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Hess Orchards, Waynesboro, PA

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HOW OUR COMPANY VIEWS PINE MOUSE CONTROL

Presented By

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March 10, 1977

I am H. Lee Showalter, the manager of Hess Orchards, Waynesboro, Pennsylvania. We are growers and packers of fresh fruits. At the present time, we have approximately 350 acres planted to apples and 125 acres planted to peaches. We are producing about 180,000 bushels of apples and 15,000 bushels of peaches annually.

Our company is concerned mainly with 'pine' mouse damage. We have had meadow mouse injury but it has not been as much of a problem as the pine mouse damage. We have been spending \$4,000 to \$6,000 for rodenticide materials annually. This does not include the labor necessary to apply the materials.

Let me briefly describe the type of injury that is typical in our orchard and the economic importance of this injury. Normally the mouse injury to our apple trees shows up as off color foliage with accompanying devigoration of the tree. Within a two to three year period, the tree dies or loses its productivity. Most severely affected trees have been mature apple trees 15 to 20 years old. These trees have an annual productive potential of 15 to 20 bushels per tree. If you consider that the productive life of these trees is 30 years, we have lost 10 years of productivity when one of these trees is killed by mouse damage. If annual production for the tree averages 15 bushels of apples, we have lost a potential of 150 bushels of production.

Assigning a value of 5¢ per pound to this volume, we find that we can lose \$300. each time a tree is killed by mouse damage. If 20% of the trees in a given acre are killed or devigorated to the point of losing productivity and assuming that the orchard would have produced for 30 years, we are losing \$3,000. per acre - given to standard of 50 trees per acre. We have several acres of apple orchards affected in this manner on our farm. This is why we are willing to spend fairly large sums of money each year to control this pest.

We have tried several different methods of controlling pine mice. We have broadcast and hand baited zinc phosphide materials. We have hand baited strychnine coated wheat under aluminum bait stations. We have also used Endrin as a ground spray fall application after harvest.

Of all the methods, the one that has worked best for us has been the ground spray application of Endrin. From a labor management point of view, it is done at a time of the year when there are not other pressing demands on labor. In addition, labor costs us about 30% for the Endrin application compared to any hand baiting we've tried. The effectiveness of the Endrin has surpassed any of the other rodenticides we have tried. We have not had an opportunity to evaluate the Ramik or Rozol materials currently available.

In addition to the mentioned control measures, we have tried other cultural practices suggested by our Pennsylvania Extension Service people. We have tried to keep the sod level in our orchards at three to six inches. We have also tried to eliminate grass cover under our trees by the use of herbicides. The last practice is costly and must be done at least twice during the growing season if it is to be successful. We also try to remove dropped fruit from the orchard as soon as possible.

I would also state that we have never had an accident or any illness resulting from the application of any of the rodenticides that I have mentioned. We try to handle these materials just like any other pesticide, VERY CAREFULLY. We follow the label recommendations religiously. In addition, our farm is part of the Co-operative Farm Game Project operated by the Pennsylvania Game Commission. The many hunters who roam through our orchards each year can attest to the fact that small game is indeed plentiful on our farm.

In conclusion, we wish that there were less costly and more effective controls available for pine mouse control. It has been my pleasure to speak to you on this important problem.