CRANBERRY CROP MANAGEMENT JOURNAL
DIVISION OF EXTENSION
Volume 35 • Issue 5 UNIVERSITY OF WISCONSIN-MADISON July 20, 2022

# Cranberry Viruses

***By Leslie Holland***

As cranberry beds enter early fruit set, this is an important period to scout for virus-infected fruits. While research demonstrates that infected uprights do recover from T*obacco streak virus* and *Blueberry shock virus*, recovered uprights will continue to carry virus-infected pollen. Beds where a virus has been identified should not be used as a source of cuttings for new beds. This article provides a brief overview of the main viruses that we observe in cranberry in Wisconsin. Cranberries, like many other plants, can harbor viruses. Symptoms of viruses can range from no visible symptoms (asymptomatic) to plant mortality. Expression of these symptoms may vary based on variety, host phenology, and production region. Some viruses have a latent period, where infection occurs but symptoms may take several months or even a year to develop.

**Tobacco streak virus *symptoms on cranberry uprights. TSV and BlShV cause similar berry scarring symptoms on cranberry and cannot be distinguished in the field. (Photo credit: L. Wells-Hansen & P. McManus).***

***Tobacco streak virus (TSV)*** was first identified in 2012 in Wisconsin cranberries. Infected uprights show decreased average berry weight and reduced percent fruit set in the year that symptoms are present. Uprights that recover from TSV do not differ from healthy uprights in terms of average berry weight, number of flowers produced, and percent fruit set. However, recovered TSV-positive uprights still produce TSV-positive pollen that can spread to healthy uprights.

***Blueberry shock virus (BlShV)*** was first associated with berry scarring in Wisconsin marshes in 2014. Scarred fruit tested negative for TSV and positive for BlShV. Similar to TSV, uprights infected with BlShV produced scarred berries one year and healthy-looking berries in subsequent seasons (i.e., recovery).

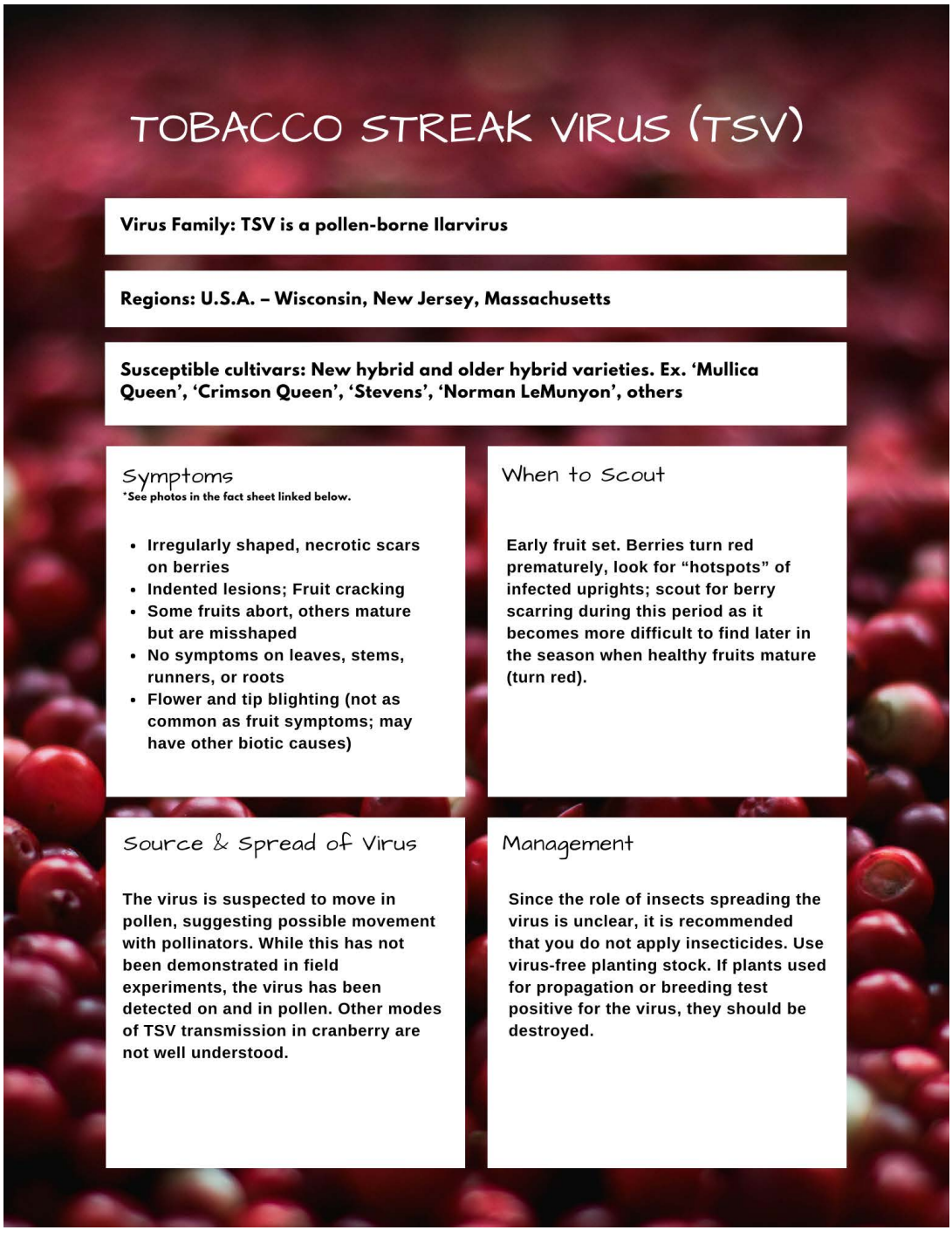
**Things to consider when scouting for virus-infected uprights:**

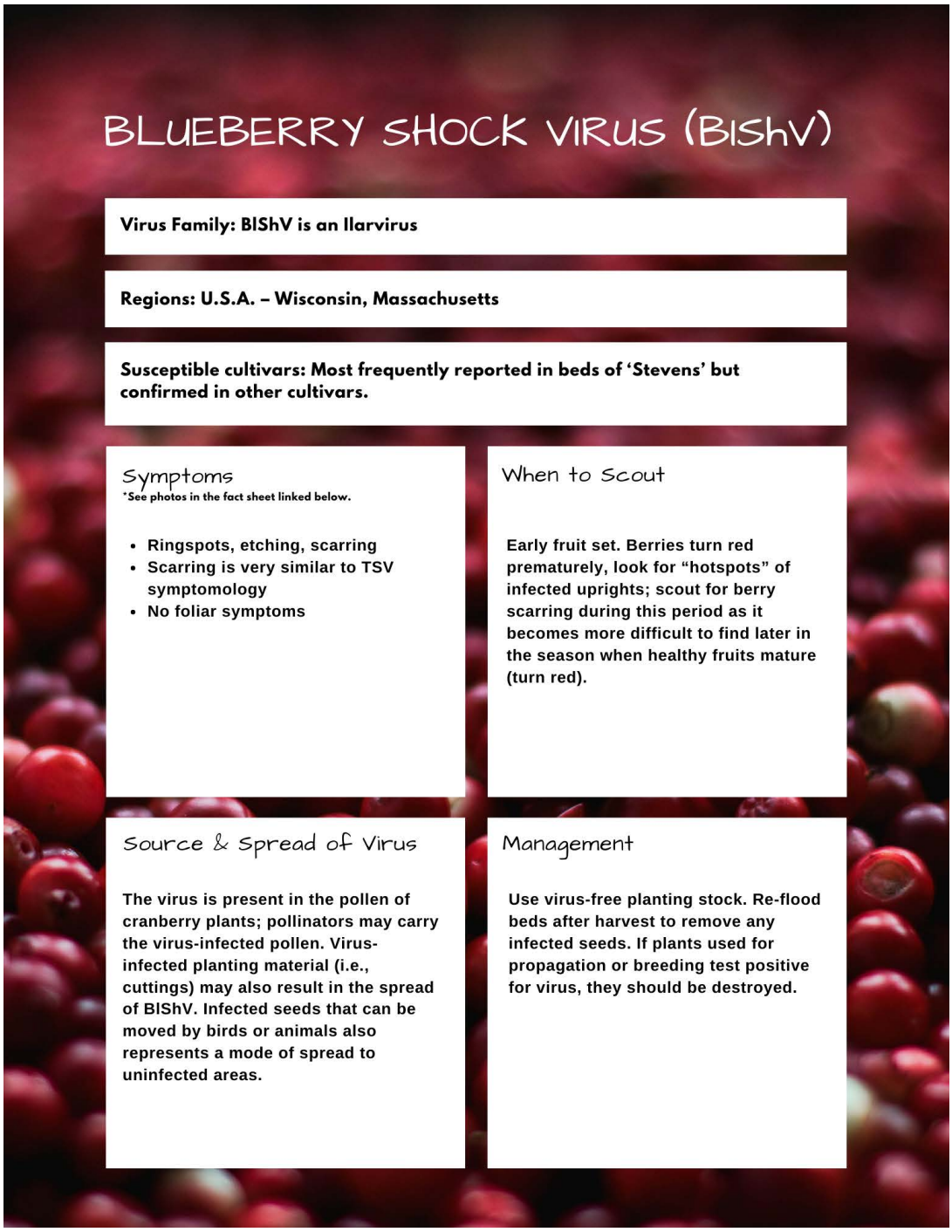
- The best time to scout is during early fruit set in mid- to late July. Scouting later in the summer can be difficult as infected berries may be shriveled or aborted.
- Symptoms associated with some viral diseases of cranberry may be similar to other biotic issues in cranberry, so accurate diagnosis is needed.
  - Example: premature reddening of fruits during early fruit set (as seen with TSV and BlShV

infections) could also result from insect feeding damage.

- Infected vines do “recover” from TSV and BlShV. In the year following berry scarring symptoms, infected vines are not symptomatic and are indistinguishable from healthy uprights. Despite the absence of symptoms in the years following, these infected vines still produce virus-positive pollen.
- Cranberry uprights infected with TSV or BlShV cannot be cured of the virus. Removal of infected plant material is not practical as healthy plants and recovered plants can not be differentiated in the field.
- If you find uprights containing scarred berries you can submit them to a commercial laboratory for virus testing. Example: Agdia (www.agdia.com).
- If you want to test asymptomatic uprights for the presence of virus, more representative sampling within a bed is required. Consult fact sheets referenced below for instructions.

*Mention of a product or company is not an endorsement.



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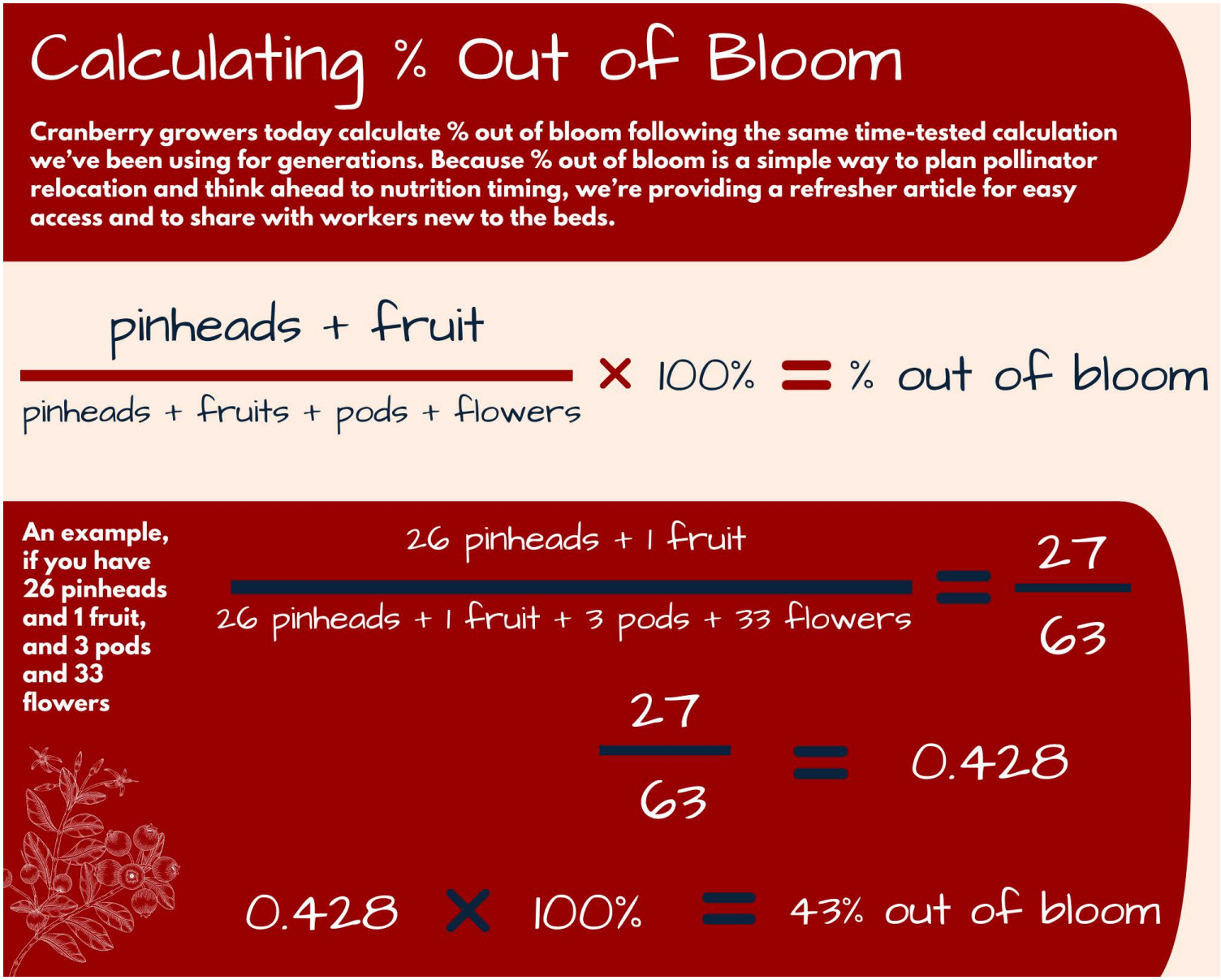
# Calculating Percent Out of Bloom

*By Allison Jonjak*

There's no new information in this article. Cranberry growers today calculate % out of bloom following the same time-tested calculation we've been using for generations. Because % out of bloom is a simple way to plan pollinator relocation and think ahead to nutrition timing, we're providing a refresher article for easy access and to share with workers new to the beds.

1. Choose a bed of the variety you are curious about, and **step carefully in**, at least 5 paces from the ditch edge. Choose a "regular" place—not obscured by weeds, not a low spot, not a high spot.
2. **Choose 10 random uprights.** A safe way to do this is to choose the first 10 your hand finds, so you are not drawn to the furthest-ahead or furthest-behind uprights.
3. **Count the number of pods pinheads and fruit** on your 10 uprights.
4. **Count the number of open flowers and unopen pods** on your same 10 uprights.
5. Write down the number of pinheads and fruit. Write down the total of pinheads + fruit +pods + flowers.
6. Divide pinheads + fruit by total (pinheads + fruit + pods + flowers). Multiply by 100 to get % out of bloom.



# Extension's New Farm Management Outreach Specialist to Focus on Financial and Risk Management for Successful Farm Businesses

***By Trisha Wagner***

University of Wisconsin–Madison Division of Extension is pleased to announce Katie Wantoch as the new Extension Farm Management Outreach Specialist and Professor of Practice, focused on farm business financial and risk management. The Farm Management Outreach Specialist position is a new, exciting position in the UW–Madison Division of Extension. This position will identify needs and provide outreach education to find solutions to the most critical issues facing Wisconsin agricultural producers in the areas of farm financial and risk management.

Financially viable farm businesses are essential to Wisconsin's $100 billion agriculture economy. Farmers must continually identify and evaluate opportunities and challenges to meet their mission and goals and enhance their competitive position. Expanding a business, experimenting with new enterprises, investing in technology, managing ever-changing input costs and price risk, or capitalizing on new market opportunities; all may increase capital investment or require new or additional financing. Hence, farms need to analyze financial performance and position, determine feasibility and assess risk. Success will depend upon skillful farm business management and places more importance on information, resources and analysis tools for informed decision-making.

Part of the Agriculture Institute's Farm Management Program, this position will emphasize financial and risk management for commodity and specialty crop farms, including:

- Identifying and evaluating opportunities for agricultural businesses to meet their mission and goals, and enhance their competitive position.
- Identifying challenges to these opportunities resulting from variability of prices received, access to new markets, prices of inputs, and new technologies and practices affecting both yield and quality.

Katie Wantoch has been integral to the Extension Farm Management Program since joining Extension in 2010, where she was previously the County Agriculture Extension Educator and Associate Professor in Dunn County. Katie grew up on her family's dairy farm in Marshfield, WI. She earned a Master in Business Administration degree in Finance from Lakeland University and a Bachelor of Science degree in Agricultural Business Management from the University of Wisconsin-Madison. Prior to 2010, Katie served as an Agricultural and Business Loan Officer for M&I Marshall and Ilsley Bank.

As the new Farm Management Outreach Specialist she will leverage her 12 years of experience in the field to enhance the competitiveness of farms and the agricultural industry across Wisconsin. "I am excited to be a part of the farm management team with UW Extension," Wantoch said. "I am looking forward to improving the resiliency of hard working farmers in the state of Wisconsin in my new role."

Katie started as a state outreach specialist on July 5th. In this role, Katie's work will add value to that of partner organizations and community members through collaboration to develop and deliver educational programs for ag commodity and specialty crop industries across Wisconsin. Her office is located at the Extension office - 3001 US Highway 12 East, Suite 216, Menomonie, WI 54751. Please feel free to contact Katie; she can be reached directly via email katie.wantoch@wisc.edu or phone 608-354-3992. Learn more about Katie's work at https://farms.extension.wisc.edu/author/kwantoch/.

# Grower Updates

## Vilas 51

***By Jeremiah Mabie***

Hello everyone I hope you all had a wonderful and safe Fourth of July! Boy have things moved along fast since last time we chatted! My early varieties have little to no bloom left with my latest varieties at about 60-70% pollinated this morning. Blossom looked strong across the marshes up north and fruit set seems to be following suit. Bug pressure has been low. Everyone's booms have been busy with applications and pumps running for irrigation. It's been a "rain on the lawn but not on the garden" summers as we watched many storms narrowly miss us. It's going to be a busy couple of weeks but before we know it we all will be thinking about getting harvest equipment out and ready! Hope everyone has a great month and mother nature treats you well!

## Flying Dollar Cranberry

***By Seth Rice***

Hello everybody! We're getting ready to say goodbye to our bees for the year. It's hard to have a crop without them! We are mostly out of bloom across the marsh. We are also finishing up our fungicide applications on the marsh. If we have any bugs out there, our best option is Altacor so we don't hurt the bees too bad. New plantings are taking off and are doing good. It won't be too long and we will be at summer field days Aug 10th at the research station. Hope to see everybody there that can make it!

## Update from the Wisconsin Cranberry Research Station

***By Wade Brockman***

Blossom is gone, bees are leaving soon, and fruit is setting fast. Now we need to keep these warm days and nights and hope we can size the fruit. Looking forward to seeing everyone in a few weeks for the Summer Field Day and Trade Show!