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Callisto and Sweet Corn Varieties By Doug Doohan, Weed Ecologist

Difficulty in predicting tolerance of the great many sweet corn varieties, more than any other factor, has prevented sweet corn labeling of many herbicides used regularly on field corn. There are too many varieties to test and new ones are introduced every year. Varying environmental conditions from site to site and from year to year further complicate predicting tolerance. Even a very tolerant variety may be injured when herbicides are applied during weather conditions that adversely affect crop growth.

Sweet corn is generally quite tolerant of Callisto (mesotrione is the active ingredient). Preemergence (PRE) applications are thought to be safest but require a higher rate (6.7-7 oz/A) and control fewer weeds. Most growers will apply Callisto postemergence (POST). Short-lived chlorosis is common with POST applications and stunting may also occur. Injury with Callisto can be minimized by only using non-ionic surfactants (NIS) with POST applications. Never use nitrogen-containing adjuvants such as urea ammonium nitrate or ammonium sulfate. Also be careful to observe the restrictions on insecticides used in close sequence with Callisto applications (see last weeks VegNet article or the Callisto label). We have never observed the severe injury and total cessation of growth that sometimes occurs when some corn varieties are treated with certain sulfonyl urea herbicides.

Since 2002 we have tested tolerance of approximately 40 sweet corn varieties to Callisto and other mesotrione containing herbicides (Lumax etc). Varieties in Table 1 were tested in weed-free trials. Trials were conducted using a randomized complete block design with 3 replications unless otherwise indicated (ie Non-replicated). We never detected significant yield loss following Callisto POST at 3 oz/A alone or tank-mixed with atrazine at 1 lb/A (yields only from replicated trials). In many instances yield increased slightly following Callisto even though we maintained a high degree of weed control. Increased rates of atrazine (1 lb/A) in the tank-mix with Callisto or Callisto at 6 oz/A (ie 2X application) caused increased chlorosis. Cultivar names in italics in Table 1 were those that displayed significant chlorosis or stunting immediately following mesotrione application but no affect on yield.

Table 1. Sweet corn varieties evaluated for tolerance to Callisto in replicated and non-replicated trials at OARDC in Wooster. Variety names in italics were those temporarily injured by Callisto applied postemergence (POST) at 3 oz/A. Injury was mainly chlorosis with some stunting, yield was not affected.

2002

2002

2003

2004

Replicated

Non-replicated

Replicated

Non-replicated

Replicated

Merlin

Bandit

Seneca Dancer

Confection

Bonus

Serendipity

Sweet Ice

GSS 0966

Cronus

Tahoe

SilverKing

Ice Queen

Camas

Jubilee

Confection

HMX 0351

Incredible

Sensor

Kandy Korner
Sweet Chorus
Silver Queen
Imaculata
Serendipity
Kandy Plus
SS Jubilee Plus

Kandy Korner

Obsession

Kandy King
Extra Tender
Sweet Rhythm
Seneca Daybreak
Double Up
Kandy Korn
Morningstar
Kandy Korn
Silver King
Winstar

Kandy King

Sweet Ice
Serendipity

Bandit
Sweet Chorus
Sweet Rhythm
Argent

Sweet Rhythm

Temptation
Jubilee

Seneca Daybreak

Xtra Tender 277
Prime Time

Ice Queen
GH 0937

Xtra Tender 372A
GH 2547

Temptation

Editors Note: Sweet Corn Hybrids Reaction to Callisto. Sweet corn growers should be aware of the research of Dr. Jerald Pataky et al. His 2004 Sweet Corn Hybrid Disease Nursery report summarizes the reactions of 378 sweet corn hybrids to Stewarts wilt, common rust, NLB, MDM, and SLB and the reactions of these hybrids to post emergent applications of Accent, Callisto and Option herbicides. The report is part of the 2004 Midwest Vegetable Variety Trial Report for 2004. This bulletin also contains numerous vegetable variety evaluations from the Midwest region and copies are now available for sale for \$20.00 which includes postage. Supplies are limited so send your order to Jim Jasinski, OSU Champaign County Extension, 1512 South US Hwy. 68, Suite B100 Urbana, OH 43078, Phone 937-484-1526. Make checks or money orders payable to: The Ohio State University Extension. The report is also available online at: <http://sweetcorn.uiuc.edu/>

Strobi Availability Source: Gregory Shaner, Professor, Botany and Plant Pathology, Purdue Univ., Facts for Fancy Fruit, 4/15/05 and ICM Newsletter 4/21/05

Editors Note: The following article is directed to fruit growers but the same applies to all vegetable growers.

Azoxystrobin, sold as Quadris in the field crop market, and trifloxystrobin, a component of Stratego, are both likely to be used against soybean rust should the disease develop this year. If a major epidemic develops, this will put a lot of strain on the fungicide delivery system. Various people have told me that the chemical companies and dealers are not going to forget about their regular customers as they try to take care of all the soybean farmers who may want product. Still, I think fruit growers (and veggie growers) might want to talk to their dealers about supply, and if pre-ordering is appropriate, may want to do so. I think the fruit growers (and veggie growers) probably have a big advantage over soybean growers, in that they have a pretty good idea of how much material they need. Right now, its all very uncertain for the soybean growers, because no one can say whether we will have a rust problem or not, especially in the northern states.

Petting Zoo Sanitation Source: Peter Hirst, Purdue Univ. Commercial Tree Fruit Production Specialist, Facts for Fancy Fruit, 4/15/05, ICM Newsletter 4/21/05

Cases of E. coli infection following visits to petting zoos or animal exhibits have been widely reported recently. In Florida, at least 22 people, almost all children, fell seriously ill after visiting one of three fairs in the past two months. State health officials are investigating 35 more cases. Last Autumn, 15 children developed the life-threatening kidney ailment in North Carolina, and a petting zoo exhibit at the

state fair in October was determined to be the likely source. In all, 108 people, more than half of them small children, were affected by E. coli traced to the fair, although most had far milder symptoms than the 15.

Not that petting zoos are hazardous places for kids, but there is some level of risk. As with any aspect of your farm operation, you should do all you can to be aware of the risks and to reduce and manage the risk. Talk to your local health inspector to make sure you are in compliance with all regulations. The bad publicity and ramifications of a child becoming ill after visiting your petting zoo are pretty obvious, so do all you can to reduce the risk of this occurring.