PREMATURE FLOWERING MANAGEMENT

J. Michael Moore

The cause of early flowering is not completely understood, but thought to be associated with variety genetics, the environmental conditions in which the tobacco was grown and when it was transplanted. This condition is more likely to occur with sensitive varieties such as NC 82, NC 2326, and Coker 371-Gold during seasons of unseasonably cool, overcast weather while the plants are still in the beds and/or when cool, wet field conditions occur shortly after transplanting. In addition to environmental conditions, early flowering is also thought to be triggered by other forms of stress. This stress may be drought, excessive soil moisture, nitrogen deficiency, root damage, fertilizer injury or chemical injury.

Tobacco crops can generally tolerate an accumulation of approximately 10% stand loss without serious yield losses. If losses to other pests or diseases are high the level of premature flowering which might be tolerated would be lower.

A distinction between excessively premature flowering of plants which have not and will not produce harvestable leaves and those which flower slightly earlier than the majority of plants in the field but with near normal numbers of harvestable leaves should be made. In the first case, plants should be cut back to leave one to two leaves. Suckers will begin to grow from the remaining leaf axils. After allowing the suckers to reach two to three inches in length, remove extra suckers leaving only the best sucker in the second leaf axil from the top. In the latter case, plants which may have produced some harvestable leaves, but flowered early may be topped a little lower than normal and cleaned up to leave the second or third sucker from the top after allowing the suckers to grow to two to three inches in length. In both cases, additional leaves may be added before the bud is removed by the first or second contact sucker control application.

Chemical sucker control applications should not be delayed because of remedial actions taken to increase the leaf counts of a few premature flowering plants. In fact, early hand application of a contact type fatty alcohol or Prime® may be used to control the growth of additional suckers below the one left. In some cases, growers should take the appearance of a few slightly early flowers as a signal to get prepared to start their sucker control programs.

Plowing up the crop and starting over should be the last option considered in most cases. Replanting adds to production costs and increases the chances for lower than normal yields. Topping and turning out a sucker is usually the most practical option. Growers should be aware of the threat of spreading mosaic during this operation and follow good sanitation practices. Workers should avoid touching plants which show symptoms of mosaic and should wash their hands and knives frequently in a milk solution or in a strong phosphate containing soap to remove and deactivate the virus.