

Weather Important Factor In Sucker Control

MIDDLEBURY, Conn. — Rainy or dry, the weather always plays a major role in flu-cured tobacco sucker control. Understanding how weather affects

sucker control will help growers get the most from an application of Royal MH-30® plant growth regulator.

Dry conditions, such as those in 1993, make it more difficult to control suckers with MH® noted Fred Yelverton, Ph.D., extension tobacco specialist at North Carolina State University.

na State University.

"MH® is absorbed by leaves and moved within the plant system to small sucker buds," Yelverton said. "Good absorption and

systemic movement depend on having good crop growing conditions. Therefore, MH® should never be applied on drought-stressed crops. If soil moisture is low, it is best to apply MH® one to three days after a good rain or irrigation."

Rain is a problem only if it washes MH® off plants within six hours of application. If rain falls within six hours after application, MH® should be reapplied at one-half the recommended rate. Reapplication is unnecessary if it rains more than 10 hours after application.

Timely rain actually can help growers by washing off excess residue. Heavy dews in tobacco producing regions of Virginia can have the same effect, noted David Reed, Ph.D., extension agronomist, tobacco, at Virginia Polytechnic Institute.

Quality Of Grain Under Loan Important

LEESPORT (Berks Co.) — To protect and maintain the quality and quantity of their farm-stored grain, Agricultural Stabilization and Conservation Service (ASCS) official Richard Troutman advises farmers to continue following

proper grain storage procedures. "With more than 85,000 bushels of loan grain stored on Berks County farms, it is imperative that producers make periodic grain inspections, particularly during the spring, summer and early fall,"

Troutman said.

He said rapid insect development usually occurs near the grain surface, usually at the peak of cones and in areas where foreign material has built up.

"Producers are cautioned to be particularly alert when inspecting their grain, and increase spot-checks if the normal checks indicate the need."

The longer grain is in storage, the more likely it is to become infested. The stored grain should be probed to discover insects, and a thermometer should be inserted from time to time into the grain

mass to check the temperature. If there are signs of insect infestation or hot spots, fumigation may be necessary.

"We spot check farm-stored grain at random and notify producers of any existing problems," said Troutman. "However, our spotchecks are strictly for the purpose of protecting the Commodity Credit Corporation's interest and should not be relied on as a substitute for regular producer inspections."

Any loss in the quality or quantity of farm-stored grain is the producer's responsibility.

Registration Granted

WAYNE, N.J. — Federal EPA registration has been granted for American Cyanamid's newest no-till soybean herbicide, Detail CPTM herbicide.

A complete surface-applied herbicide, Detail provides no-till farmers with consistent control of more than 50 grasses and broad-leaf weeds.

Detail controls tough weeds such as cocklebur, lambsquarters, yellow nutsedge, nightshades, ragweeds, foxtails, panicums, and crabgrass.

"No-till farmers needed a complete surface-applied herbicide that could stand up to weather extremes and high levels of crop

residue," said Julie Bennett, American Cyanamid product manager. "When we designed Detail, we looked for a product that would provide exceptional weed control in wet or dry conditions and would easily wash off crop residue."

Scientists Study Effects Of Mastitis

HUNTINGDON (Huntingdon Co.) — Mastitis, the dairy industry's most pervasive animal health problem, may be costing farmers more than they think.

Each year, farmers lose up to \$200 per cow in lost milk, culled cows, veterinary fees and other expenses. Annual losses from mastitis total \$150 million in Pennsylvania and \$2 billion in North America.

Now researchers in Penn State's College of Agricultural Sciences are learning that mastitis also may be a factor in bovine embryo mortality. Veterinary scientists Dale Moore and William Sischo are investigating a possible link between coliform mastitis and changes in the reproductive cycle of infected cows.

"Some types of mastitis are caused by E. coli bacteria or other organisms that have endotoxins in their cell walls," Moore said. "When those bacteria die inside the mammary gland, toxins are released. The cow's immune system responds and, after a series of biochemical events, prostaglandin is produced. This chemical mediator is associated not only with pain but also with reproduction."

Moore said he suspects that prostaglandin released in response to mastitis short-circuits a cow's reproductive cycle.

"A layer of tissue called the corpus luteum, which grows on the ovary after a cow ovulates, may be the key," Moore said. "If the cow conceives, the corpus luteum produces progesterone, which maintains pregnancy."

Progesterone is produced at maximum levels during days six through 17 of the cow's 21-day cycle.

"Normally, if conception doesn't occur, the cow's endometrium produces natural prostaglandin, dissolving the corpus luteum so that she can ovulate again," Moore said. "If bacterial endotoxin from mastitis stimulates her immune system and prostaglandin is produced, the corpus luteum could be dissolved. Once that happens, the pregnancy is over."

The researchers have studied 75 cows from Penn State's dairy herd since the project began. "We're not inducing mastitis in any animals, but if a cow is diagnosed with coliform mastitis, we study her," Moore said.

"Because hormone levels reveal whether the reproductive cycle is disrupted, we monitor blood progesterone every four days for a whole cycle. We also check the ovaries to see if a corpus luteum is present when mastitis is diagnosed, and whether it regresses as the infection runs its course."

The study will be completed in 1995. "If we can show that mastitis is a factor in embryonic death, veterinarians and herd managers can make more specific diagnoses when a loss occurs and can take control measures," Moore said.



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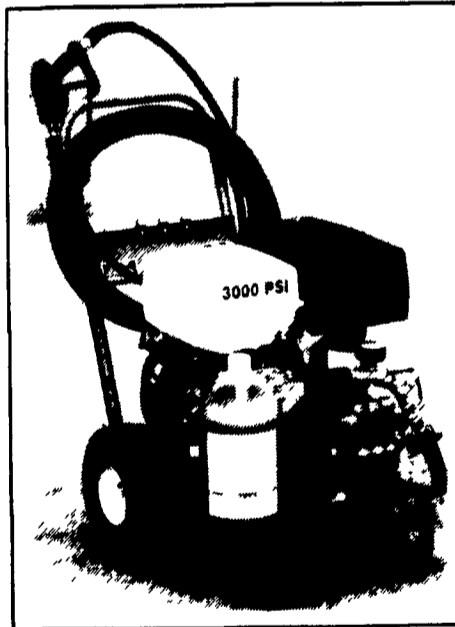
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