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MANAGEMENT PRACTICES TO REDUCE LOSSES CAUSED BY HAIL DAMAGE TO BURLEY TOBACCO

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It is estimated that Kentucky farmers have suffered income losses caused by hail damage to burley tobacco in excess of \$6 million annually over the last five years. Such losses could often be substantially reduced through proper management of the crop following hail, according to studies involving artificial and natural hail damage.

After severe damage involving a high percentage of stalk breakage early in the growing season, two methods of treatment are possible. The stalks can be cut off and a crop grown from the suckers which develop, or the crop can be re-transplanted. The choice between these practices depends on the size of the damaged plants, whether or not adequate moisture is available, and, of course, the availability of re-plants. If plants are not well established at the time of injury, or if adequate moisture is not available, suckers may not develop and re-transplanting is the only possibility. However, hail is generally accompanied by enough rainfall for well-established plants to develop suckers, bringing greater returns than expected from re-transplanting. If moisture is lacking, irrigation should help in promoting sucker growth.

When a sucker crop is to be grown, the plants should be cut off high enough to retain enough leaf buds for development of strong suckers, but they should not be cut at a height of more than six to eight inches above the ground. Later, the sucker growth should be reduced to one sucker per plant. Mutilated leaves or leaf fragments remaining on the injured plants should be left to promote sucker growth.

In the event of severe damage that completely or almost completely strips plants of their leaves but doesn't damage the bud, there is also a choice of two treatments. The choice is determined by the stage of plant growth. In the early stages of plant growth, the best practice is simply to remove broken leaves clinging to other leaves on the plant and also to remove developing suckers. Leaf fragments attached to the stalk should not be removed, as these will help nourish the young developing leaves. The plants should still develop enough leaves to justify harvesting and marketing the crop.

Studies with simulated hail have shown that when all leaves longer than six inches were stripped from the plants as late in the growing season as seven weeks after transplanting, the income could amount to as much as 65 percent of that of

normal plants. If buds have not appeared, the plants should always produce enough leaves to justify harvesting. If buds have appeared, a fair estimate can be made of the number of leaves likely to develop, indicating the probability of a profit from harvesting.

Only a few leaves will develop following a severe hail storm in the late stages of plant growth. Caring for these plants would not be profitable; the plants should be cut off to grow a sucker crop. It is possible to obtain a sizable income from a sucker crop even following a loss rather late in the growing season. If the suckers fail to make sufficient growth and it would not be profitable to harvest them, the cost of cutting off the plants and removing the suckers would not be great.

If moisture is lacking, irrigation might help to promote sucker growth on the cut-off plants and overcome the shock of losing leaves, thus promoting better growth of new leaves on untreated plants.

If adequate amounts of fertilizer were applied initially, it is doubtful if any benefits would be derived from additional fertilization.

The profitability of harvesting a hail-damaged crop on any farm should be determined by the individual farm conditions, such as the availability of labor. If the labor force has no other opportunity for more profitable employment, consideration might be given to harvesting plants with very few leaves or suckers of small size.

Because of individual farm conditions and the variations in plant growth and degrees of hail injury, recommendations can not be made that will cover all situations.

In the event of a severe hail loss, call your county agricultural Extension office or your Area Tobacco Agent for assistance.

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