Reniform (Rotylenchulus reniformis) is the most damaging nematode pest on cotton in Alabama. In 1985, this nematode was restricted to a few cotton fields in south Alabama. By 1996, over 25,000 acres were infested. The reniform nematode is found in all cotton-growing areas of the state except for southeast Alabama. Yield losses vary from 10% to 75%, depending upon infestation levels and prevailing weather conditions. Losses are greatest on cotton exposed to drought-like conditions from mid-summer to early fall.

**Symptoms.** The presence of reniform cannot be determined by field symptoms alone. Nematode soil analyses must be made to confirm their presence. Nematode symptoms resemble root-knot nematode symptoms, but lesions are not as obvious or distinct. Lesions are larger and necrotic in appearance. Lesions are most apparent after 1 year back in cotton, so either a rotation with a non-host crop or a nematicide is required the following year.

**Persistence And Transmission.** Reniform nematodes can feed and reproduce on a wide range of plants. Many vegetable crops, vetch, clover, and certain varieties of soybean are excellent hosts. Nonhost crops include corn, sorghum, peanut, and winter grain crops such as wheat, rye, oats, and barley.

**Control.** Reniform nematode is best controlled by using the following strategies:

• The most effective means for controlling reniform nematodes is by preventing their spread to “reniform free” fields. Reniform nematodes are especially adapted for spread from field to field in contaminated soil clinging to farm equipment, tires, or the soles of shoes. Farm equipment that has been in reniform infested fields should be cleaned thoroughly before entering “clean” fields. Farm workers, cotton scouts, and other farm personnel should also make certain that all soil has been removed from their shoes upon leaving a reniform infested field.

• Nematicides are the best and most efficient means for controlling reniform nematodes in fields infested with reniform nematodes. Aldicarb at the higher recommended rates and 1,3-dichloropropene both provide economical return in infested fields.

• Crop rotation is also effective in reducing reniform nematode populations. One year in grain sorghum was as effective as a nematicide in controlling reniform nematode. Reniform populations survived after 1 year back in cotton, so either a rotation with a non-host crop or a nematicide is required the following year.