, Walla Walla and Yakima. I do not believe that elevation has anything to do with the keeping of apples, only in so far as it affects early and thorough ripening. The same elevation in southern Idaho will produce apples that will ripen earlier and will not keep so long as those grown about Moscow. If apples grown in the warmer valleys are picked earlier and then kept in as cool a place as those grown in the cooler regions, my judgment is that they will keep equally well. We have picked Snow apples very early and had them keep till the next spring. Yet ordinarily the Snows are all gone by the first of December. Judge Forney's table proves conclusively that apples picked the first of October keep longer than those picked the first of November. Why? The only reason that can properly be assigned for this is that there is a difference in the stage of ripeness. If this is so when the apples grow in the same orchard then the same principle will apply if grown in different orchards and under entirely different conditions of temperature. Here is a valuable lesson for those who are growing apples in the warm valleys. If they want to hold them through the winter, they must be picked early.

The idea that fruit raised by irrigation will not keep as long as that

raised without irrigation, other things being equal, is utterly untenable. It is a well known law of vegetable growth that the fertility of the soil cannot be taken up by the plant, only in the liquid state. Now, water is water, and it makes not a particle of difference how it gets into the soil, whether by dropping down in the form of rain or snow or by being brought in an irrigating ditch. If the fertility was in the water and not in the soil then there might be some grounds for this claim, but any well informed man knows that such is not the case. The function of the water is to make the plant food in the soil available. There may be some calcium (lime) in the water and likewise some soda in the form of alkali, but the amount is so small as to have no appreciable effect on vegetation. Alkali is sometimes a serious matter in irrigated countries, not because the water brings the alkali there, but because it is already in the soil, and the water, if not properly applied, simply brings it to the surface in the form of the sulphate of soda (white alkali) or the carbonate of soda (black alkali).

Very many people entertain the idea that fruit raised by irrigation is insipid and is quite inferior to that raised where irrigation is not needed. This matter was taken up in Colorado some years ago by the experiment

he will most certainly injure his land. A miner's inch means the amount of water that will flow through an aperture an inch square and under a six-inch pressure. That means that the water must stand in the measuring box six inches above the opening. More than double the amount of water will flow out through the aperture under such a pressure than where there is no pressure at all. On one of my ranches in the Yakima valley the water is measured to me in miner's inches. For 120 acres I own 36 inches of water. I irrigate about 110 acres and find that I have an ample amount of water. That is about three acres to the inch of water. All this is in fruit but 12 acres, and that is in alfalfa. On my other ranch I have 40 acres in alfalfa and we are planting 31 acres to fruit. Here the water is measured at the rate of one cubic foot per second for 160 acres. It is claimed that 50 miner's inches of water are equal to one cubic foot per second. If that is correct, it will be seen that the amounts per acre for each ranch is about the same. Too much water in irrigating is a bad thing. It tends to leach the land for one thing, and then it is liable to raise alkali to the surface unless thoroughly drained.

J. H. Kirkpatrick, of Custer, Wash., has asked the editor of this department a number of questions to which

regularly drink freely of the waters of Medical Lake, and yet is so thoroughly impregnated with alkali as to be very distasteful. People who are constantly eating pork are not going to die very soon from the small amount of alkali they may receive into the stomach by drinking the waters of the Yakima valley.

I wish to commend to the readers of The Ranch the excellent circular by Prof. Henderson, of the Idaho Experiment station at Moscow, on the pear blight. This is one of the diseases that baffle the fruit grower in many cases and I know no one who is better prepared to speak authoritatively on this subject than Prof. Henderson. The pear blight has not yet reached the Yakima valley, but when it does we expect it to play havoc among our pear trees. The pear industry has been very profitable in that valley, and as a result many are planting out new pear orchards or enlarging old ones. It is a risky business, and it would be well for all the pear growers there, as well as elsewhere, to read carefully what Prof. Henderson has to say and be prepared to meet this enemy on its first appearance.

In the Rural New Yorker, that admirable farm paper, there was recently a statement that sulphate of copper (blue stone) is sometimes badly adulterated. This is one of the difficulties that the fruit grower has to contend with. At the meeting of the Northwest Fruitgrowers' Association in Portland last winter some one stated that in using the arsenate of soda the usual results seemed to be lacking. So a sample of the arsenic was sent to a competent chemist who reported that fully one-half of the stuff sold for pure arsenic was gypsum. No wonder that his spraying was a partial failure. In the state of Washington it is a criminal offense, punishable with a fine, to sell adulterated spraying material, and the purity of arsenic is placed at 98 per cent. Paris green must contain not less than 50 per cent of pure arsenic in combination and not more than 4 per cent of free or water soluble arsenic. Let all who use Paris green or the arsenate of soda, often called also arsenate of lime, have their poison analyzed and see that it is up to the required standard. Most, if not all, wholesale druggists keep in their employ a competent chemist and if they sell adulterated spray material

FORNEY'S TABLE—SHOWING KEEPING QUALITIES OF APPLES

First appearance of decay, 1902 crop.

VARIETY.	Date Picked	Date												
		Dec. 1.	Jan. 1.	Feb. 1.	Mar. 1.	Apr. 1.	May 1.	June 1.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	
McMahona Wh.	Oct. 1.	1	2	3	3	3	3	3	3	3	3	3	3	3
Jonathan	Oct. 1.	1	1	1	1	1	1	1	1	1	1	1	1	1
Mann	Oct. 1.	1	1	1	1	1	1	1	1	1	1	1	1	1
Wealthy	Oct. 1.	1	1	1	1	1	1	1	1	1	1	1	1	1
Gano	Oct. 1.	1	1	1	1	1	1	1	1	1	1	1	1	1
Greenville	Oct. 1.	1	1	1	1	1	1	1	1	1	1	1	1	1
Rome Beauty	Oct. 1.	1	1	1	1	1	1	1	1	1	1	1	1	1
Maiden Blush	Oct. 1.	1	1	1	1	1	1	1	1	1	1	1	1	1
Newton Pippin	Oct. 1.	1	1	1	1	1	1	1	1	1	1	1	1	1
Wine Sap	Oct. 1.	1	1	1	1	1	1	1	1	1	1	1	1	1

* One kept to Feb. 1, 1904. † Three kept to Feb. 1, 1904.

station and the result proved that fruit raised on irrigated land was better in quality than where it is raised on non-irrigated land. This was a genuine surprise to those who had been harping on the insipidity of irrigated fruit. But some one may say that this contradicts the statement made above that there is no difference where the water comes from. The contradiction is only seeming, however. Government experts have recently shown that irrigated lands are richer in plant foods than lands that need no irrigation. The reason given for this condition of things is that arid lands have never had their fertility leached out of them. On the other hand, lands subjected to copious rains have had much of their fertility washed away. So the greater fertility of irrigated lands is not owing to the fact that the water is applied by irrigating ditches, but owing to the fact that such lands are not leached. It is a well known fact that leached ashes are not as fertile as the unleached. Why should it not be true that unleached lands are richer than the leached ones?

An inquiry comes to hand from S. L. Garrett, of Wenatchee, as to the amount of water he needs to the acre. He says that he owns an inch to the acre and wants to know if that is not too much. If by an inch he means the miner's inch, he certainly does not need that much, and if he uses it all

a private reply has been sent. The following inquiry, however, may be of general interest and is therefore answered here: "How do they get their drinking water in the Sunnyside district? Most of the water is so strong with alkali as to be injurious to health, is it not?" We use cistern water in most cases and fill our cisterns from the irrigating laterals. The water in the canal is simply melted snow and no purer water can be found. There is no perceptible trace of alkali in such water. There are a good many wells in the Yakima valley, but the water in these wells is not as pure as the ditch water referred to. There is a trace of alkali in most of them, and sometimes the water may be strongly impregnated with alkali. But will water having a trace of alkali in it prove injurious if we drink it? I think not. What is alkali? It is either the sulphate of soda or the carbonate of soda. In the one case it is called white alkali and in the other black alkali. Now soda is not injurious to the human stomach when taken in small quantities or we would have all been dead long ago. The soda that our wives use in cooking is bicarbonate of soda or frequently simply carbonate of soda. Many a time I have taken half a teaspoonful of bicarbonate of soda and after dissolving it in water drank it to my relief. I have yet to realize that I was ever injured in that way. Horses and cattle

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