

the weather and ready for the worm when he shall make his appearance. If the blossoms have not been sprayed it is now impossible to get any fluid into the cavity, and the work of spraying the apples after the closing of the calyx lobes is labor lost. Hence the necessity for spraying the blossoms within a week after the falling of the petals. The developing fruit must be carefully watched; the falling of the petals is a sign that it is almost time to begin spraying, and the closing of the blossom end must stop all spraying. One or two thorough sprayings are sufficient unless it rain within twenty-four hours after the work. There is no danger from poisoning the fruit by spraying. The quantity of poison which lodges in the blossom end, while sufficient to kill the little worm, is infinitesimal, and tests have shown that before the apple has matured, wind and rain have removed from it all traces of the Paris green.

Orchards Can be Cleaned of It.

The apple worm—or, rather, the codling moth, its parent—is not a migratory insect. Once eradicated from an orchard, it is gone never to return, unless it may come in barrels of apples shipped in from abroad. In that case, by placing the apples in storage in a cellar, where every exit is carefully screened, the moths which come out in the spring will be imprisoned and will die without laying their eggs. By perseverance the worm can be rooted out. With the trees sprayed in the spring many of the first brood are killed and the number of the more destructive second brood is reduced. Eventually the apple worm goes for good.

Below are given the results attained by some fruit growers, who experimented with the spray last summer. It will be noticed that some of them experimented upon fruits other than the apple, but these were side issues. The real fight was against the worm on its native heath—in the apple.

A. Oberndorf of Centralia mixed the spray according to directions and applied it to the Missouri Pippins, Ben Davis, Winesap and Genet varieties. The number of trees sprayed, the manner of spraying and the cost, and other particulars are not known to Mr. Oberndorf, as he was not living on the farm when the work was done. He reports, however, that while there was no appreciable difference in the size of the yield, the fruit on the sprayed trees was much superior in quality to that on the unsprayed trees, and less damaged by the worms.

A. E. Dickinson of Meriden believes that he has obtained no benefit from the spraying. Mr. Dickinson expended about \$16 in the work and sprayed three blocks of trees, Ben Davises, Missouri Pippins, Genets and Jonathans, only one block of which was sprayed twice. The fact which Mr. Dickinson com-

municates to the department—that bitter rot was prevalent in his orchard during the summer—changes the circumstances somewhat. The effect of the experiments can best be observed only on healthy trees.

He Noticed the Benefit.

"On May 3, I commenced spraying my apples, finishing May 9," William Mitchem of Argentine writes to the department. "I used from two to three pints on each tree, spraying 7-year-old Ganos, Winesaps and Ben Davises. April 28th I sprayed my Keifer pears.

"In mixing the spray for convenience I put five pounds of Paris green and ten pounds of lime separately in water to soak and slake. When the lime had slaked I stirred it into a paste and placed it, together with Paris green, in a barrel; added sufficient rain water to make twenty gallons and mixed it to a paste, allowing it to stand twenty-four hours as directed. To each forty gallon barrel of water I added one gallon of this mixture, stirring thoroughly and spraying with mist spray. The pear trees sprayed produced a large crop of fruit and a crop of good quality, but the effect of the spraying was most noticeable on the apple trees. The Ganos and Winesaps were not entirely free from the insect pest, but produced an average good crop, and the Ben Davises, which have been badly infected for the last three years, were much improved and there were fewer windfalls than formerly. I intend to spray another year when the apples are at the same stage of growth, but the next time I will make the spray twice the strength and spray twice if possible. I was so busy last spring I could only spray once. I consider the spraying a benefit."

A Success for This Grower.

"I sprayed for the moth according to directions on May 5, 8 and 10, spraying twice and covering six or seven trees each of the Missouri Pippin and Ben Davis variety," writes Willis K. Folks of Lawrence. "The whole operation cost me \$25. Half of the orchard was left unsprayed for comparison. The yield on the sprayed trees was much larger than on the others, the apples remained on the trees better and the sprayed trees produced larger apples of finer quality. I shall spray again in 1901."—The Kansas City Star.

ORCHARDS.

From the Kansas City Star THE CONSERVATIVE is permitted to copy a very valuable article as to the treatment of orchards. And to the Star—which is the best newspaper on the Missouri river, as its enormous circulation demonstrates—THE CONSERVATIVE—for the use of the illustrations kindly furnished—returns sincere thanks. Read the article and treat your orchards accordingly.

ACCEPTING HARRISON'S VIEW.

It is refreshing to listen to such a commanding voice when we are told that the shibboleths of American liberty do not mean what they meant at the beginning of the century, and when it is taught in high places that principles which were pregnant with patriotism as asserted against Great Britain are mere bubbles of rhetoric if quoted against ourselves. President Harrison says that the provisions our fathers fought for were rights, "not privileges," and he rejects the opportunist idea that the flag shall stand in the new possessions only for commercial benefits and for the "benevolent policies" of the administration, however benign they may be. No one can dispassionately read the address and still believe that our century-old maxims as to the "rights of man" are idle babble.—Philadelphia Ledger (rep.)

Mr. Harrison has just returned from Washington. While there, two dinners were given in his honor by judges of the supreme court. He was much with them. Very soon they are to decide this great constitutional question. They are considering it now. Knowing Harrison as we do, we are quite sure that he would not publicly lay down this opinion of constitutional law if he had reason to think that soon the supreme court will decide the other way. He might still have the same opinion, but he would not openly put himself in antagonism to the supreme court. Let us hope that its opinion will agree with his. It will be the shortest and best way out of a very bad situation, give to the Philippines their independence, and put an end to this syndicating colony business, which is obnoxious to our institutions.—Boston Evening Record (rep.)

Ex-President Harrison's clear and comprehensive statement of the case will have great weight in determining opinion that has been in suspension, and will be a potent influence upon the future course of the republican party, which has arrived at the parting of the ways and must choose which road it will take—the path of plain duty and loyalty to American ideals, or the other road to imperialism and tyranny.—Philadelphia North American (rep.)

Ex-President Harrison's address, delivered to the students of the University of Michigan on Friday last, was the most significant of the many recent proofs of the recovery of the American people from the intoxication caused by their easy victory over a second-class military and naval power. It is not very long since it was regarded as little short of treason for anybody to express a doubt that this nation had suddenly acquired new greatness and had new duties thrust upon it as a world power; indeed, the foremost representative of "the strenuous life" was going up and down the country only a few weeks ago