DESERET EVENING NEWS.

Tuesday, March 5, 1895.

VOICE OF THE BEEKEEPERS

Discussion of Spraying to Catch the Codling Moth.

What Prof. Cook Says of the Matter—Suggestions for Horticulturists and Agriculturists.

Editor Deseret News:

I have read a maxim, said to have been David Crockett's, "Be sure you are right, then go ahead." It matters little how sure or positive we may be that we are right, to run up against nearly an entire community and with very little help is anything but encouraging. While we were just so sure last year that we were right in asserting that the moth deposited their eggs on the apple and not in the calyx cup, the calyx were so strong against us that we could make but very little progress. It was almost a life and death struggle to save the bees from destruction by those who supposed that the only proper method to get rid of the codling moth was to spray when the trees were in bloom, bees or no bees. Over three hundred people remarked to me last year that the spray-ing would be none the more effectual if the trees had been sprayed while in bloom; but when we named the people to give their reason for this belief, the only answer we received was that the prevailing opinion was that the moth laid their eggs in the blossoms.

Now, if I did not know that I am right in this matter I would not preach it further; and if it were not that this method of spraying in the bloom did not threaten the very existence of the bee, the beekeepers might let it pass, just knowing, as we do, the inconsistency of spraying in the bloom and seeing its injurious effects on the bees and fruit, we do not feel like shirking the responsibility of aiding our wife to try and protect this valuable industry.

Now, then, those who are opposed to us in this matter and the law that are so positive that the moths lay their eggs in the blossom, should offer some proof that they are right, or they should investigate the proof we offer them. Every person in the Territory who sprayed in the bloom last year and those after, if they knew anything of its effects, will tell you that it was a total failure, while the spraying done later was from a partial to a full success. Aside from what we have said before on this point, every one knows our fruit will inherent themselves, that the moth do not lay their eggs in the blossom, and they may easily see the effects of their work in the apple. We have the assurance of Prof. Cook to this effect. We have received the following letter recently from the professor on the subject of bees and spraying:

CLAREMONT, California, Feb. 8th, 1895.—Mr. E. S. Lovesy: Dear sir:—Say to your people that the codling moth do not lay eggs till the blossoms fall, say also that the petals are slowly removed so that it is never wise to apply it till necessary. Thus, to spray before the blossoms fall is useless to say nothing about the effect on bees. No one should spray till blossoms all fall. Polley and justice alike affirm this.

Yours truly, A. J. COOK.

I wish to say to all our fruit growing friends that, having read much of Prof. Cook's works on fruit and other insect pests and how to destroy them, and also from a personal acquaintance, having met him in the city and also in Chicago, at the World's fair convention in 1893, we corresponded with him on the subject of fruit pests and spraying, and also of his many experiments with arsenic to destroy the pests and protect the bee and fruit. He is generally conceded that the professor is one of the best, if not the very best, authority in the United States on these subjects. He states that any mixture strong enough to kill the codling moth will also kill the bees. With the assurance that we have had we can assure our fruit growers that the eggs are deposited on the apple and not in the blossom. We can show them to all stages from the newly laid egg to the young larva as it commences to eat its way into the fruit. When it reaches maturity it leaves the apple and in some concealed place spins its cocoon, and in about six weeks from the time the egg is deposited in the apple the moth issues from its cocoon, only to repeat the same destructive operation. The fact that the early fruit is comparatively free from the moth is proof against the blossom theory, as in that case it would suffer as much as the late fruit.

Now the facts are these: In Utah the moth do not appear in sufficient numbers to do much harm before the 10th to the 20th of June, varying somewhat with the season. Hence we see that the very early fruit is so far advanced that if it were attacked much of it would ripen and rot before the larva would reach maturity to leave their work more on the late fruit. For this reason also the spraying commenced last year about the middle of June and kept up until September was a success, while the early spraying was a total failure.

It is the nature of the moth to glue its eggs on the fruit for safe keeping till they hatch, and this must be done on the blossom and our friend, C. P. Dodenl, of Hamilton, Illinois, agrees with us in the statement that the moths do not and cannot deposit their eggs in the blossom, even if they were present, owing to the fact that the pistils' points in all blooms protect the embryo fruit from injury by any insect. We have been chagrined to prove that the bees are not the cause of the codling moth. Many assert that the bee moth and the codling moth are one and the same. Until some of our instructors (who assert this) can prove to us that they believed this to be true we did not deem it necessary to reply, having supposed it to be too absurd to build. The cause of this absurd theory is because the codling moth was imported to Utah in fruit boxes and have been imported at about the same time—soon after the Pacific railroads were completed.

In regard to the bee and codling moth, there is very little resemblance. The bee moth is twice as large as the codling moth, as also is the larva; and the larva of the bee moth is a milky white, while the larva of the codling moth is of a pinkish hue. We have plainly shown that the bees are not responsible for the codling moth and we have also shown the impossibility of spraying the moth to kill the bee, and thereby the fault of washing the poison off.

At the Ontario convention the *Review* says of it: "Half-way of a meeting was adjourned to allow those from other to go to a nearby meeting house, and a paper from Mr. Cook, read a paper from his own orchard. While that paper states that Bugle even spray at all had fair crops of plums.

Peach fruit was destroyed in this way last year. A heavy rain storm will destroy such in the manner. A case in point is that of a gentleman living at Tonawanda, New York, near a lake. The cool breeze from the lake retarded the flow of sap (fluid) in the trees, and the result was that neighbors, who had not sprayed, had a heavy crop set in. The result was not so in full as in the late varieties. A lack of the early varieties was a lack of a crop, while his neighbors whose trees blossomed a week earlier had full crops. We have heard of a case of a fruit grower in Oregon, where his trees were in bloom, being about one week earlier than his neighbors, who had not sprayed their trees, a heavy rain set in. The result was not so