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Control Ragweed to Help Manage Granville Wilt

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Research has shed some interesting light on the relationship between the organism that causes Granville Wilt in tobacco and ragweed.

This dreaded disease is caused by bacteria which can live on the roots of ragweed.

Once inside the roots of tobacco plants, these bacteria multiply and "plug up" the vascular system. One of the first symptoms of Granville Wilt infection is that tobacco plants droops to one side as a result of the plugging of the vascular system on that side of the plant.

Granville Wilt bacteria are known to stay in tobacco fields for years. Rotation can help reduce the level of infestation, but unfortunately rotation doesn't help the way it does with managing black shank.

One reason that rotation may be ineffective is that the Granville Wilt-causing organism thrives on common ragweed, which grows not only in tobacco fields, but other crops and idle land as well.

A management program for this diseases should consist of an early stalk and root destruction program, rotation, use of resistant varieties and the possible use of multi-purpose chemicals. Also, control of ragweed is an important component of

managing Granville Wilt.

Ragweed control should involve cultural practices such as rotation, cultivation and the use of herbicides in tobacco as well as rotation crops.

The 2013 Flue-Cured Tobacco Guide published by the NC Cooperative Extension Service on Page 80 has the following statement about "The Presence of common ragweed in tobacco fields in related to higher incidence of Granville Wilt because populations of this disease-curing bacterica can survive on roots of this weed. Ragweed control in a rotational crop and especially in skip-rows and filed borders is necessary to reduce populations if this weed and the persistent soilborne, bacteria that cause Granville Wilt. Command offers good control and Devrinol provides fair control "Ragweed following this harvest of small grain should be controlled.

Ragweed seeds germinate at or near the soil surface beginning in early to mid-April. Most germination takes place during April and May. Thus, ragweed seeds germinate most during the period when tobacco is becoming established. During this period, growth of tobacco may be so limited that it cannot provide enough competition to shade out week pests such as ragweed.

Ragweed plants may produce many seed. Large, vigorous ragweed plants may produce up to 62,000 seeds. Small plants germinating late in the season are capable of producing 3,000 seeds. On an average, a single ragweed plant produces 3,380 seeds in a single season. The high seed production potential of ragweed is what makes it so essential to control this pest.

Seeds spread mainly by wind and can withstand considerable damage without loss of viability. Seeds can lie dormant in the soil for long periods of time until favorable conditions for germination exist. In fact, ragweed seeds buried for 40 years have been found to germinate. However, most germinate within the first three years after they shed from the plant.