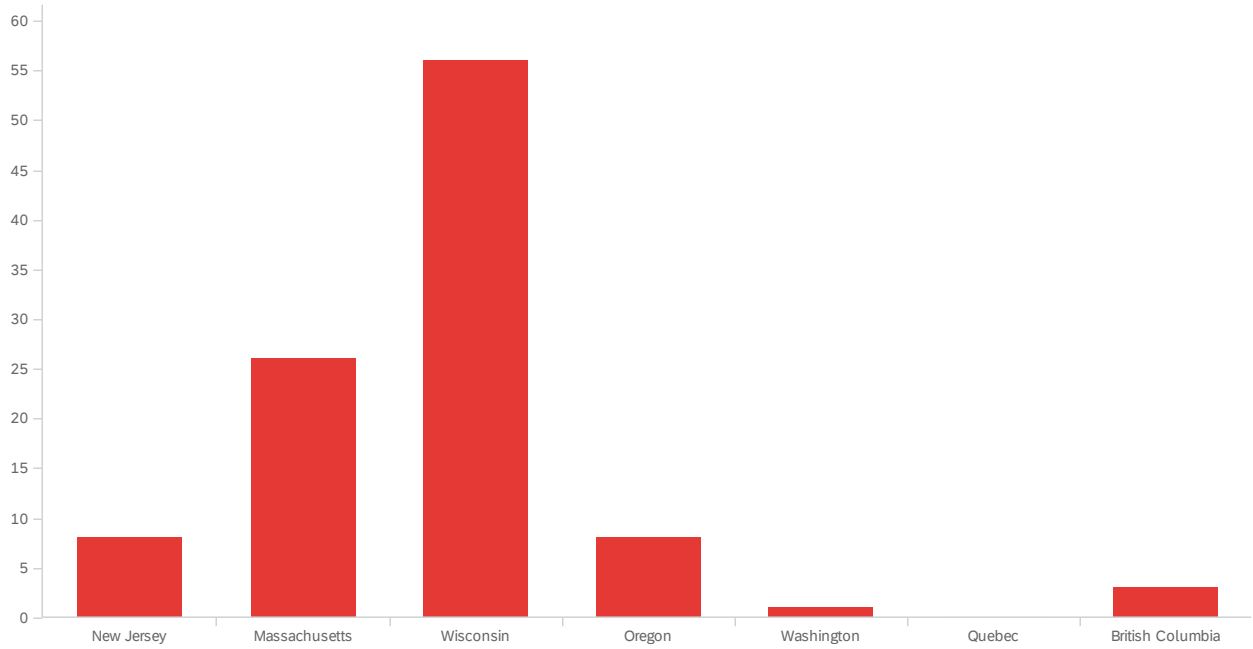


Cranberry Growers Survey 2022

May 4, 2022 9:08 AM MDT

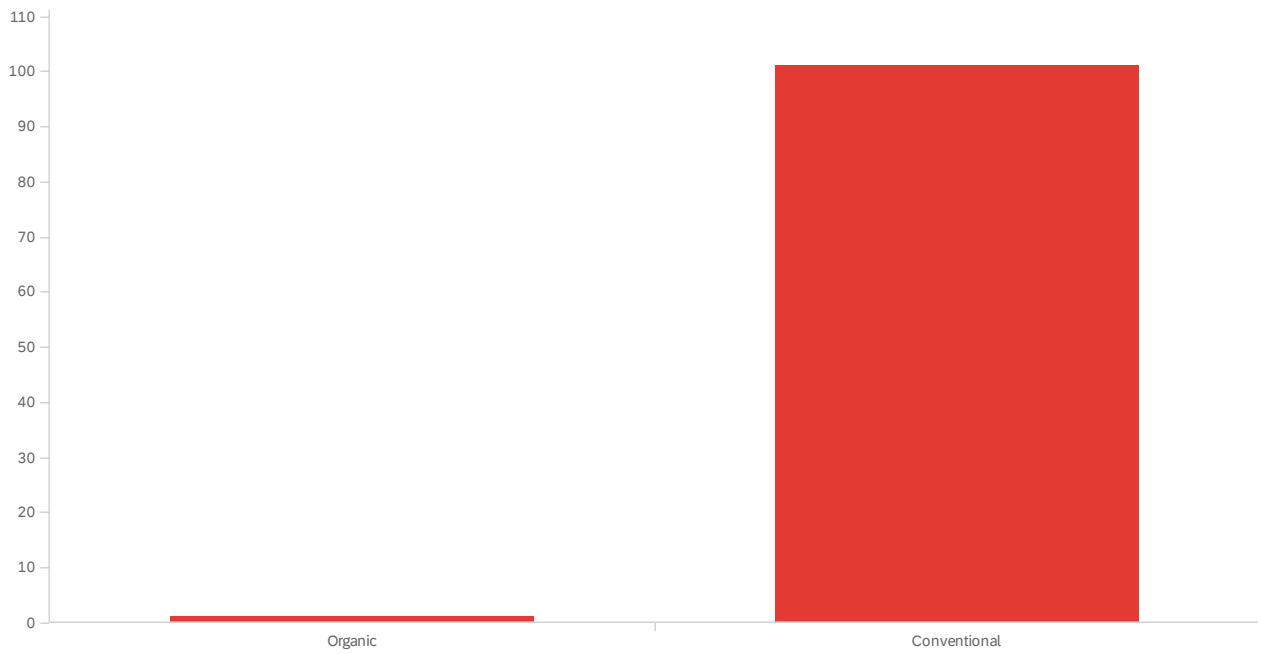
Q1 - Where is your cranberry farm located?



Field	Choice Count
Wisconsin	55% 56
Washington	1% 1
Quebec	0% 0
Oregon	8% 8
New Jersey	8% 8
Massachusetts	25% 26
British Columbia	3% 3
	102

Showing rows 1 - 8 of 8

Q2 - Is your farm organic or conventional?



Field

Choice
Count

Organic

1% 1

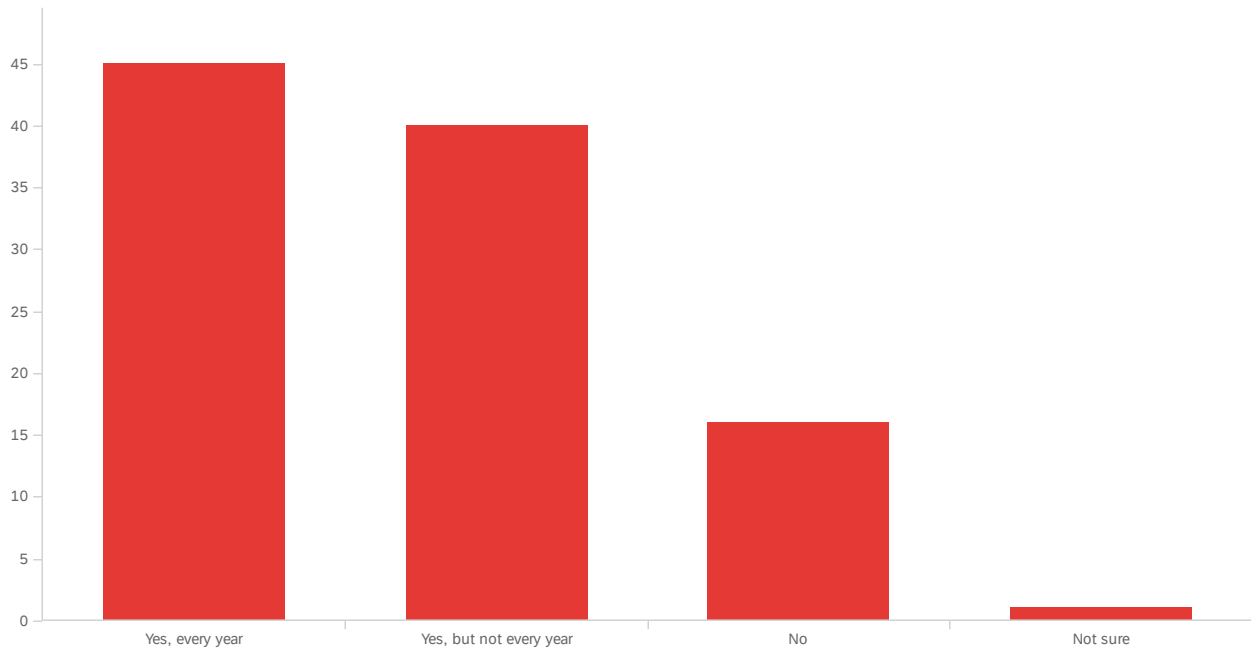
Conventional

99% 101

102

Showing rows 1 - 3 of 3

Q3 - In the last 5 years, have you experienced losses to fruit rot?



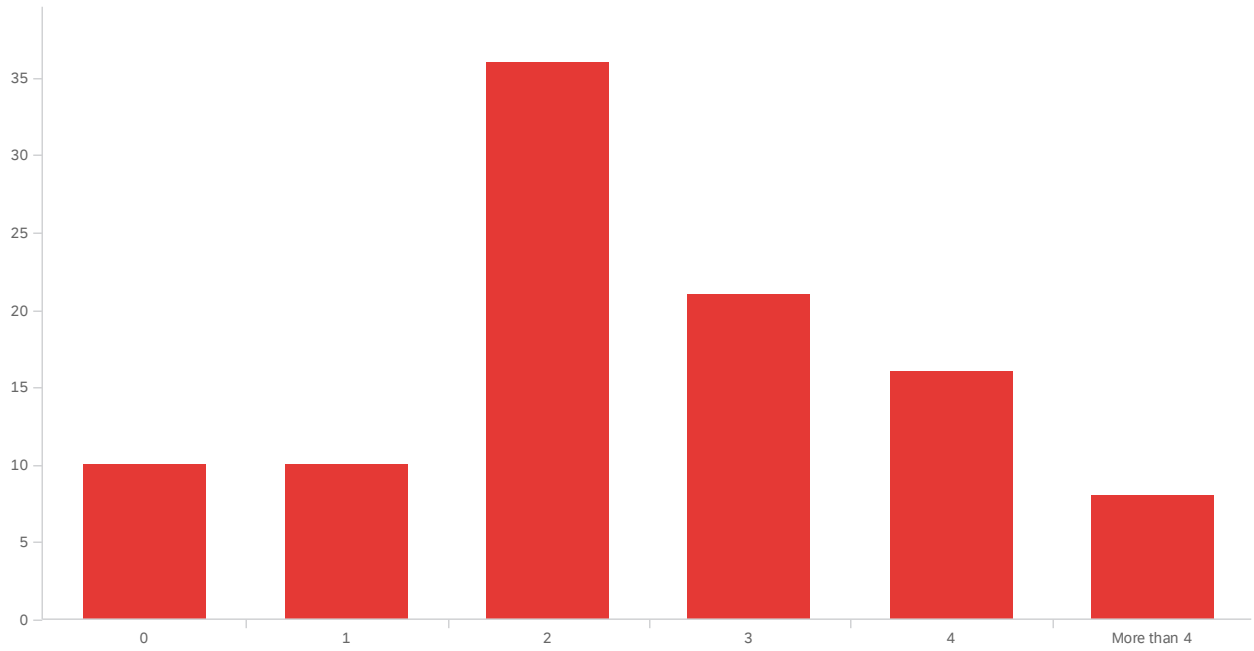
Field	Choice	Count
Yes, every year	44%	45
Yes, but not every year	39%	40
No	16%	16
Not sure	1%	1

102

Showing rows 1 - 5 of 5

Q4 - On average, how many fungicide applications do you make during the growing

season to control fruit rot?



Field

Choice
Count

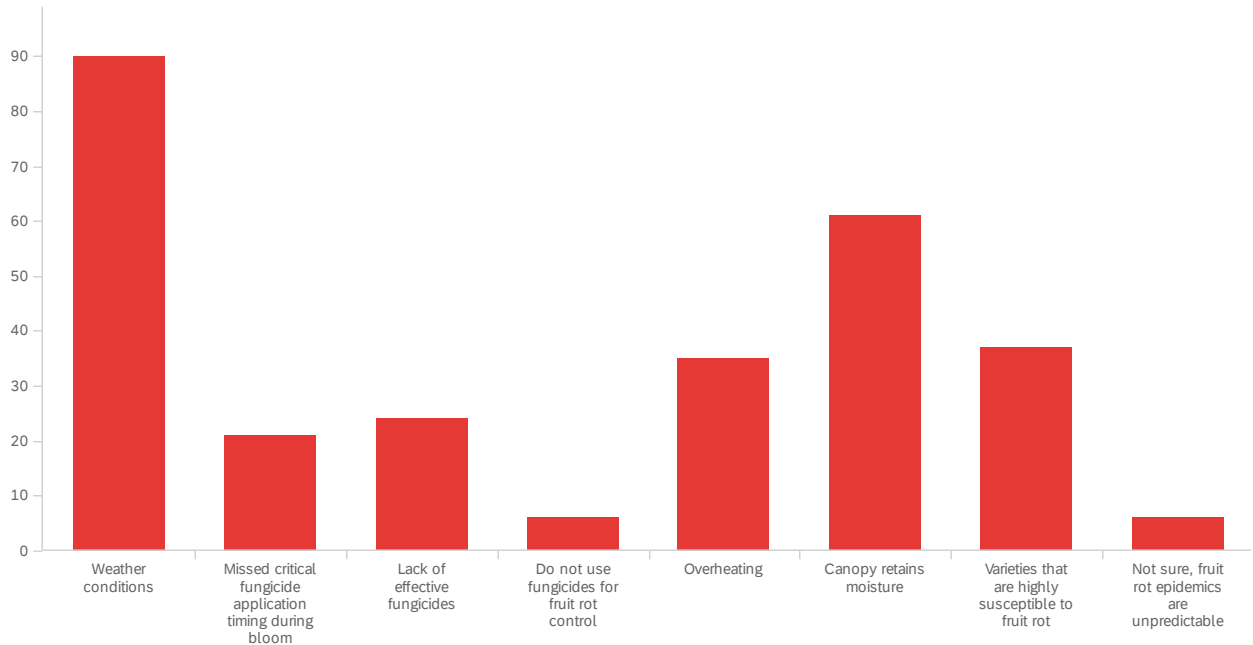
More than 4	8%	8
4	16%	16
3	21%	21
2	36%	36
1	10%	10
0	10%	10

101

Showing rows 1 - 7 of 7

Q5 - What do you feel contributes to increased fruit rot pressure on your farm? Select all

that apply.

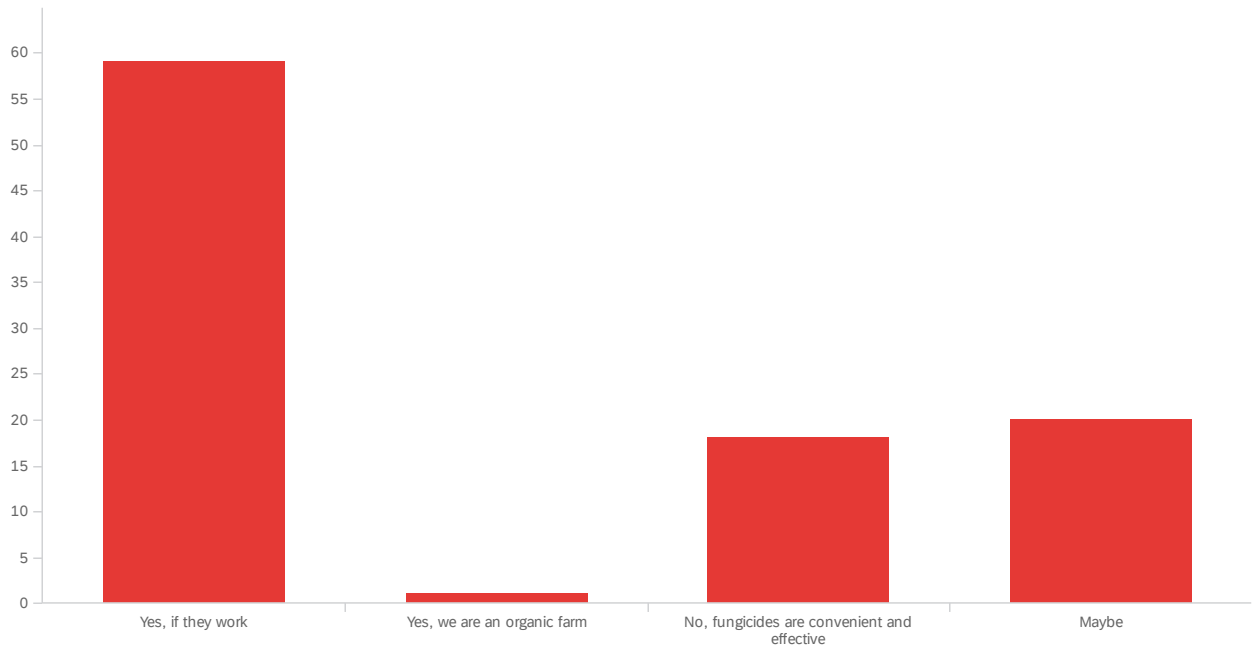


Field	Choice Count
Weather conditions	32% 90
Varieties that are highly susceptible to fruit rot	13% 37
Overheating	13% 35
Not sure, fruit rot epidemics are unpredictable	2% 6
Missed critical fungicide application timing during bloom	8% 21
Lack of effective fungicides	9% 24
Do not use fungicides for fruit rot control	2% 6
Canopy retains moisture	22% 61

280

Showing rows 1 - 9 of 9

Q6 - Would you consider alternative practices (ex. no fungicides) to manage fruit rot?



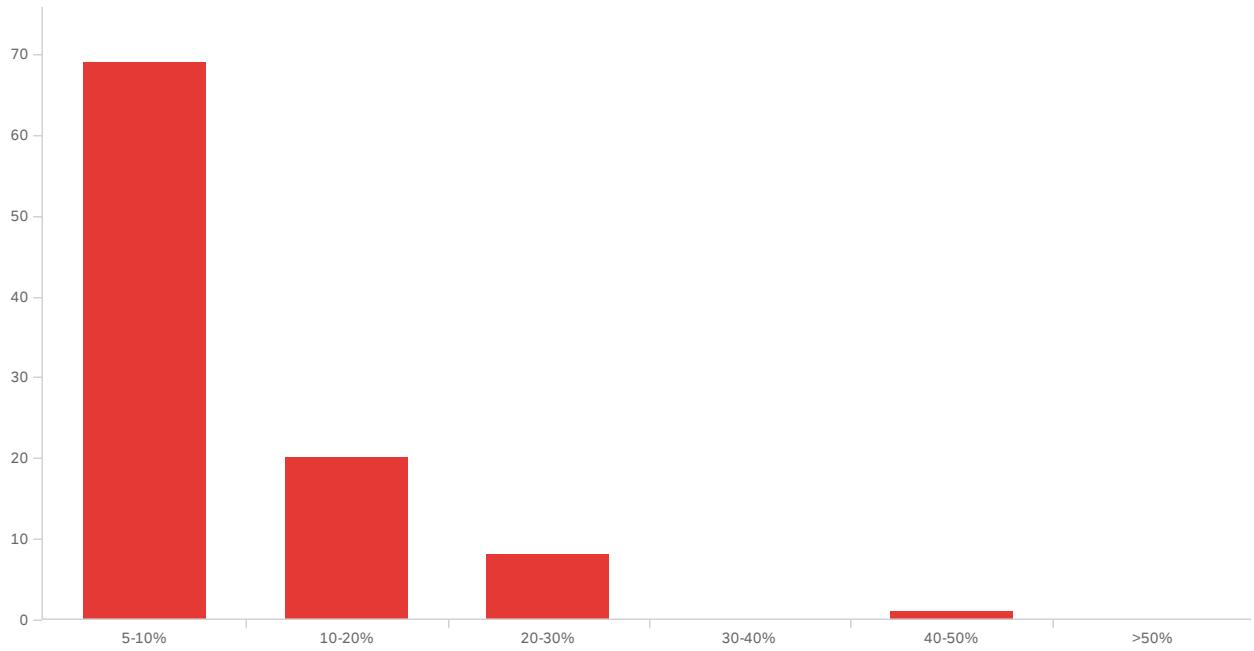
Field	Choice Count
Yes, we are an organic farm	1% 1
Yes, if they work	60% 59
No, fungicides are convenient and effective	18% 18
Maybe	20% 20

98

Showing rows 1 - 5 of 5

Q7 - What would you estimate is the cost of fruit rot control (i.e., fungicide applications)

related to the overall production costs?

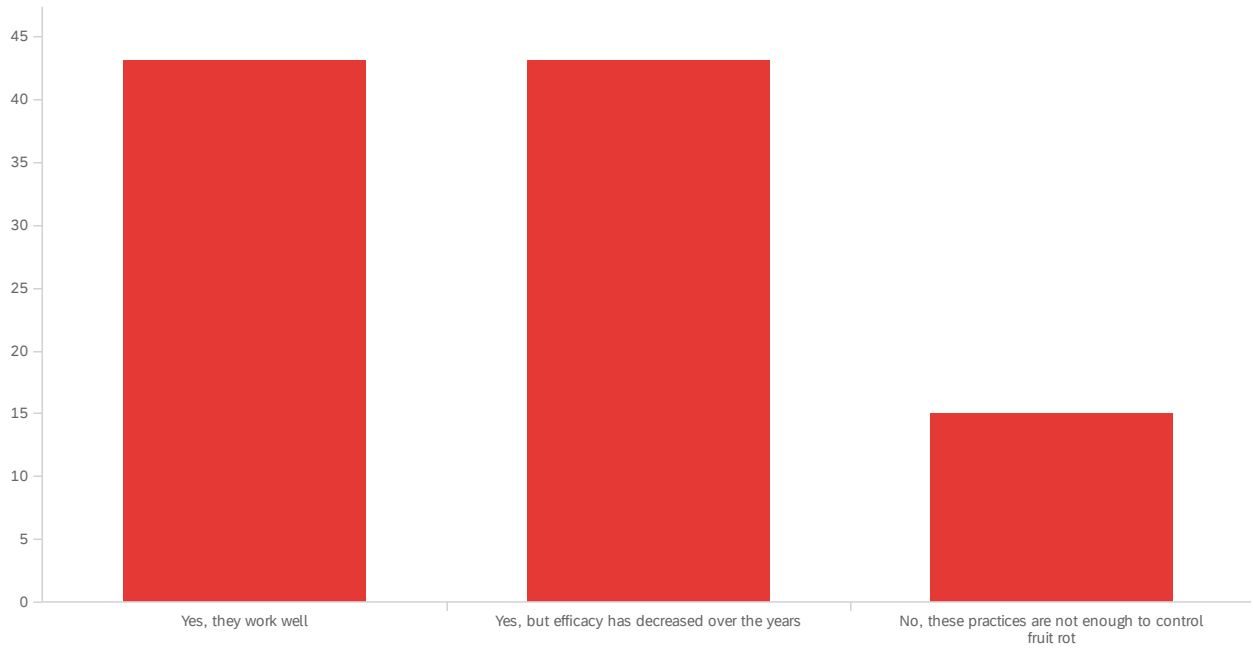


Field	Choice Count
>50%	0% 0
5-10%	70% 69
10-20%	20% 20
20-30%	8% 8
30-40%	0% 0
40-50%	1% 1

98

Showing rows 1 - 7 of 7

Q8 - Do you consider the current fruit rot management practices (i.e., fungicide applications, spring flooding, sanding, etc.) effective at reducing fruit rot incidence?



#	Field	Choice Count
1	Yes, they work well	42.57% 43
2	Yes, but efficacy has decreased over the years	42.57% 43
3	No, these practices are not enough to control fruit rot	14.85% 15
		101

Showing rows 1 - 4 of 4

Q9 - In your opinion, what should be the priority for cranberry fruit rot research and/or extension efforts?

In your opinion, what should be the priority for cranberry fruit rot resear...

better fungicides

understanding late season rot

Better fungicide to control rot...

In this obvious climate change scenario, move forward with new and different approaches. Simplify and focus on existing available chemicals and procedures.

We are doing all the right things from a research perspective. We just need to go at it harder with good bottom line answers. Simple steps to follow for each type of bog and various bog conditions. To start, it would be nice to understand what is the perfect upright density?

Canopy management, understanding heat or humidity indexes as it affects berry color, top layer scalds, bottom layer rots when we get into fall Sept/October. Question, does the pH of our water impact efficacy of pesticides? Just a thought since we have a high incident of moss on bogs and noticeable surrounding trees that are dying from being covered in moss, not sure if pH has changed in our water systems, ponds, irrigation water & ditches? Or perhaps the climate change with more humidity that creates moss growth. Do adjuvants or stickers build up in the soils, creating moisture issues? Are we missing microbes in soil that would help with reducing pathogens in soil? Honestly grabbing at thoughts that have crossed my mind... Dawn Gates-Allen 508-726-6052

Impact on bloom. Missed application in 2021 due to concerns over applying fungicides during a heat wave. What would be the best product and method of application during high heat situations.

New compounds, refine sequencing of compound use, incorporation of cultural practices

Which fungicides are most effective, and during what phase in the growing season. What growing practices are best at controlling fruit rot throughout the growing season. Also what are some of the biggest players in causing fruit rot.

Alternate Group Fungicides to spray alternate years to avoid resistance build-up

researching newer varieties whose fruit is larger, softer and earlier.

realistic to use (that is economical) easy to apply (chemigation) environmentally friendly

Acquiring product labeling for cranberries from different FRAC codes

low cost replacement for Bravo

Is the water we use clean enough? Is our irrigation timing right? Why late water will not work any more. Why new rot resistant varieties are worse than Howes and Early Blacks.

Maybe look into a regenerative nutrition. Healthy plant should repel bad fungi

Resistance Fungicides Biologics

In your opinion, what should be the priority for cranberry fruit rot resear...

High. Some growers 4 and 5 fungicide applications for fresh fruit. A better approach to rot control would save money and be good for the environment.

One fungicide to be used to cover all kinds of rot

New Fungicides

More options, different fungicides, biologicals and more data on impacts of cultivation.

New products to replace bravo

Research on daytime cooling. Proper irrigation time commensurate with soil types and tensiometers. Communicate same. Continue new fungicide research.

to find targeted alternatives to commonly used fungicides and to provide data proving the efficacy of horticultural/cultural practices in the effort to reduce fruit rot

Safer compounds for human handling/ exposure that are also acceptable for exported fruit.

Screen new compounds

Frac research and obtaining labels for different types of rot.

research

Looking for other fungicide chemistry possibilities and alternatives to applying fungicides.

I feel that the climate change has created a major problem for fruit quality

Heat and scald research. Not enough information to make the proper call. Also new variety research on fruit rot control. Demoranville seem to rot even with the current fungicide program.

Better understanding of late season Aug-September weather conditions and relation to fruit rot/ degradation. We have experienced warmer than average fall temperatures. Where fruit rot seemed to slow/stop spreading once frost watch began. Now I am noticing without colder frost temps an increase in fruit rot and tissue breakdown as the fruit ripens.

We need a wider (more 3 & 11 group fungicide) so we can rotate to prevent resistance. We are careful in our use but the toolbox is very limited (we spray for cotton ball fungus as needed, then for fruit fungus) less fungicides = greater chances of resistance even with judicious applications.

A greater diversity of fungicide products than presently available

Yes, if we do everything correctly fruit rot seems manageable with current products. But...a rainy or cold bloom can turn manageable into high fruit rot rather quickly. We need to research conventional products and alternatives to give us a variety of options and to reduce reliance on a select group of fungicides every year.

Find ways to control rot that doesn't cost a fortune

Growing practices that help minimize risk-keeping vines short, best irrigation and vine cooling practices.

new fungicides

In your opinion, what should be the priority for cranberry fruit rot resear...

New products or practices for fruit rot control

Fruit rot resistant varieties, more and better fungicides, tools for identifying pathogens.

moisture effects

If you can control the weather tell me how?!

Timing of applications, finding a less expensive fungicide

Not sure I've never had a fruit rot issue.

10 and 50% has been our timing goal for sprays. Would different timing produce better results?

feel it applies to the newer varieties of vines with the heavier canopies.

Fresh fruit

More effective fungicides.

I believe drainage is the biggest factor for fruit rot.

research fertilizer application to reduce canopy over growth without loss of cranberry production

This is quite important as the industry has shifted towards SDC's as the major end product and quality fruit is vital to quality SDC's. I think just making sure timing of fungicides needs to be precise along with what are other factors causing rot. Is watering too much an issue. Do they rot because they are wet? Or the other way, do we need to water a little in hot afternoons to cool them down? It's difficult to put a finger on exactly what causes fruit rot each year. Thanks for trying

New chemistry and improve cultural practices to mitigate fruit rot.

More FRAC groups to treat fruit rot so we can have greater rotation

Stop the rot

Important to find new modes of actions and or new cultural practices, to help us get more tools in our arsenal. Long term we will start losing our current modes of action to legislative actions. New to be ahead of the game and find a way to reduce our impact on native beneficial insects.

Screening new fungicides and classes of fungicides

Controlling the depth of your vine canopy is crucial. You want to control how much height is above the fruit - about 1 inch above the fruit. Goal is to fertilize for next year's crop - . Leave the vine healthy but a little hungry.

A BETTER FUNGICIDE

Vine Density, Upright count vs fruit rot

Efficacy trials with alternate chemistry/products. More research to develop guidelines for rot control on new plantings of hybrid varieties; especially Mullica Queen. Irrigation frequency/timing - what works best for mitigating rot?

In your opinion, what should be the priority for cranberry fruit rot resear...

Cultural practices to reduce need for fungicide applications. And confirm specific timing of application to be most effective and not a waste of \$\$.
What is the economic threshold of fungicide applications?

Understand the economic costs of rot problems vs cost of applications and justification. What weather events or location climates Warrant or don't warrant product applications. Is there a combined list of practices with products (or with out products) that have exponentially results when combined. Is an annual application program the best course of action

grower education and registration of new modes of action

To compare varieties, especially the new high yield, to see if/ why they are getting rot. Also any alternatives would need to be convenient and effective

From what I hear, we will probably lose the use of Bravo. We need a good alternative program to replace it. Focusing on cultural practices to reduce fruit rot is also helpful to Growers in my opinion.

Spring flooding in the previous question sounds like a horrible idea if you have a fruit rot problem.

Keeping bravo available

New effective fungicides to replace the ones we're losing. Very difficult at this point to have a good fungicide program due to limited number of mode of actions, especially if exporting.

The chlorothalanyl I use is effective but I understand it may cause health problems with consumers. I'd like to have something without that problem

End of Report