

Without Pesticides, Apple Production in the United Kingdom Would Not be Viable

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United Kingdom apple growers produced 408 million pounds of dessert and culinary apples in 2004. The major varieties grown were Cox's Orange Pippin (*dessert*) and Bramley's Seedling (*culinary*). Pesticide use surveys for apples in the UK indicate 99% of Cox's Orange Pippin and 96% of Bramley's Seedling received pesticide applications. Both Cox's and Bramley's received 18 pesticide sprays throughout the year [1]. Key pests targeted by fungicide applications are apple scab and mildew while insecticide applications are aimed at rosy apple aphids, tortrix moths and codling moths.

The fruit industry relies on pesticides to minimize losses and to maintain the high standards of fruit quality that customers demand. Most fruit crops receive numerous fungicide sprays, as well as several insecticides. By applying a full spray programme, good growers have generally restricted losses due to pests and diseases to low levels, usually no more than 1-2% in total [2].

In recent years, the increased value of the larger and better quality fruit which results from the control of pests and diseases has been showing an increasing differential with that of lower grade produce. At present the only way that these high standards of visual appearance can be achieved is through chemical control of pests and diseases. Failure to control a disease such as apple scab could have the direct effect of reducing the value of top quality Cox's Orange Pippin apples from £600/ton to £90/ton as processing fruit [3].

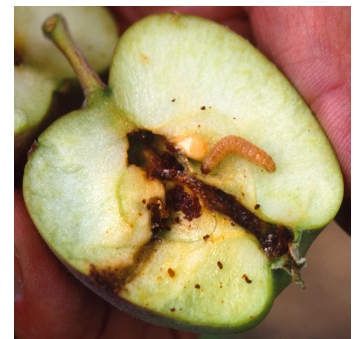
With no pesticide use, it is unlikely that any saleable crop of dessert apples would be obtained, and the fruit would only be of value for juicing. Furthermore, a no pesticide policy results in a negative gross margin. This implies that, other things being equal, producers would grub their orchards immediately. If pesticides were not used, apple production would thus not be commercially viable. With a negative gross margin, apple producers would leave the industry and find other uses for their land [4].

References

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2. Cross, J.V. 1994. Pest and disease control in fruit crops in the UK – biological methods for reducing our dependence on pesticides. *Pesticide Outlook*. 15(2):12.
3. Gunn, E. 1988. The contribution and value of pesticides to disease control in fruit. In Clifford, B.C. and E. Lester (Eds) *Control of Plant Diseases: Costs and Benefits*, Blackwell Scientific Publications, Oxford, UK.
4. Webster, J.P.G., and R.G. Bowles. 1996. Estimating the economic costs and benefits of pesticide use in apples. *Proceedings of the Brighton Crop Protection Conference – Pests & Diseases – 1996*. p. 325.



Scab Infected Apple



Codling Moth Damage to Apple



Cox's Orange Pippin



Pesticide Application in an Apple Orchard