Cooperative Extension
Coastal Washington Research & Extension Unit
Long Beach, WA 98631

CRANBERRY VINE

July 1997

MEETINGS

Pre-Cranberry Field Day Celebration. Thursday evening, July 24, 6:30 p.m. at the Station in the PCCRF auditorium. This will be a potluck for the locals; the visitors will be our guests. Let's celebrate the joy of farming and the renovation of the Museum.

PCCRF Annual Meeting. Friday morning, just before Field Day, July 25, 7:30 - 9:00 a.m. at Lee Crowley's, across the road from WSU - Long Beach.

Cranberry Field Day. Field day this year will be held on Friday, July 25 from 8:30 a.m. - 3:30 p.m. at the WSU Research Station on Pioneer Road. A full day of meetings and exhibits is planned--please see the attached agenda. Pesticide credits will be given. I hope to see all of you there!

WEED CONTROL

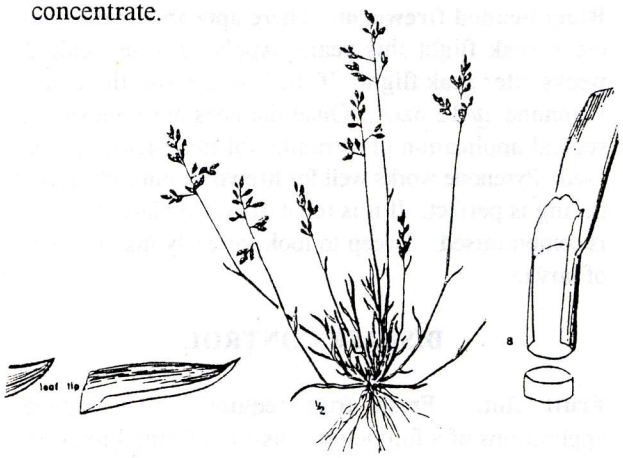
Summer Wiping Program. This summer there are several options for wiping. For most weeds, 20% Roundup works fine. Coverage is most important for good control--the more leaves covered, the better. I have not found that Weedar 64 improves control over Roundup alone. Weedar, however, does give quick diedown. I have also seen that the addition of 2,4-D to Roundup increases the likelihood of phytotoxicity when the application is sloppy. Application in early morning or evening will minimize release and spread of vapors which cause vine injury. Weedar helps control some weed species, but data suggest that the risk/benefit ratio does not warrant use unless you really have problems with woody species and can't get good coverage with Roundup.

Another option is to wipe with Stinger. The Section 18 permits the use of a 2% solution for control of weeds such as lotus and aster. I much prefer Stinger to Roundup for wiping of these weeds. Beside being very effective, Stinger slopped onto the vines will only stunt them for a year or two, not kill them, as Roundup does. Read the label for more information on what weed species Stinger will control and remember the PHI is 60 days.

For brambles, I prefer cutting the shoots and applying 50% to 100% Roundup to the cut stumps. You can do this with special clippers or with other devices. Used Bingo markers work well, or mix Roundup with a lanolin paste as previously mentioned in The Cranberry Vine. Applying Roundup to cut stumps also works with most other woody plants, but it may be better to just dig them up. In order for cut stump applications to work, all the shoots of a particular plant must be treated.

Grass Control. A frequent question is, I applied Poast but it doesn't work, why? Usually it is because the grass is not a true grass or it is annual bluegrass. See the figure below for a profile on annual bluegrass. Don't forget that Prism is effective for all grass species but can be used only on non-bearing beds.

Another question I often get relates to crop damage with grass herbicides. This results from the crop oil concentrate used in the mix. Don't spray on hot days, don't spray to run-off, and use lower rates of crop oil concentrate.



INSECT CONTROL

Girdler control. This has become one of the worst cranberry pests in recent years. There is no really good control other than Diazinon 14G. Because of environmental and other concerns, this product is not on the most-favored list. When do you decide to use Diazinon 14 G? Girdlers tend to like weak beds that have prior damage from herbicides or other factors. If pheromone traps are used, apply Diazinon 14G at peak flight of moths and again two weeks later if there was a season's accumulation total of 25 moths per trap before peak flight. Otherwise, apply when the season's accumulative total reaches 25 moths per trap. Usually this is between 7/1 to 7/7. Remember, do not discharge water from bogs within 7 days of application. Based on flight counts I have seen this year, more people may need to consider using Diazinon. Spot treating areas instead of blanket applications should be strongly considered. What are the alternatives? Some growers spray for moths. This is not recommended and should not be considered. Some growers flood in mid- to late August for a short duration. This is tricky to do and doesn't always work. Call me if you want more information. Research suggests that nematodes will work but they are difficult to obtain this year and many growers are reluctant to use them. They need to be applied 14 days after peak flight. Sanding remains one of the best long-term options for girdler. Research on alternative controls by Dr. Booth is showing great promise. Your success with control can be determined by examining cranberry roots/runners in these areas in mid-July to late August to look for evidence of larval activity such as notched bark and frass (insect feces).

Blackheaded fireworm. There appears to be a very clear peak flight this year. Apply an insecticide 2 weeks after peak flight. If the bees are still there, use Pyrenone @ 12 oz/A. Once the bees are removed, a second application of a traditional insecticide can be used. Pyrenone works well for fireworm but only if the timing is perfect. If it is too early or too late, efficacy is compromised. Sweep to look for early instar stages of larvae.

DISEASE CONTROL

Fruit Rot. Fresh fruit requires two to three applications of a fungicide to assure minimal rot. Dr. Pete Bristow's data suggest that a fungicide applied prior to fruit set is not necessary to reduce rot. If you have high disease pressure (high incidence of field rot and poor keeping quality), he recommends three applications at maximum label rate. For most cranberry beds, however, growers should use two applications at low to mid rates.

Growers using two applications should consider Bravo -Bravo, 21 days apart. For three applications, growers should consider Bravo-Bravo-Mancozeb, each 14 days apart. Remember 50 PHI for Bravo and do not use a sticker with any Bravo product. A sticker/spreader is needed for Mancozeb, however.

Red Leaf Spot on New Beds. This summer may be humid enough to encourage outbreaks of red leaf spot on luxuriant growth of new beds. Spray with Bravo or Mancozeb to control. Severe outbreaks can slow vining over.

BOG MANAGEMENT

Pollination. By the time you get this newsletter, most pollination will have occurred; however, for late blooming McFarlin beds, bloom often continues well into July. Conventional wisdom says that if there is not a set by July 4th, it is too late. We have done a fair amount of research on this concept; several things are apparent. First, some strains of McFarlin are late and there is not much that can be done about it. If the bed is weak, a better fertility program will promote earlier bloom. Second, if a majority of bloom is still left when bees are removed, then a reduction in yield can be expected. The amount of reduction depends on bed vigor and number of wild pollinators left.

As always, do not put any insecticide sprays on the beds when there is any sort of bloom left, even if the honey bees have been removed. Bumble bees will still be out foraging. The queens you kill this year, affect next year's crop.

MISCELLANEOUS

New Wetland Regulations. Pacific County's adoption of the Critical Area Ordinance (CAO) likely will change the way state and federal agencies regulate new plantings in wetlands across the State. Unfortunately, it will not be easier and may be a disaster, as far as new plantings are concerned. Under the new CAO,

the agencies will be using the Department of Ecology Wetland Rating System for Western Washington. This divides the wetlands into quality ratings. As currently written, the rating system not only evaluates your land but also the wetlands adjacent to yours. That is, yours may be junk (class 4) but if your neighbor has high quality wetlands (class 1 and 2), yours will have the higher value. For high value wetlands, one has to mitigate not only for dikes and roads, but for cranberries also. What does this mean for new plantings (both individual permits and nationwide permit 34)? We don't know. All the agencies are working on a plan so that there will be consistency in decision making. This could take up to one year. The take home message: don't expect business as usual. As always, if you don't know if you own wetlands, ask the Army Corps of Engineers.

Internet and Cranberries. In my last Cranberry Vine I asked how many growers used e-mail. The answer was about what I thought - under 5%. Therefore, it doesn't appear to be a useful way to communicate. However, I am very easy to contact via e-mail, (better than phone) and answer promptly. One grower has been sending photos via e-mail of problems on his beds and this has been a good way to diagnose problems from a distance.

COOPERATIVE EXTENSION
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WEATHER

	Rainfall (Inches)					Growing Degree Days				
Month	1997	1996	1995	1994	20 yr av.	1997	1996	1995	1994	10 yr av.
January	14.93	9.8	14.9	8.1	10.8	43	51	108	76	40
February	5.55	13.1	7.4	12.1	9.3	21	86	84	26	55
March	16.15	3.4	8.3	6.4	9.5	38	108	90	137	72
April	6.35	12.9	7.4	5.6	5.6	91	190	133	164	116
May	4.69	4.3	2.8	3.4	3.8	344	231	280	276	216
June	5.08	1.8	3.0	2.9	2.8	362	315	372	340	323
July		1.6	0.9	0.7	1.9		460	516	440	421
August		1.0	1.6	1.4	1.7		440	418	503	440
September		2.7	3.9	1.8	4.1		385	514	439	363
October		11.5	10.0	8.5	6.5		245	268	171	217
November		14.2	17.3	17.0	11.4		67	183	25	99
December		18.4	13.7	17.6	12.6		20	82	15	41
TOTAL		94.7	91.2	85.5	80.5		2598	3048	2612	2402

COOPERATIVE EXTENSION
Washington State University
Long Beach Research and Extension Unit

AGENDA
WASHINGTON STATE UNIVERSITY CRANBERRY FIELD DAY - 1997
Long Beach Research & Extension Unit
Friday, July 25, 1997

8:30 - 9:30	Coffee and doughnuts; Registration and Exhibitor Displays
9:30 - 10:45	Dr. Kim Patten - WSU - Long Beach: Cranberry research highlights for 1997.
	Jennifer Bair - WSU graduate student: Cranberry flower physiology - factors controlling effective pollination.
	Steve Booth - WSU - Vancouver: Alternative insecticides for blackheaded fireworm control.
	Dr. Pete Bristow - WSU - Puyallup: Fruit rot - Is there such a thing as a healthy berry?
10:45 - 11:00	Break
11:00 - 12:00	Dr. Allan Felsot - WSU - Tri-Cities: Elucidation of cranberry herbicide behavior in soil: what is really happening?
	Dr. Joan Davenport - WSU - Tri-Cities: Nitrogen fertilization of cranberry - final report?
	Malcolm McPhail - Pacific Coast Cranberry Research Foundation
12:05 - 1:30	Lunch - Salmon barbecue ($7.00) sponsored by the Pacific Coast Cranberry Research Foundation (all proceeds go to the Foundation to help support cranberry research on the West Coast).
1:30 - 2:45	Steven Booth - WSU - Vancouver: Entomopathogenic fungus for weevil and cranberry girdler control
	Grower panel - Getting rid of that pesky fireworm and girdler.
	Jere Downing - The Cranberry Institute: Research update.
	Sue Butkewich - Ocean Spray: Agricultural tools for the future.

Commercial exhibits
Farmer equipment display/sales
Farm Tour - Variety trials, fertility and weed research plots.

CRANBERRY RESOURCE INFORMATION

Bulletins are available at the following locations.

Washington State University, Long Beach Research & Extension Unit, 2907 Pioneer Rd, Long Beach WA 98631, or call (360) 642-2031:

The Cranberry Vine newsletter
Cranberry production in the Pacific Northwest PNW247 . . . . . $7.50
1997 Cranberry insect, disease and weed control program, (revised annually) EB845 . . . . . 2.00
Cranberry tissue testing for producing beds in North America . . . . . free
Cranberry insect & disease IPM calendar . . . . . free
1995 Cranberry establishment & production costs & returns, southwestern WA -- dry harvest EB1805 . . . . . 1.00
1995 Cranberry establishment & production... wet harvest EB1806 . . . . . 1.00
Sprinkler irrigation rates and depths EB1305 . . . . . 1.00
Aquatic vegetation management & control PNW224 . . .50
Sizing irrigation mainlines & fittings PNW290 25
Electrical demand charges: how to keep them low PNW291 25
Evaluating honey bee colonies for pollination - a guide for growers and bee keepers PNW245 25
Protective clothing for pesticide users Misc107 25
Pest control guide for commercial small fruit EB1491 . . . . . 3.50
Small fruit pests: biology, diagnosis & management EB1388 . . . . . 5.00
Chemigation in the Pacific Northwest, PNW360 . . . 1.50

University of Massachusetts, PO Box 569, East Wareham MA 02538, phone: 508-295-2212:

Major cranberry insect pests--IPM fact sheet 6.00
The southern red mite--IPM fact sheet 3.00
The blackheaded fireworm--IPM fact sheet 3.00
The cranberry weevil--IPM fact sheet 3.00
The cranberry fruit worm--IPM fact sheet 3.00
Spring & fall frost tolerances--IPM fact sheet 3.00
Field identification guide: insect pests 5.00
Cranberry industry in MA - 201 . . . . . 2.50
Flood-sander barge for cranberry bogs (1982) 2.50
Modern cranberry cultivation - SP-126 . . . . . 5.00
Cranberry IPM notebook 35.00
Best management practices guide for MA cranberry production 10.00
Bog construction & renovation manual 15.00
Cranberry chart book & mgmt. guide for MA 8.00

Washington State University, Cooperative Extension, Cooper Publications Bldg., Pullman WA 99164-5912

PNW insect control handbook, Misc047 . . . . . 19.50
PNW plant disease control handbook, Misc048 . . . 19.50
PNW weed control handbook, Misc049 . . . . . 19.50

Oregon State University, Publication Orders, Extension Communications, 422 Kerr Admin, Corvallis, OR 97331-2119, phone: 541-737-2513.

South coastal OR cranberries fertilizer guide FG75 . free
Irrigation water quality, FG76 . . . . . free

University of Wisconsin, Cooperative Extension Publications, 630 W Mifflin St, rm 170, Madison, WI 53703, phone: 608-262-3346.

Botryosphaeria fruit rot & leaf drop A3351 35
Black rot of cranberry A3197 30
The cranberry girdler A3188 35
Early rot of cranberry and blast of blossoms and young fruit A3352 35
End rot of cranberry A3196 35
Gibbera leaf spot and berry speckle of cranberry A3193 35
Hard rot and tip blight of cranberry A3194 35
Red leaf spot A3343 35
Viscid rot and upright dieback of cranberry A3195 . . .35
Yellow rot of cranberry A3350 35
Cranberry pest management in Wisconsin-1997 A3276 . . . . . 1.25

Other Information:

Cranberries, National Cranberry magazine, P.O. Box 858, South Carver MA 02366

Cranberry Agriculture in Maine: Opportunity and Challenges, Maine Cranberry Development Committee, 6/90, Maine Dept. of Ag., Food and Rural Resources, State House Station 2, Augusta ME 04333.

Maine Cranberry WWW Page: http://www.nysaes.cornell.edu/ipmnet/me/crantoc.html

The American Cranberry, 1990, Dr. Paul Eck, Rutgers University Press, New Brunswick NJ 08901 (out of print; check your library)

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