

As compiled by Jennifer Haverstock, Perennia Small Fruit Specialist <a href="mailto:jhaverstock@perennia.ca">jhaverstock@perennia.ca</a>





Perennia, in conjunction with Horticulture Nova Scotia, regularly administers a variety of research projects to assist farmers in exploring new varieties of crops, improving on existing crops, determining best management practices, and managing crop pests. Approximately every two years, berry and vegetable research priority selection sessions bring together berry and vegetable growers to determine what these projects should encompass. An online survey was administered to the berry growers December 2019 through February 2020 to determine research and industry priorities for strawberries, brambles, and highbush blueberries.

In some cases, the selected priorities have been extensively researched. The fact that the industry still selects these as a priority could indicate several important points:

- 1. The research that has been conducted is not being communicated well to growers
- 2. The research that has been conducted is impractical in an applied setting
- 3. There is a need for greater depth and/or breadth of research of the selected priority

A summary is presented below of the findings as determined by this survey and through discussion with growers and industry stakeholders.

## Methodology

Survey questions were formatted to determine specific crop needs and to address issues that pertain to each crop. Past industry survey responses were used to generate the questions for this survey, allowing for further refinement of industry and research priorities for Nova Scotia berry growers.

# Respondents

The survey had 21 participants, with farms responding for several berry crops resulting in a total of 32 responses over all included crops. There are numerous other berries being grown in Nova Scotia, including but not limited to: haskap, cranberries, elderberries, grapes, and currants that were not captured by this survey.

Crop	Number of Responses
Strawberry	14
Berry Nursery	2
Raspberry	4
Blackberry	1
Highbush Blueberry	7
Other (please specify)	4 (haskap, elderberry and grapes)

Approximately a quarter of the respondents were either organic or used predominantly organic practices and farm smaller acreages. It is important to bear in mind that while conventional and organic research and industry priorities sometimes do overlap (prioritizing system resiliency and soil health for example), pest management strategies are often divergent priorities. For further clarification of any priority, it is recommended that you contact the relevant Perennia Specialist.

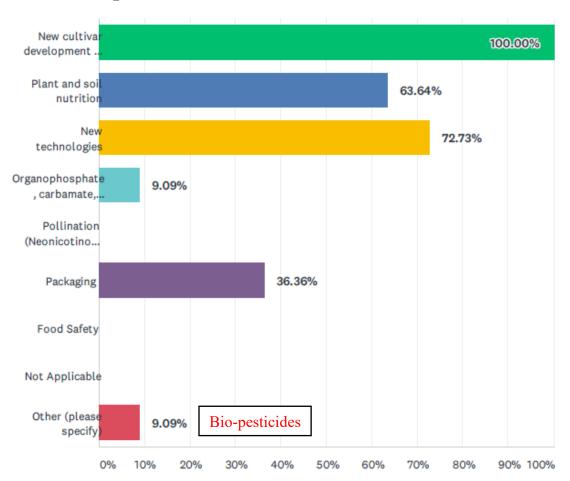




#### **Strawberries**

The Nova Scotia fruiting strawberry industry consists of approximately 80 commercial growers producing around 4.5 million quarts on 650 fruiting acres. An equally as important strawberry nursery industry also exists in Nova Scotia, producing bareroot and plug plants for Northern and Southern markets. The survey was directed at strawberry fruit production but many of the research priorities span strawberry nursery production as well. The following are the top industry and priorities for strawberries in Nova Scotia.

## **Strawberries: Top 3 General Priorities**



#### Top 3 priority traits for strawberry cultivar development:

- 1. Yield, disease/insect resistance, taste/flavour, shelf life, fruit size, later variety
- 2. Picking efficiency, appearance, ever-bearing, size, taste/flavour, early variety, shelf life, disease resistance
- 3. Firmness, flavour, disease resistance, size, yield, winter hardiness, earliness

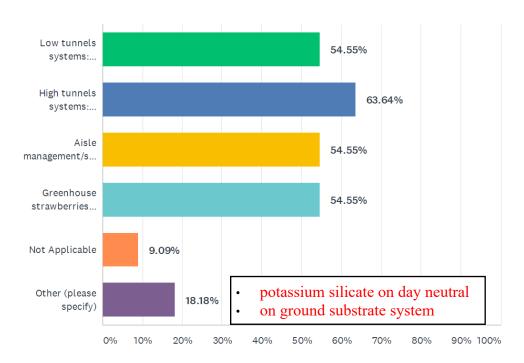




Bottom 3 priority traits for strawberry cultivar development:

- 1. Shelf life, color, leaf size
- 2. Shape, size
- 3. Color, late varieties, vigour

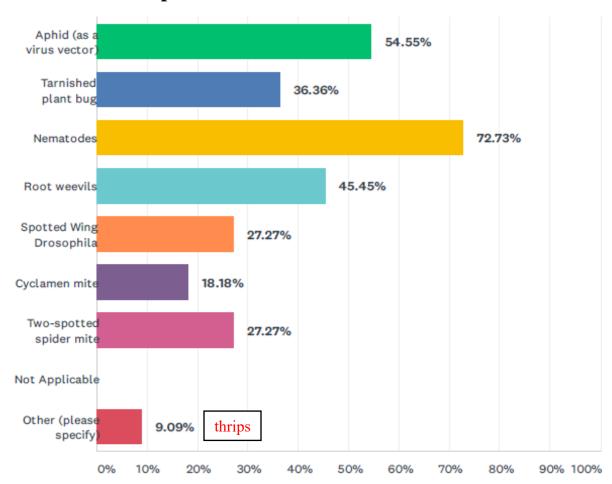
# **Strawberries: Top 3 Production Systems Priorities**







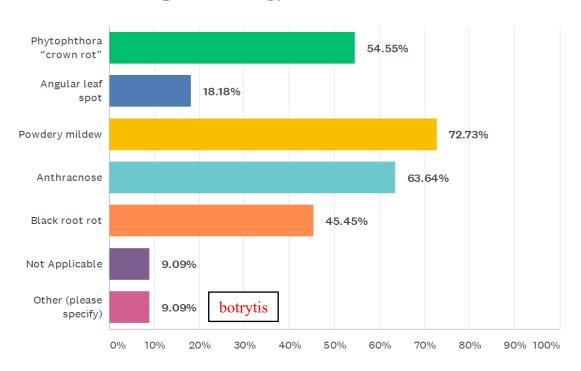
# **Strawberries: Top 3 Insect Priorities**



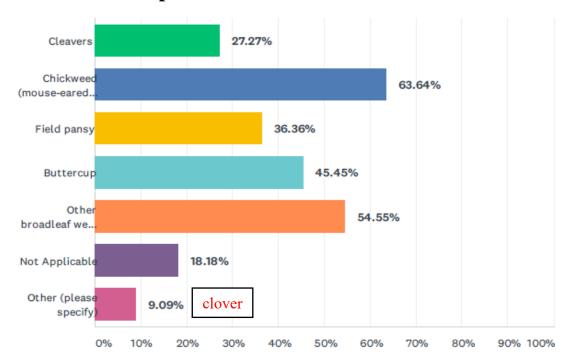




# **Strawberries: Top 3 Pathology Priorities**



# **Strawberries: Top 3 Weed Priorities**







#### **Brambles**

Raspberry acreage in Nova Scotia is estimated to be about 100 acres with limited growth in recent years. The farm gate value is approximately \$1 million with very good demand and prices. Despite good market and price potential, there are very few blackberries grown in the province, although one farm has found success growing thornless varieties in a high tunnel system. The following are the top industry and research priorities for brambles in Nova Scotia.

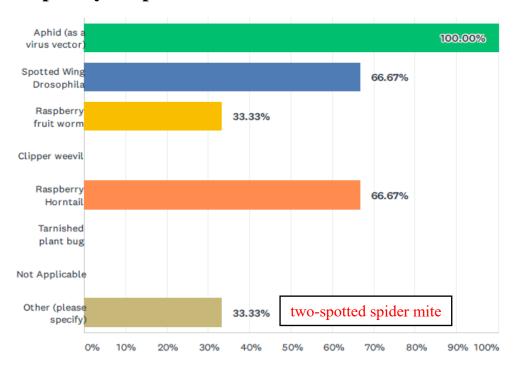
## **Brambles: Top 3 General Agronomy Priorities**

- New cultivar development (100% of respondents ranked in top 3)
  - Raspberry
    - Yield, shelf life, firm
    - Fruit size, size, large
    - Fruit firmness, flavour, ease of picking
  - Blackberries
    - Hardy, thornless, firm
    - Yield, large size
    - Fruit size, even ripening
- Plant & Soil Nutrition (100% of respondents ranked in top 3)
- New Technologies (66% of respondents ranked in top 3)
  - High tunnel systems: planting timing, density, varieties, row spacing, pest ecology
  - o Long cane production
  - Trellis systems
  - Netting use for pest control (protective covers)
- Weed Management (66% of respondents ranked in top 3)

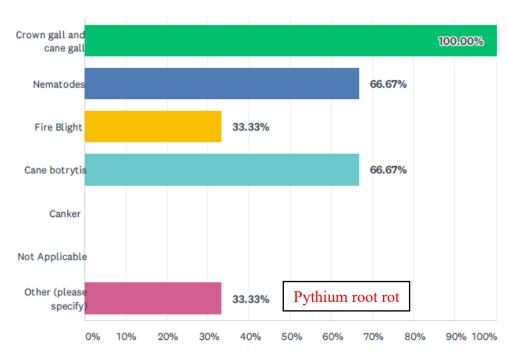




# **Raspberry: Top 3 Insects Priorities**



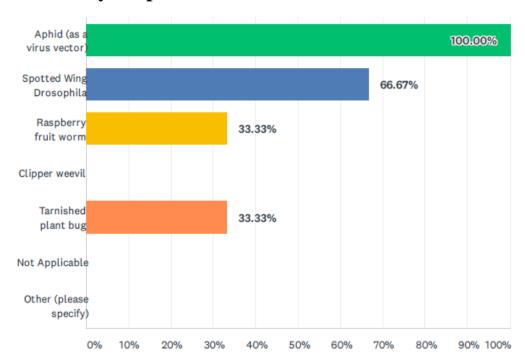
# **Raspberry: Top 3 Pathology Priorities**



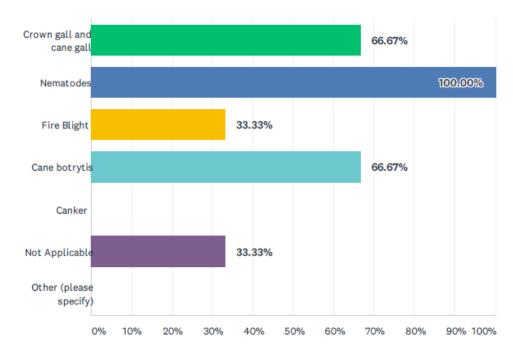




# **Blackberry: Top 3 Insects Priorities**



# **Blackberry: Top 3 Pathology Priorities**



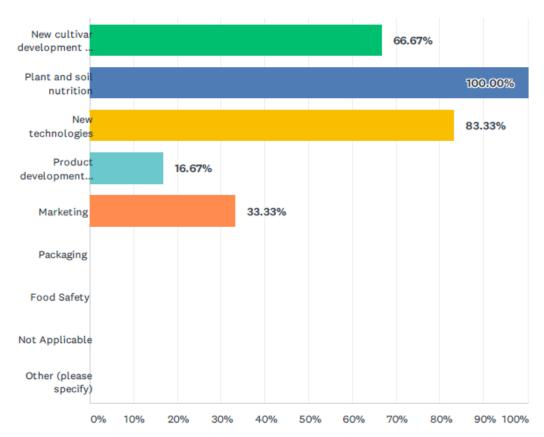




## **Highbush Blueberries**

The Nova Scotia highbush blueberry industry consists of over 500 acres and is gaining ground every year as interest in the industry grows and markets trend towards high antioxidant foods. The majority of the plantings are located in the Annapolis Valley, producing a normal crop of approximately 2.5 million pints valued in excess of \$5 million farm gate. Nearly half of the provincial acreage has been established in the last 5 years, so many of these plantings have not yet seen their full potential. The following are the top industry and research priorities for highbush blueberries in Nova Scotia.

## **Highbush Blueberries: General Agronomy Top 3 Priorities**



Top 3 priority traits for highbush blueberry cultivar development:

- 1. Productivity; winter hardiness; nutritional values; flavour; disease resistance
- 2. Taste; yield; size; winter hardiness
- 3. Disease resistance; fruit size and firmness; productivity

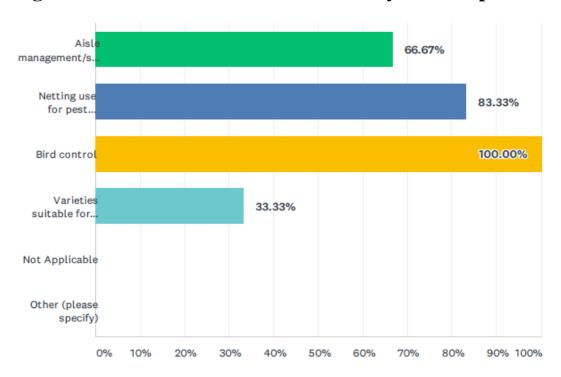
#### Bottom 3 priority traits for highbush blueberry cultivar development:

- 1. Shape; mid-late season ripening; color
- 2. Suckering; suitable for machine harvest
- 3. Color; winter hardiness

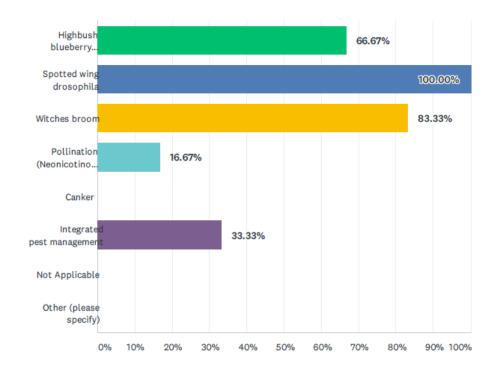




# **Highbush Blueberries: New Production Systems Top 3 Priorities**



# **Highbush Blueberries: Pests**







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### **Perennia**

Perennia Food and Agriculture Inc. is a provincial development agency with the mission to support growth, transformation and economic development in Nova Scotia's agriculture, seafood, and food and beverage sectors. We are Nova Scotia's only technical development agency focused solely on our food sector and maximizing its value.

Operational since 2001, Perennia has a 94-member team including specialists with expertise in areas of horticulture, livestock, field crops, product development and commercialization, quality and food safety, as well as professional skills in such areas as facilitation, adult education, information technology and communication. Perennia offers a wide range of production and development services to farmers, agribusinesses, co-operatives, industry associations, universities, and government. From its offices in Kentville and Truro, Nova Scotia, Perennia provides advice through workshops, field days, in-depth projects, and one-on-one consultations.

## **Horticulture Nova Scotia**

Horticulture Nova Scotia was formed in 1998 and is a not-for-profit association. Horticulture Nova Scotia works with other horticultural interest groups to further the needs and interests of the horticulture industry. Horticulture Nova Scotia aims to promote unity and cooperation within the research community and to facilitate the identification of research priorities that will benefit the horticulture industry.



