Washington State University • Long Beach
Cooperative Extension
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CRANBERRY VINE

February 2000

MEETINGS

Weed, Disease and Nutrient Management on a Budget; Tipworm, Fruitworm and Fireworm IPM. March 20, 7:00 - 9:00 p.m. at the North Beach Grange in Grayland; March 21, 7:00 - 9:00 p.m. at the WSU - Long Beach Research Station on Pioneer Rd. Pesticide credits will be given.

Pesticide Safety, Chemigation, Pollination, Backpack Sprayer Calibration and Frost Protection. April 17, 7:00 - 9:00 p.m. at the North Beach Grange in Grayland; April 18, 7:00 - 9:00 p.m. at the WSU - Long Beach Research Station on Pioneer Rd. Pesticide credits will be given.

BOG MANAGEMENT

Spring Disease Control Clean Up. Harvest trash harbors many pathogens and has been implicated as a source of disease inoculum. Trash from fields with a lot of harvest rot should be moved at least ½ mile away or buried. Spring Bordeaux is an old-time fungicide that has been suggested in the past to help clean up diseased fields. Bordeaux, applied as the beds open and new upright growth begins, might help in fields infested with cottonball. Call Dr. Bristow for more information.

Spring Weed Control. We have studied long-term control of silverleaf with Casoron, with or without high rates of Devrinol and/or 2,4-D, for 3 years. In every year at every site, the most cost effective and simplest treatments to apply were split Casoron applications (50 lb. ea.), one in March and one in April. Adding 2,4-D to this treatment (Casoron:2,4-D 5:1) or Devrinol did not improve silverleaf control or yield, nor reduce phytotoxicity in any of the trials. Other work done in 1999 would suggest that a single application of Casoron late (75 lb. in mid-April) was just as effective or more effective than higher rates (100 lb.) earlier. The least effective application was 100 lb. in early March. I want to stress that these data are relevant only on McFarlins on peat or muck soils. Stevens on sand respond better to lower rates with a split application and the last date of application moved up 2 weeks.

Winter Grass Control with Poast. Poast works only on actively growing grasses. A few species of grasses, however, remain green during the winter and are moderately susceptible to Poast. Don't expect great results, but you can make a dent over time. One note of caution, Poast, which is used with a crop oil surfactant, may injure cranberry foliage in very cold weather. I would recommend its use as spot treatment on warmer days.

A Quick Method to Calibrate Your Sprinkler System for Chemigation. If you have not done so recently, you should consider calibrating your sprinkler system to determine where and when your chemigated materials are being delivered. It will save you money in the long term. Now is an especially good time, as your system may have sprung a few leaks, developed a few plugs, or been banged in the nozzle here and there during harvest. Ocean Spray BMP suggest that chemigation systems be calibrated mostly by measuring volumes of chemigated water in cups placed in different parts of the bog and calculating a Uniformity Coefficient to express any spatial differences. While this process can be quite precise, it is also rather time-consuming and complicated. Last summer we adapted another BMP recommended procedure to measure the time it takes to deliver material to all parts of the farm. We calibrated the set sprinkler systems for chemigation according to this method at four commercial cranberry bogs in the Long Beach growing region. The results were very revealing.

An inert blue dye (Spray Tracer, Becker-Underwood) was injected into the set sprinkler systems by the grower according to his/her normal operating procedures. Unlike Ocean Spray recommendations, we did not lower injection volume nor shorten injection time. The system operator timed the period of injection (how long it took the chemigation barrel to empty), while three or more observers, placed at different parts of the farm, timed how long it took the dye to appear and disappear at various sprinkler heads.

We found that the travel time (time for the dye to reach the sprinkler head) varied a lot both among and within bogs. It usually took longer for the dye to reach

sprinkler heads at greater distances from the point of injection (pump house), but some exceptions occurred. For example, the dye appeared at very different times at the sprinklers in each of the western corners of bogs 6 and 7 at Farm 1, although they shared the same plumbing design. Coverage varied considerably at Farm 2, where the travel time on the bed (e.g., actual duration of application) was close to 8 minutes at many sprinkler heads in 2 bogs, but only 4 minutes at eastern sprinklers in 2 other bogs. Another curious irregularity was observed at some sprinklers at Farm 2 when the dye suddenly disappeared for 20 to 30 seconds in the middle of application. The original sprinkler system at that farm is over 50 years old and portions have been replaced, but not with uniform fittings. Pipe sizes also decrease quickly, from 6" diameter main-lines, to 3" pipes that enter the bog, to 1.5" pipes that lead to the nozzles. Rapid and non-uniform changes in pipe diameter could lead to sudden fluctuations in irrigation pressure, flow, and direction. At some parts of Farm 3, injection to last-head-travel-time (e.g., time to final clearance of dye) exceeded 10 minutes after the end of the injection period (Fig. 1). This observation poses a

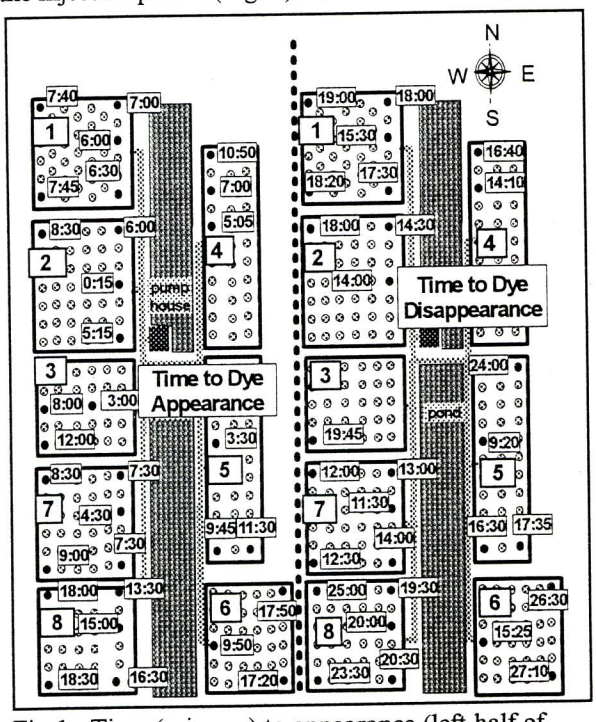

Fig 1. Time (min:sec) to appearance (left half of figure) and disappearance (right half of figure) of blue dye at several sprinkler heads at Farm 3. Time of injection was 12 minutes.

serious chemigation dilemma. If material is allowed to totally clear those sprinkler heads with very long travel times (usually those at greatest distance from the point of injection), then areas under nozzles with very short travel times will receive too much post-application drench, reducing pesticide efficacy, increasing pesticide run-off, and adding to environmental contamination. If chemigated material is not allowed to clear the sprinkler heads with long travel times, then pesticide coverage, and efficacy, may be reduced. As a compromise, the grower's usual practice at Farm 3 was to turn off the pumps and terminate chemigation at 5 minutes after the end of the injection period. This prevented excessive drench at sprinkler heads close to the pump house, but a "hot spot" of high blackheaded fireworm infestation was noted to consistently occur in the northwest corner of bog 1, where travel time from injection to head was very long and injection was often stopped before all material had cleared the system.

These observations demonstrated how small flaws in the design, maintenance, and operation of chemigation equipment can lead to inaccurate pesticide application, and ultimately poor pest suppression. To calibrate your system most precisely, you should follow the techniques laid out in Ocean Spray's pamphlet: "Best management practices to optimize chemigation applications. Ocean Spray Environ. Bull. Series, #5. Ocean Spray Cranberries, Inc. Mass." by T.J. Bicki, 1997. (We have copies.)

MISCELLANEOUS

Alternative Crops. There must be something better to farm than cranberries! I have talked about wasabi before and we will have better data in a few years; until then, stay tuned. My lingonberry trials were a bust. Too many stem diseases. Another possibility that may have potential is converting run-down beds into western red cedar nurseries. Cedar is a hot tree now on the nursery market and it is difficult to find transplants for reforestation. Predictions are that this high demand will continue for 3 to 5 years. Turning a few acres of cranberry beds into a temporary western red cedar nursery may have good prospects. Call or e-mail me if you want details.

Wanted - Junk Bogs for Weed Control Research. Do I have a deal for you! Now, while the price of cranberries is so low, is an ideal time to let us do some large scale research. You know the beds I'm talking about - they are covered with silverleaf or aster, the yield is 5-30 bbl/A, and it is highly unlikely that returns would even pay for the Casoron you would use. I would need 1/4 to 1 acre sites that I could clean up with some of these new herbicides. Your reward? - The

site would be too large for crop compensation, but you might get rid of some silverleaf. We also need research sites for fruit worm, tipworm, cranberry girdler, cottonball and fruit rot.

Section 18's - What Are They Worth? Has your curiosity gotten the better of you and are you wondering what it costs to do a Section 18? Dr. Pete Bristow and I always give a special deal to cranberry growers - gratis. Most commodity groups, however, must contract them out. A typical Section 18 can run between $2,000 and $5,000/yr. The highest price I've heard is $20,000 for a Washington/Oregon Section 18, similar to the one we have for Stinger. Are they worth it? It depends. Some can save an industry millions a year; others, less. So what is my point? - appreciate the fine folks working for you at WSU!

We already have a 2000 Section 18 for Stinger and we hope to obtain a 2000 Section 18 for Orbit on cottonball. Dr. Bristow will be working on that application soon. Until the check is in the bank, however, don't buy or apply Orbit.

Resources. A new book by Anne Averill, titled Cranberry Insects of the Northeast, over 100 pages with good color photographs, is available for $35 from the U of Mass. Cranberry Station. See web site below.

Your E-Mail Address. If you haven't received e-mail messages from me, you are not on my e-mail mailing list. Please send me your address. This allows me to send out information quickly.

Cranberry Production Web Sites.
http://www.umass.edu/umext/programs/agro/cranberries/
http://www.bio.umassd.edu/cranberries/deafult.html
http://www.library.wisc.edu/guides/agnic/cranberry/cranhome.html
http://www.nemaine.com/rc&d/ipm.htm

Banks, Loans, and Debt. For what it's worth, here are two suggestions.
1) One way to prevent losing personal property in the event of foreclosure is to transfer your ownership of property to a close family member. For example, transfer your truck to one of your children.
2) Banks are about as willing to renegotiate a loan as the Army Corps is to issue a wetland permit. They will be nasty and mean, but be persistent and don't give in. They tell me it can be done, if you are very tough.

Disaster Grants and Direct Farm Operating Loans. The deadline for signing up for the disaster grants through the Farm Service Agency (FSA) is February 25. There are still growers out there who qualify but who have not signed up. This is not nickel and dime change and you don't have to have crop insurance to qualify! Call the FSA office (360-249-5944) if you are interested in either the disaster grant program or in obtaining a low interest farm operating loan.

WEATHER

	Rainfall (Inches)					Growing Degree Days				
Month	2000	1999	1998	1997	20 yr average	2000	1999	1998	1997	10 yr average
January	10.7	15.5	18.5	14.9	10.8	5	14	58	43	40
February		21.2	11.4	5.6	9.3		10	69	21	55
March		12.0	10.2	16.2	9.5		36	97	38	72
April		3.6	3.0	6.5	5.6		87	99	91	116
May		4.4	3.8	4.7	3.8		180	265	344	216
June		4.0	1.8	5.1	2.8		329	350	362	323
July		1.9	1.1	1.2	1.9		376	476	476	421
August		1.9	0.2	2.7	1.7		474	484	543	440
September		0.6	0.7	6.9	4.1		333	369	477	363
October		5.6	6.2	15.6	6.5		193	244	229	217
November		16.3	19.6	6.5	11.4		138	99	144	99
December		16.0	20.3	9.0	12.6		39	34	38	41
TOTAL		103.0	96.8	94.7	80.5		2209	2644	2806	2402

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COOPERATIVE EXTENSION

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