

## POISONING THE PASTURE UNDER THE TREES.

Another important practical question which I have tried to settle this season—1889—concerns the danger of pasturing under trees which have been sprayed with the arsenites.

A gentleman wishing to spray his orchard, in which he was pasturing seventy-five hogs, consulted me as to the wisdom of doing so without first removing the swine. I told him I believed there was no danger. I said use a mixture, one pound of London purple to two hundred gallons of water, watch your hogs closely and if any seem affected remove all at once, and I will be responsible for damages to the amount of twenty-five dollars. The gentleman did so and reports no damage.

In the following experiments I used the mixture of twice the strength which should be used, that the experiment might be the more convincing. I used one pound to one hundred gallons of water. In every case the spraying was very thoroughly done. Care was taken that every twig and leaf should be drenched.

In tree No. 1 a thick paper was placed under one-half of a rather small apple tree. The space covered was six by twelve feet, or seventy-two square feet. The paper was left till all dripping ceased. As the day was quite windy the dripping was rather excessive. In this case every particle of the poison that fell from the tree was caught on the paper. Dr. R. C. Kedzie analyzed the poison and found four-tenths (.4) of a grain. Tree No 2 was a large tree with very thick foliage. Underneath this tree was a thick carpet of clover, blue grass and timothy just in bloom. The space covered by the tree was fully sixteen feet square, or equal to two hundred and fifty-six square feet. As soon as all dripping had ceased, the grass under the tree was all cut, very gently and very close to the ground. This was taken to the chemical laboratory and analyzed by Dr. R. C. Kedzie. There was found 2.2 grains of arsenic. Now as our authorities say that one grain is a poisonous dose for a dog, two for a man, ten for a cow, and twenty for a horse, there would seem to be small danger from pasturing our orchards during and immediately after spraying, especially as no animal would eat the sprayed grass exclusively. To test this fully, I sprayed a large tree over some bright tender grass and clover. I then cut the clover carefully, close to the ground, and fed it all to my horse. It was all eaten up in an hour or two, and the horse showed no signs of any injury. This mixture, remember, was of double the proper strength, was applied very thoroughly, and all the grass fed to and eaten by the horse. This experiment was repeated with the same result. I next secured three sheep. These were kept till hungry, then put into a pen about a tree under which was rich, juicy June grass