Washington State University • Long Beach
Cooperative Extension
2907 Pioneer Road
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CRANBERRY VINE

June 1999

MEETINGS

Cranberry Field Day. Monday, July 26, 8:30 - 2:30, at the PCCRF on Pioneer Road in Long Beach. Pesticide credits will be given. (See attached agenda.)

Oregon Cranberry Farm Science Review. Friday, July 23, 8:30 - 12:00, Bandon area. For more information, call 541-396-3121, ext. 285.

Long Beach Cranberry Growers' Bog Tours. The June bog tour will be held at Bob and Karen Hamilton's at 8:30 a.m. on June 25, in Seaview, on Highway 101.

North American Cranberry Research and Extension Workers Conference. September 30 to October 2, Long Beach. Washington is hosting the conference this year. We hope growers will be able to attend some sessions. A full agenda will be posted later, but keep it in mind. The website for the conference is: http://ext.ws.edu/nacrew/.

Waste Pesticide Pickup. The WSDA is offering its waste pesticide disposal program for western Washington. This program is free and completely confidential. Call Joe Hoffman at 360-902-2056 to sign up. The dates are August 30 at WSU - Long Beach, August 31 in Longview, September 1 in Olympia, and September 2 in Puyallup. You must sign up in advance to participate.

BOG MANAGEMENT

Surviving <$40/bbl. "Farming is a hard life. It's a hard life, therefore, nobody ought to live it," Wendell Berry. With the price of cranberries having reached the point at or below break even, farming is going to get harder. The reduced price will likely be around for a while. To survive, growers need to carefully strategize every aspect of their farming operations to cut costs and increase yields. True operating costs should include personal and property taxes, insurance, utilities, labor, repairs, fuel, pump standby charges, equipment, vehicles, and chemicals. Some of these costs cannot be avoided, but some can be reduced. One possible way to reduce equipment and vehicle costs is to combine operations with other growers needing the same equipment (partnership). This can help small growers reach the economy of scale. Reduction in chemical and labor costs can be achieved by practicing good IPM. Do your vines really need as many fertilizer applications as your are giving them? Cutting back to fewer applications or changing products may save considerable money over a five year period. What about disease control? Comparing spray records with fruit rot and keeping quality for different growers is an interesting exercise. More fungicides do not equal better fruit quality. I do not advocate reducing sprays at the expense of disease control, but I do suggest practicing good IPM for disease control. If you have never had twig blight and have low disease, skipping a Bravo application now and then is not likely to be harmful. Similar scenarios can be said for insect management. With careful scouting and sweeping, extra fireworm sprays can be eliminated. If you don't have fireworm, do you really need to make three applications of an insecticide? Alternatively, only beds or parts of beds with infestations need to be treated. Lastly, a few thoughts on weed control. Herbicides are one the more expensive pest control methods. I do not suggest replacing herbicides with hand weeding, but if you have clean beds you may be able to cut back on the rate of herbicides or frequency. On clean beds, skipping Casoron for a year may improve vine health while still not allowing weeds to get the upper hand. Devrinol and Evital are not cheap. Unless you are going after a specific weed that only they control, they may be redundant if you are already using Casoron. My personal pet peeve is lack of weed maps and spot treatment. Mapping hot spots and treating those areas differently can improve weed control and save money. Another peeve is over-zealous control of weeds which are mostly cosmetic and don't cause much, if any, loss.

In summary, when we were getting $60+/bbl cutting costs by skipping a fertilizer or insecticide application

did not make a lot of sense. When we are getting <$40/bbl, saving nickels and dimes over the course of the next few years could help save the farm.

Another more effective way to achieve economic viability is to renovate all beds that cost you more to grow than you receive in return. There are models based on yields and production costs illustrating the correct time to do this (contact Ocean Spray Grower Relations) but, in general, summer is a good time to renovate if you see that your crop is going to be marginal.

Sun Protection. For a little ironic humor in this cold, wet year I thought I would add something about safety in the sun. Skin cancers affect almost 1 million Americans each year, resulting in over 7,000 deaths. Because farmers spend substantial amounts of time outdoors during the summer they are at a higher risk for skin cancer (yes, even in Grayland). Use a sun screen with a sun protection factor (spf) of at least 15 and wear a hat. Most farmer caps, like the ones provided by handlers and chemical companies, don't protect the ears and neck. Instead, choose a wide-brimmed hat (pith helmet, straw hat) or a hat with a neck shield.

Dike and Ditch Weed Control. Control of broadleaf weeds along the dike or grass in the ditch with the appropriate herbicide this summer will help prevent their eventual spread into the beds.

Cut Stump Treatment of Blackberries. Control of these pesky weeds can be achieved by digging or wiping, but often a cut stump application of 50 to 100% Roundup is a superior treatment. Our research indicates that timing is not very critical, but the higher the concentration the better the control. The more shoots treated, the better the control. It is important to treat immediately after the shoots are cut.

Wiping of Aster. Control of aster by wiping with a 1-2% Stinger solution is just as or more effective than Roundup wiping and costs less.

Grass Control. We recommend spot treating Poast for bearing beds and Poast, Fusilade, and Prism for new bearing beds. Avoid over-dosing (high spray volumes) and application on hot days. Remember that grasses have hollow stems with nodes (ring-like swellings on the stem), whereas sedges have edges (stems are usually triangular, and rushes are round (stems are round and unlike the hollow stems of grasses).

Weevil Control. This year's damage from last year's weevil infestation appears heavy. Good scouting with night sweeps to indicate new weevil feeding is necessary to decide whether or not to use Cryolite.

Tipworm. We are observing more and more of this insect and are definitely noticing reduced return bloom in the year following infestation. If you have tips that are not flowering or have no fruit and you think it is frost damage, it could be tipworm. Give us a call and we will take a look.

Blackheaded Fireworm. We have been fascinated this year by the variation in egg hatch. First hatch on some beds occurred in late April and early May; other beds were showing hatch on June 6. With such a spread in hatch, it is no wonder timing of sprays is difficult. As you read this, first generation adult moths are flying and we may be seeing some second generation larvae. We are applying mating disruption pheromones at demonstration farms, but will also be applying Confirm against new larvae, probably during bloom. Also, by way of interest, we found larvae in evergreen huckleberry leaves this spring–not a lot, but it could be an alternative host.

Cranberry Fruitworm: The cranberry fruitworm larva (caterpillar) is mainly green with some brownish-red coloration on its top surface and measures about ½ inch long at maturity. It is found within developing and ripening berries. Feeding reduces the crop and spoils marketability of the berries. Eggs are laid in the calyx cup (blossom end) of unripe fruit. Larvae will consume from 3 to 6 berries. There is one generation per year. It has been noticed on a few beds in Long Beach over the past few years. We are starting a monitoring program for it this summer. Let us know if you see anything suspicious.

In related studies, we have helped calibrate the chemigation systems at some farms and found some problems affecting pesticide efficacy. At some farms, the system was turned off while some of the product was still in the line. Run a dye through your system to observe how long it takes for the last sprinkler to clear. That is the time it takes to fully inject the product. The difference between that time and the time it takes for the first sprinkler to clear is the wash-off time. If this is greater than 600 gpa, there could be a loss of product efficacy for the area where the sprinkler is closest to the pump. We hope to find the best compromise between these two problems.

Cranberry Girdler. Few satisfactory options are currently available to tackle this pest. Flooding, sanding, and parasitic nematodes all work, but are costly, tricky to use, and may not be an option for some growers. If trap counts are high, a lot of moths flying, and you note previous damage, it is important that you develop a long-term management plan. See your spray guide or call us for more information.

Pollination. To document bee hive quality, check hive entry counts on a good warm day from the safety of your vehicle. You should have >100/min and 1/4 to 1/3 should be carrying pollen. If you obtain counts significantly less than this, try again over several days and check your neighbor's hives. Low counts could mean trouble in the pollination department.

With our very late bloom this year, one important question is how late to keep bees. Our previous data indicates that late blooming flowers can set fruit and the fruit can size enough to pass the screening at the receiving station. The big problem will be the need to control fireworm while the bees are still present. My advice is to use Confirm and keep the bees a little longer than normal.

Red Leaf Spot. This innocent disease can be a nightmare on vines that are growing too vigorously. It is easy to treat with Mancozeb or other fungicides used for fruit rot. It should be controlled if there are large areas of vigorous growth and/or if you had a serious problem with it last year. The time to treat is when you first start seeing the red leaf spots. Several applications may be needed. The normal fruit rot sprays will substitute for one or two of the required fungicide applications but additional sprays may be required.

Cottonball. Thanks to Pete Bristow's efforts, we (Long Beach growing area) obtained a Section 18 for the use of Orbit. Use 4-6 fluid ounces per acre per application. Apply 7-10 days later at 10-20% bloom. The cost per application is about $15 to $20/acre/application. (Call for the label.) While this disease is not a huge problem yet, it could become one. By the time you read this, it may be too late to treat for this year; however, we need to know the level of infestation across the entire state. Please note if you have lots of yellow fruit at harvest that never ripen and are filled with white mycelium. It is important to record the level of loss in order to validate the need for a Section 18. Save some fruit and call us.

Disease Control. A few miscellaneous notes on disease control. For areas with poor sprinkler coverage, spot treatment with a fungicide may be appropriate. This would be for twig blight or fruit rot. Remember, don't use a sticker/spreader with Bravo, but add them for other fungicides such as Mancozeb.

New Beds. There is nothing very special about getting new beds to fill in. Aim for 1# nitrogen/Acre/day during the peak growing season (50#/Acre 21-0-0 every 10 days). Add phosphorus and potassium once a month. If you are really successful with vigor, you will have to treat for red leaf spot (see above).

MISCELLANEOUS

Wetlands. Planning for new beds this summer? Don't forget to call the Army Corps of Engineers whenever you are thinking about doing something in wetlands (Gail Turzey 206-764-6903).

Do you want some training in wetland assessment? The Department of Ecology is offering 5 day programs that may be useful. Call 360-407-6172 for more information.

Web Site. Information is power and the more you know, the better you can make decisions. There is some great dialog on the current situation with cranberries on http://www.geocities.com/~cranberrybogs/. Some of it is a little harsh, but interesting, nonetheless.

Research Support. How does the Washington cranberry industry compare in garnering funds for research? From 1991-1996, the cranberry industry, via the Cranberry Commission, gave 0.432% support as a percentage of production. This was the third highest of all commodities in the state. Based on number of project and monies allocated, the cranberry industry also has been one of the most strongly supported industries of the Washington State Commission on Pesticide Registration.

Recommended Reading. Agrichemical and Environmental News is a must-read for those interested in this subject. It is available on-line at www2.tricity.wsu.edu/aenews or via hard copy subscription: Agrichemical and Environmental News, Sally O'Neal Coates, Editor; WSU Pesticide Information Center, 2710 University Drive, Richland, WA 99352-1671.

On-Line Auction for Farm Chemical Supplies. A possible way to obtain products at a reduced rate. Take a look at the web site: XSChem.com

Fertilizer. Washington State has passed a new fertilizer labeling law. For the most part, it does not have an effect on cranberry growers as long as they stay with primary suppliers of name brand products. A few off-brand products containing feather meal or rock phosphate, however, have been problematic. Contact the WSDA if you have questions.

WEATHER

No wonder bloom was two weeks late this year. May was cold, with the lowest growing degree days since 1984. This March and April were the second coldest in the past 15 years. To define growing degree days is to say that for each day the average temperature is 1° above the base temperature (or threshold temperature), 1 degree-day has accumulated. We use 45° as our base temperature. This means that if today's average temperature is 50° and the base (threshold) temperature is 45°, you would have gained 5 degree-days in one day. Some days may not achieve a single degree-day.

	Rainfall (Inches)					Growing Degree Days				
Month	1999	1998	1997	1996	20 yr av.	1999	1998	1997	1996	10 yr av.
January	15.5	18.5	14.9	9.8	10.8	14	58	43	51	40
February	21.2	11.4	5.6	13.1	9.3	10	69	21	86	55
March	12.0	10.2	16.2	3.4	9.5	36	97	38	108	72
April	3.6	3.0	6.5	12.9	5.6	87	99	91	190	116
May	4.4	3.8	4.7	4.3	3.8	180	265	344	231	216
June		1.8	5.1	1.8	2.8		350	362	315	323
July		1.1	1.2	1.6	1.9		476	476	460	421
August		0.2	2.7	1.0	1.7		484	543	440	440
September		0.7	6.9	2.7	4.1		369	477	385	363
October		6.2	15.6	11.5	6.5		244	229	245	217
November		19.6	6.5	14.2	11.4		99	144	67	99
December		20.3	9.0	18.4	12.6		34	38	20	41
TOTAL		96.8	94.7	94.7	80.5		2644	2806	2598	2402

COOPERATIVE EXTENSION
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AGENDA

WASHINGTON STATE UNIVERSITY CRANBERRY FIELD DAY - 1999

Long Beach Research & Extension Unit

Monday, July 26, 1999

7:30 - 9:00 Pacific Coast Cranberry Research Foundation Annual Meeting

8:30 - 9:00 Coffee and doughnuts; Registration and Exhibitor Displays

9:00 - 10:30 Dr. Kim Patten - WSU - Long Beach: Welcome; Weed control, pollination and vine overgrowth research.

Dr. Peter Bristow - WSU - Puyallup: Research update on variety plots, new fungicides for cotton ball, fruit rot, and twig blight.

Jere Downing - The Cranberry Institute: Update on new regulatory impacts of Food Quality Protection Agency.

Dr. Steve Booth - PCCRF: Blackheaded fireworm and tipworm–research update.

10:20 - 10:45 Break

10:45 - 12:00 Dr. Deborah Henderson - E. S. Cropconsult Ltd., British Columbia: Research on nematodes, trichogramma, and monitoring for cranberry insect control.

Grower Panel: How to survive with less than $40/bbl.

Malcolm McPhail - PCCRF: Update.

12:00 - 1:30 Lunch - Salmon barbecue, $7.00. Sponsored by the Pacific Coast Cranberry Research Foundation (all proceeds are used to help support cranberry research on the West Coast).

1:30 - 2:30 Dr. Richard Carkner - WSU - Puyallup: The economics of using biorational insect controls.

Kevin Talbot - Ocean Spray: IPM data for 1999.

Tours of research plots - variety trials, fertility and weed research.

Commercial exhibits