

► **Site-Specific Nematode Management With Telone II In The Mississippi Cotton Production System**

Presented by Dr. Tom Allen

Associate Extension Research Professor/Plant Pathologist, Delta Research & Extension Center

Over the past decade, site-specific management technologies have proven beneficial in insect management scenarios as well as nematode management situations. Site-specific nematode management technologies allow farmers to limit input costs and maximize returns in field situations where high nematode populations exist. By utilizing GPS/GIS and measuring soil electrical conductivity (such as with a Veris EC 3100) farmers can divide fields into specific management zones based on areas that may be more conducive to supporting high nematode populations. However, soil sampling remains an integral part of the system to determine where the greatest nematode numbers are present. By building field maps containing all of the above information (GPS points, EC values, and nematode numbers) farmers can get an idea of the benefits of treating small, nematode-infested field areas within a particular field (or fields) rather than treating an entire field. Reducing the entire area for treatment limits the expense of using a product such as Telone II at a rate of 3 gallons/A (approximately \$16/gal of product). Telone is a soil fumigant with activity against all nematode species when applied at least two weeks pre-plant. The high cost of the product underscores the need for site-specific technology to reduce the overall application cost. However, without verifying the nematode component, both particular species present as well as numbers within the soil category the information won't be utilized correctly. Relying on GPS technology and ground-truthed nematode numbers creates a reliable alternative for farmers. Treatment areas can then be effectively determined by combining all of the information (EC values, specific soil zones based on EC values, nematode number) from a field having a history of poor yield. The field can then be treated accordingly. In addition, by combining management strategies, such as Telone II and a nematode-resistant variety, farmers can increase the reliability of nematode management as well as maximizing returns on a farm scale. Site-specific nematode management has increased returns in the Mississippi cotton production system in two root-knot nematode infested fields over the past three seasons. By using a root-knot resistant cotton variety, coupled with Telone II, a 200+ pound lint increase was observed between non-Telone treated and Telone-treated strips in 2011. To verify the response of the technology, fields were treated with 24 row Telone-treated strips and compared with non-treated strips.

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