December 2004

MEETINGS

Winter workshop: The workshop is planned for Saturday, February 5th, 1 to 4 p.m. at the St Lawrence Catholic Church in Raymond. The address is 1112 Lake Street; it is located in East Raymond behind the high school. Three pesticide credits will be offered. Agenda includes new information on weed, insect and disease control, BMPs, cranberry varieties, cranberry Brix vs. Tacy project, sanding, fruit keeping quality, pesticide screening and new NRCS cost-sharing programs. Speakers include Kim Patten, Kevin Talbot, Pete Bristow, Tim Kellogg and Mark Scott.

PEST MANAGEMENT

Weevil control: Growers' reviews of Admire for Blackvine weevil control were mixed. Several said they had good control; others said they had little control. There could be several things affecting this difference of efficacy. Admire rapidly degrades in sunlight, especially under moist conditions. Under these conditions, the half-life can be less than 3 hours. It must therefore be immediately incorporated into the duff/soil layer with irrigation or rainfall. Also sprinkler irrigation systems are not the best means to apply this product--consider hand spraying your hot spots. Soil types are also important. One is much more likely to get control on sand than thick peat. Weevil size is important– the smaller the better and therefore the earlier the application the better. Rates: - Use the high rate if you were not satisfied with control in the previous season. I also suspect that control is relative to the level of infestation. It is very important that growers sample for larvae in their fields prior to and six weeks after an application. This can be easily done by pulling back a section of bed that was damaged. Count the number of larvae in several square foot sections. Flag those sections and recount in six weeks.

Winter weed control. In areas of beds which were thick with lotus, a late winter/early spring application of Stinger is recommended. Make applications to the Lotus canopy when it becomes visible. Follow label instructions and avoid applications near standing water. Stinger also works very well during the winter on false dandelion and clovers. Remember the rule of thumb for spot application of Stinger. If you spray to wet, approximately 100 gpa 2/3 pt/ac=0.6 teaspoon/gal of water, or 0.6 tablespoon/3 gallons. Similarly, in areas on beds with annual or perennial grasses that are still green or with annual bluegrass, consider using spot applications of Select.

Callisto: 2004 marks the year when we first got to use one of the best herbicides for cranberries I have had the experience of using in the past 15 years. We will need another Section 18 in 2005. I plan to submit that at the first of the year. If you plan on using it you will need to get a new *(cont.)* signed and notarized waiver of liability for 2005. I will have a notary public available at the winter workshop to make that process easy. Remember

Callisto cont. to bring a driver's license for ID when you come. We are still learning how to get the most out of Callisto, but reports from growers have been glowing. I collected survey data from growers in August. Below are their responses for what weeds they thought they were getting control for. Based on our research this summer, for the hard to control weed species it is very important to make applications when they are first emerging.

Table 1. Grower survey of weed control with Callisto in 2004.

Weed	Number of growers responding			
	Level of control			
	None	Minor	Moder-ate	Excel-lent
Silver leaf		4	13	2
Yellow weed	5	6	6	1
Lotus			10	6
Arrowgrass		4	7	1
Lily	4	4		
Sourgrass	2	6	5	
Clover	1	2	4	6
Salt grass	1	2	3	3
Louse grass		2	5	4
Tussock	3	2	6	1
St. John's Wort	2	1	4	1
Purple Aster	1	1	3	11
Smartweed				3
Arrowhead violet				2
Fern			2	
Buttercup			4	
Blackberry			1	
Horsetail		2	2	
"Sedges"			1	
"Grasses"			1	

Fruit Rots in 2004: Numerous beds had problems with field rots at harvest this year. Pilgrim was especially hit hard. The wet weather in June and late August might be largely responsible for this. Another contributing factor is nitrogen fertilizer. There is a strong relationship between the amount of N fertilizer used and the incidence of fruit rot. Growers who push their young Pilgrims beds hard are setting themselves up for high rot levels, especially if we have weather events that are conducive for fruit rot. I am not suggesting that we should cut back on fertilizing Pilgrims, but am suggesting that if you have had a problem you need to revisit your N fertilizer program. In addition, your fungicide program should be revisited in terms of timing and fungicides. Make sure that your fruit set application of fungicide corresponds to what is happening on your Pilgrim bed and not Stevens or McFarlins. In 2004 the Pilgrim beds set fruit well ahead of other varieties. If you waited to apply your fungicide until early July, you would have missed the critical early-timing window by several weeks. Also WSU research has shown that Abound is an excellent fungicide for fruit rot. Strongly consider using the high rate of Abound for your first application if you had high levels of rot in 2004.

Nuisance aquatic weeds in sumps and ditches. There are three aquatic weed species that have become pests for cranberry farmers. Two are free-floating species, duckweed and Azolla (water fern), that are common in ponds. One is a rooted emergent, parrotfeather milfoil, which can be found in a few sumps, but more importantly has begun to clog several of the drainage systems in Long Beach and Grayland. Control of these species is problematic. Mechanical efforts like skimming or dredging provide only temporally suppression. Chemical methods are recommended, but also require repeated follow-up applications. To apply aquatic herbicides, you must obtain an aquatic pesticide certification on your pesticide license. WSU Long Beach usually provides training for this certification in June – call for the schedule. Herbicides also have a wait period before the water can be used for irrigation.
Duckweed and Azolla: Duckweed and Azolla can be controlled with Reward at 1% solution. Do not

exceed label rate. Use with a nonionic surfactant approved for aquatic use in Washington (like Agridex). It is recommended that application be done when wind has forced all the weeds to be collected along one side of the pond. Reward® treatment will seldom make contact with and kill all the plants. Therefore, multiple applications about two weeks apart are typically needed to fully eliminate duckweeds. Survivors of the initial treatment can quickly reproduce and become a problem once more. Reward has a five day wait period before the water can be used for irrigation.

Parrotfeather Milfoil: Our research has shown that Habitat is the best herbicide for this weed. Other aquatic herbicides, like glyphosate (Rodeo or Aquamaster) or triclopyr (Renovate) also work, but regrowth is more common with them. Habitat has a 120 day wait period before it can be used for irrigation or the concentration in the water must be 1 ppb or less. Therefore I recommend it only at the end of the growing season when the water won't be used for flood harvesting, but prior to when parrotfeather gets killed by hard frost. The wait period for Rodeo and Renovate is 0 and 120 days respectively. Best overall treatment would be late fall Habitat followed by glyphosate in the spring or summer as needed to treat the regrowth.

Parrotfeather is not all bad, however. Studies have indicated that this plant has the ability to breakdown organophosphate insecticides. A ditch thickly clogged with parrotfeather is likely to have reduced problems of surface water contamination from organophosphate insecticides, like Diazinon.

BED MANAGEMENT

Casoron, Stevens and sanding: Our research has clearly shown that Stevens on sand will gradually decline in productivity. This appears to be due largely to the continued use of Casoron. We have shown that without the benefit of sanding these beds become so weak that they require renovation. If you have beds that are getting thin and under-producing, are poorly rooted, and crunch a lot when walked on in the summer, you have five options. 1) have a good sanding program this winter, 2) lay off the Casoron next year and use fertilizer generously, 3) spot treat only with Casoron, 4) renovate and 5) do nothing. If you can't afford to do #1, I would suggest considering # 2 or 3 in combination with the use of the herbicide Callisto to suppress the weeds that come in. If you are going to sand, don't wait until the beds have gone so far downhill that sand won't be adequate to repair the damage.

Vines for new plantings: As I have mentioned in the past, you should carefully research and know the source of your vines before you plant them. This is not an easy task and almost every grower I know has planted bad vines. Normally one would think that seeing the bed at harvest and collecting the vines as they prune is adequate. There has been widespread concern, however, that prunings collected from runners don't represent the true variety in that bed. Instead, especially on older beds, there could be selective harvesting of runners from seedlings that are not genetically true to type or are from unproductive off-types that came in with the vines that you planted. In other words, it is these off-types that are producing runners and not fruit and therefore becoming the dominant vine in your prunings. I suspect that both are occurring. Many of you who have had your vines tested for DNA will get back results that say of the 2 of the 10 samples sent in were off-types. That might not seem like much, but that is 20%. If 20% of your beds produced 90% of the runners it is easy to see how one could get bad vines from a seemingly good bed. There are four solutions to this: 1) get vines from young beds, 2) get vines from mowed beds, 3) have the prunings DNA tested before you take delivery, and 4) make sure there are no off-types in the beds you are getting vines from. If you have to front the cost of the DNA testing these latter two solutions might not be the most cost-effective.

MISCELLANEOUS

Online Pesticide recertification credits. Need an easy way to pick up a few credits without going to meetings? You can now do it from the comfort of your home. Several one credit classes are available at http://pep.wsu.edu/. Click on the Online Recertification Courses section. Each course will cost you $10. You need a credit card and an email address to make it all work. Here is a list of classes that are available. Credits are good for Oregon and Washington.

Plant Problem Diagnosis- Learning how to diagnose plant problems is always a challenge. This course will explain some steps that you might follow when you encounter a plant problem that you do not recognize. The course includes information on diagnostic tools, the systematic steps to follow and uses examples of plant problems observed in western Washington. This course would be appropriate for any person managing plant problems. Examples used are from landscapes.

Wildlife, Rights of Way and Pesticide Labeling - This course discusses concerns involving wildlife when making decisions for an integrated vegetation management plan. It further discusses how pesticides are registered and what wildlife impact assessments are completed and reviewed at the point of product registration and labeling. It details how wildlife impact studies are translated into precautionary language on labels and how the MSDS can serve as a data source of wildlife studies.

Integrated Noxious Weed Basics -This course is designed to give you a basic understanding of integrated noxious weed management. The Washington State noxious weed laws are reviewed. Management principles and their appropriate uses are explained.

Weed Identification and Management - This course provides identification descriptions, habitat information and management options for a variety of weeds growing in the Intermountain and Pacific Northwest. Images of the weeds discussed in this course are included to show the plant's identifying characteristics. Non-chemical and chemical strategies are covered for each weed. Course one covers redroot pigweed, poison hemlock, common burdock, Canada thistle, annual sowthistle, common dandelion, common groundsel, hairy bittercress, shepherds purse, common lambsquarters, common chickweed, yellow nutsedge, horsetail, spurges or Scotch broom. Course two covers henbit, creeping woodsorrel, broadleaf plantain, quackgrass, wild buckwheat, Japanese knotweed, curly dock, western brackenfern, creeping buttercup, bur buttercup, blackberry, catchweed bedstraw, toadflax, or bittersweet nightshade.

New publications on plant nutrition: The cranberry research community, lead by Dr. Roper from Wisconsin, has put out another fine extension publication entitled “Phosphorus for Bearing Cranberries in North America.” Copies are available at the office. In case you don’t have them, the others in the series are titled “Tissue testing and Nitrogen management,” “Cranberry tissue testing for producing beds in North America” and “Nitrogen for bearing cranberries in North America.” These are all pdf files at http://www.hort.wisc.edu/cran/Publications/Publi-cations.html.

Pesticides:

Glution: I am sure that everyone is aware that this next season will be the last year to use Guthion (planned cancellation effective December 31, 2005). Plan on using all your remaining product. If you have extra that you can’t use, let other growers know; maybe someone else could use it.
Diazinon 14 G: Effective 2005, Diazinon 14 G will be limited to one application per season and the REI will be increased from 12 hours to 5 days.

Any questions about labeled uses for pesticides on cranberries in the state of Washington can be obtained online at the Washington State Pest Management Resource Service web site http://wsprs.wsu.edu/index.html. Go to the PICOL database, then the label database. Select crop and under common name scroll down to cranberry; hit query. You'll end up with 357 labeled pesticides on cranberries.

Research sites needed: Call or email if you are interested.

Weevil - I will pay for use of an untreated bed infested with Blackvine weevil. I need to evaluate some additional insecticides for Black vine weevil control and don't have a site. I'll need to be able to pull back the vine to count larvae. I'll be out of the field by May. It doesn't have to be in production. I just need uniform vines with lots of weevil.

Fruit rot – We need some fields with high fruit rot to put in large scale trials. What we would like to do is pay growers to make the fungicide application for use using different timing or application methods. We will take subsamples at harvest for fruit rot and keeping quality. If you have had high rots in the past this would be a good time to see if there is a better way of doing things.

This season in review. With the mild spring and warm summer (see weather table below), we had hopes of a good year. Those hopes, however, were confounded by other variables. The early and prolonged fireworm hatch made it easy to miss your first generation spray timing. The rain and low temperature in the last week of May, and first two weeks of June coincided with full bloom of Stevens, thus causing problems with pollination. With McFarlins, the rain in late June and early July, plus bee removal after that, was enough to hurt pollination. I also suspect that a slightly earlier bloom of the competing floral (blackberries) also drew a lot of bees off cranberries in mid to late June. Some growers also experienced significant overgrowth resulting from the heavy rains in late August.

WEATHER HISTORY

	Rainfall (inches)					Growing Degree Days				
Month	**2001**	**2002**	**2003**	**2004**	**20 year average**	**2001**	**2002**	**2003**	**2004**	**20 year average**
January	6.3	13	12.6	15	11.5	38	40	114	49	45
February	3.7	4.8	4.5	6.2	8.3	10	21	31	49.4	48
March	5.7	8.2	14.3	5.4	8.7	46	34	101	87	76
April	6.7	5.7	7.1	3.7	6.1	79	109	126	189	125
May	3.4	2.3	2.2	3.1	3.8	194	177	231	301	241
June	3.5	2.3	1.8	2.5	2.8	274	350	382	410	337
July	1.2	0.4	0.9	0.9	1.3	382	464	467	536	437
August	3.4	0.5	0.8	5.4	1.5	429	443	453	544	460
September	1	1.8	2.4	4.7	2.3	328	377	375	381	381
October	6.5	1.9	8.6	10.1	6.8	178	206	336	262	231
November	15	5.6	10.6	4.3	11.9	97	137	63	78	93
December	13.2	14.1	9.9	*	11.4	26	47	45	*	35
Totals	**69.6**	**60.6**	**75.7**		**76.4**	**2081**	**2402**	**2723**		**2509**
Averages will be over 19 years.										