



vineland

RESEARCH & INNOVATION CENTRE



Priority Setting for OMAFRA 2023-2026

Amy Bowen and Amy Jenkins



Research Priority Setting

Vineland Research & Innovation Centre



Goals

Transition to a 3-year process

The goal of this activity is to improve the Horticulture Research Priority Setting process for Ontario on behalf of OMAFRA, to create a meaningful set of research priorities that:

- 1) Address the needs of small, medium and large crop groups
- 2) Consider short, medium and long-term priorities within and across crop groups
- 3) Align with funding/granting opportunities at both the regional, provincial and federal level
- 4) Identify a list of key resources (e.g. researchers and organizations) that can support the sectors' sustainability, competitiveness and growth



Year 1: 2023-2024

What do we know?

Identify the attitudes towards the previous research priority setting process and propose a revised process.

1. Collate information from previous rounds of priority setting
2. Identify priority areas across all crop categories to inform sector consultation



Year 2: 2024-2025

Sector consultation

Develop and present a new draft process based on feedback from preliminary industry consultations completed in Year 1.

1. Consult with at least 75% of the horticulture commodity groups to obtain feedback on the process and
2. Development of a priority setting template to support crop groups in setting priorities.
3. Implement recommendations and/or improvements in a draft of the new research priority setting process.



Year 3: 2025-2026

Implement a new research priority setting process

- The key deliverable will be the establishment of a new priority setting process and priority list for 2026-2029.
- Complete industry consultation with all stakeholder groups to define, communicate and make recommendations to OMAFRA on priorities for the next 3-year cycle.
- The long-term objective of this revised approach toward priority setting is to enable the establishment of short-, medium- and long-term priorities and the time for grower and other industry organizations to implement and or address these priorities.





Industry consultation

- A state of the industry review: Conducting an online review of horticulture value chain issues that may impact the horticulture sector. This information will be used to inform sector consultation discussions.
- Phone calls and meetings to discuss process, what's working and could be improved.
- Hosting sessions at OFVC and CGC to engage with the sector and gain feedback on what's happening / changing / challenging / emerging that could inform priority setting.
- Developing working groups based on industry needs to establish priorities, i.e. Bring together representatives of crop subsectors with similar challenges to aid in priority setting discussions.
- Highlighting case studies of how priority setting has created impact for the sector to demonstrate and gain trust in the process

Review of 2017-2023 Priority Data

Vineland Research & Innovation Centre



16 Crop categories



Apples



Berries



Tender Fruits



Brassicas &
Leafy Veg



Fruiting Veg



Ginseng



Grape & Wine



Greenhouse
Veg



Honeybees &
Pollinator



Maple Syrup



Mushrooms



New & Specialty
Crops



Ornamental
Horticulture



Potatoes



Bulb Veg



Root Veg

Together
2017-2022



Crop categories

Multiple crop categories - 2023

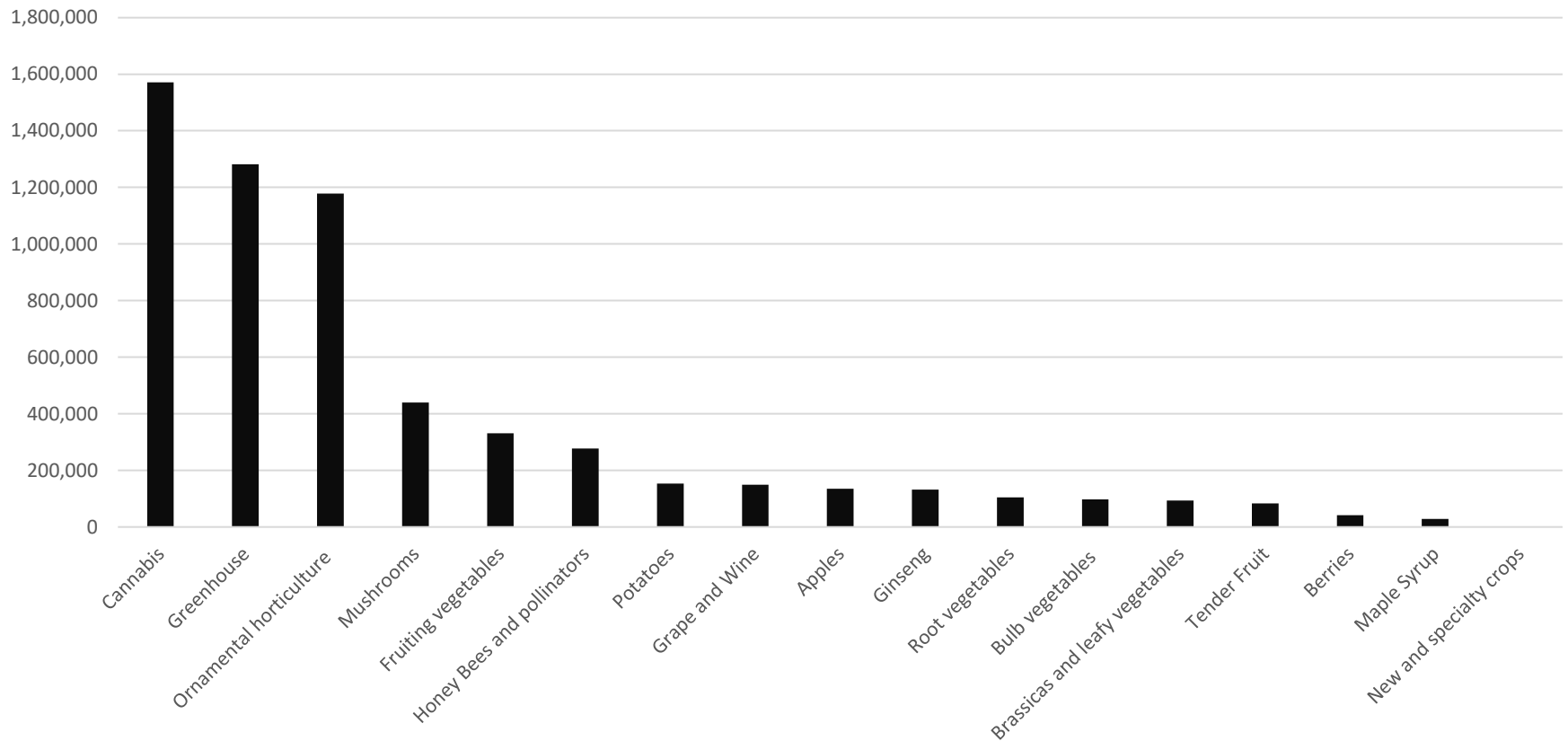
| Category | Crops included |
|---------------------------|---|
| Berries | Strawberry, blueberry, raspberry |
| Bulb Vegetables | onions, leeks, shallots, garlic |
| Brassica and Leafy Greens | asparagus, broccoli, Brussels sprouts, cabbage, celery, cauliflower, lettuce, leafy herbs and vegetables, rhubarb, spinach |
| Fruiting Vegetables | solanaceous vegetables (eggplant, peppers, tomatoes), cucurbit vegetables (cucumber, pumpkin, melons, summer squash winter squash), legume vegetables (green/wax beans, succulent peas, edamame) and sweet corn |
| Greenhouse Vegetables | Tomatoes, cucumbers, peppers |
| New and Specialty Crops | sweet potatoes, peanuts, tigernut, okra and other specialty vegetables, specialty fruit including haskap, kiwiberries and pawpaw, medicinal herbs including cannabis, culinary herbs, lavender, hops, truffles, hazelnuts and other tree nuts |
| Rooting Vegetables | carrots, parsnips, beets, sugarbeets, rutabaga, turnip, radish, horseradish, sweet potatoes. |
| Tender Fruit | Apricots, peaches, nectarines, plums, pears, tart cherries, grapes |

*Crops included in each category as of 2023

Biggest challenge

Resources across crops are not equal

Ontario Farm gate value in 2023 (in 1000 dollars)



Source: Stats Canada

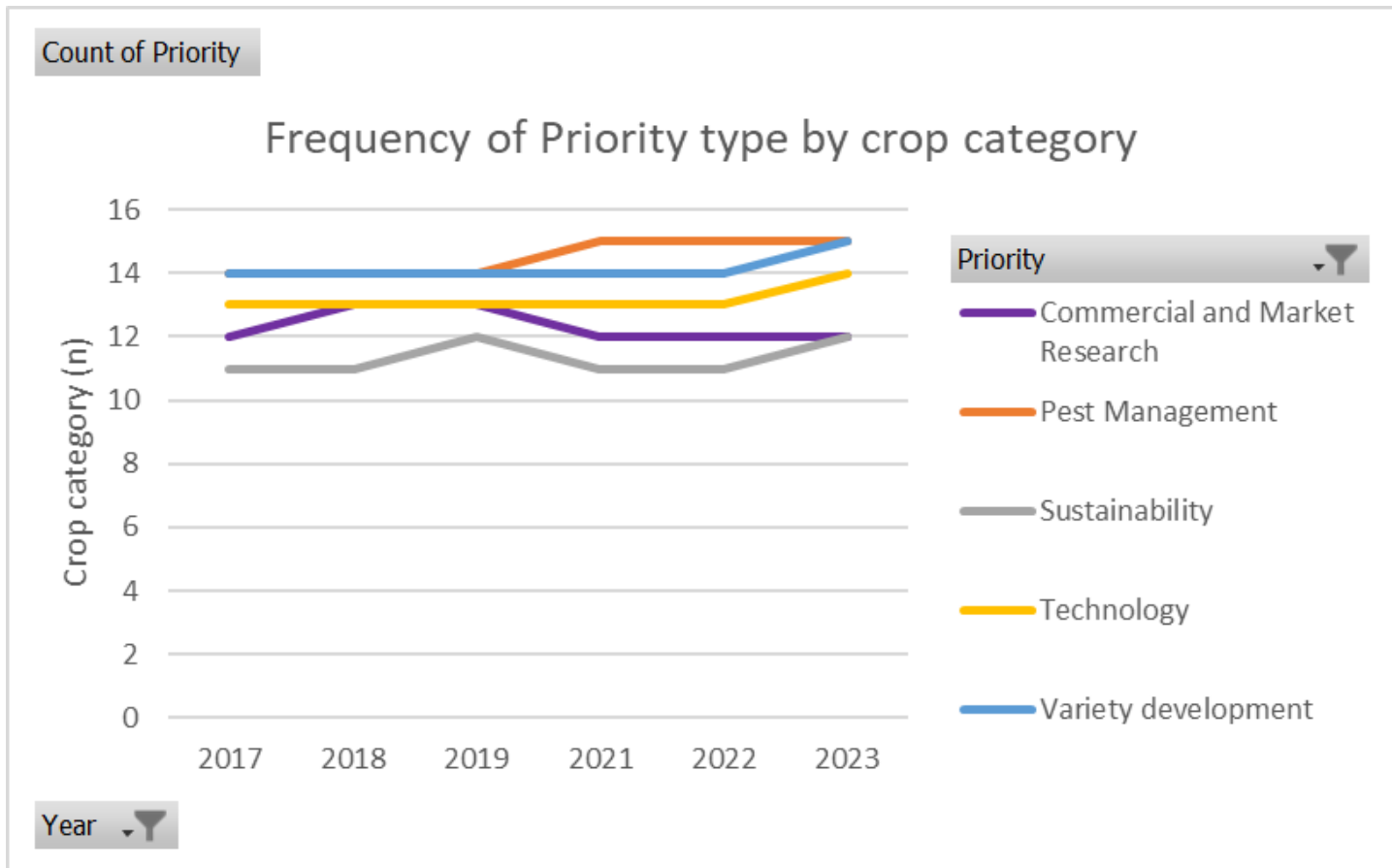
What we did

- Collated information from the Ontario Horticulture Research Priority Reports from 2017-2023.
- 5 common themes emerged in terms of research priority areas across all crop categories:
 - Commercial & Market research
 - Sustainability
 - Technology
 - Variety Development
 - Pest management



Priorities across crop categories

5 main priority areas identified



Consumer & market research

Across crop categories





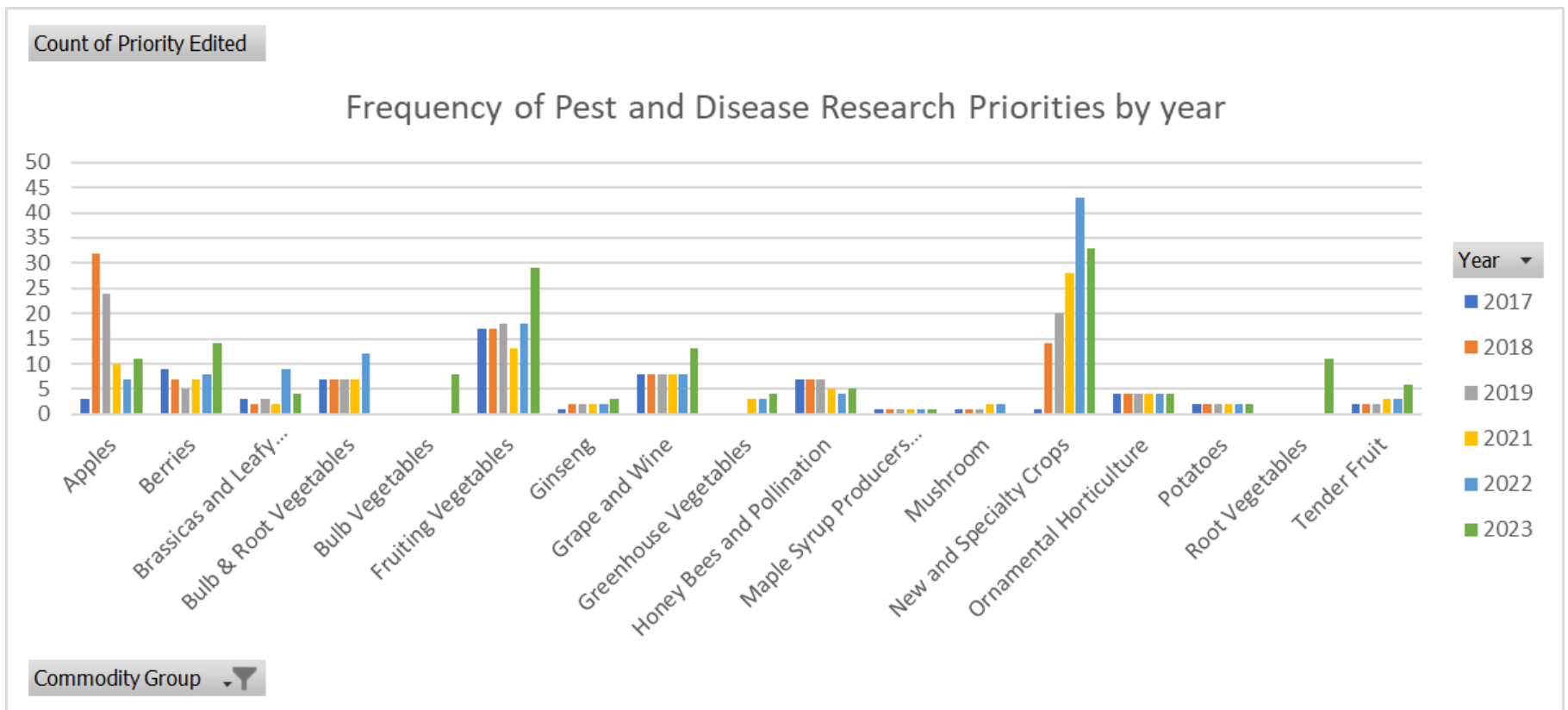
Consumer & market research

By 2023 12/16 commodity groups have at least one consumer & market research priority

- Two commodity groups never have a consumer & market research priority
- Market Research (7/16 commodity groups in 2023)
 - Market development
 - Analysis of value chains
 - Economic analysis
- Consumer Research (10/16 commodity groups in 2023)
 - Consumer trends
 - Preference (including variety preference)
 - Sensory research
- Knowledge transfer (3/16 commodity groups in 2023)
 - Barriers to adoption
 - Information dissemination

Pest and disease management

By crop category



Pest & disease management

By 2023 15/16 commodity groups have a pest management goal.

- Every commodity group has had a pest management goal at one point over the past seven years.

Over 150 unique pests and diseases were mentioned as research priorities by commodity groups.

Some overlap exists in terms of pests and diseases between commodity groups.

The most common are:

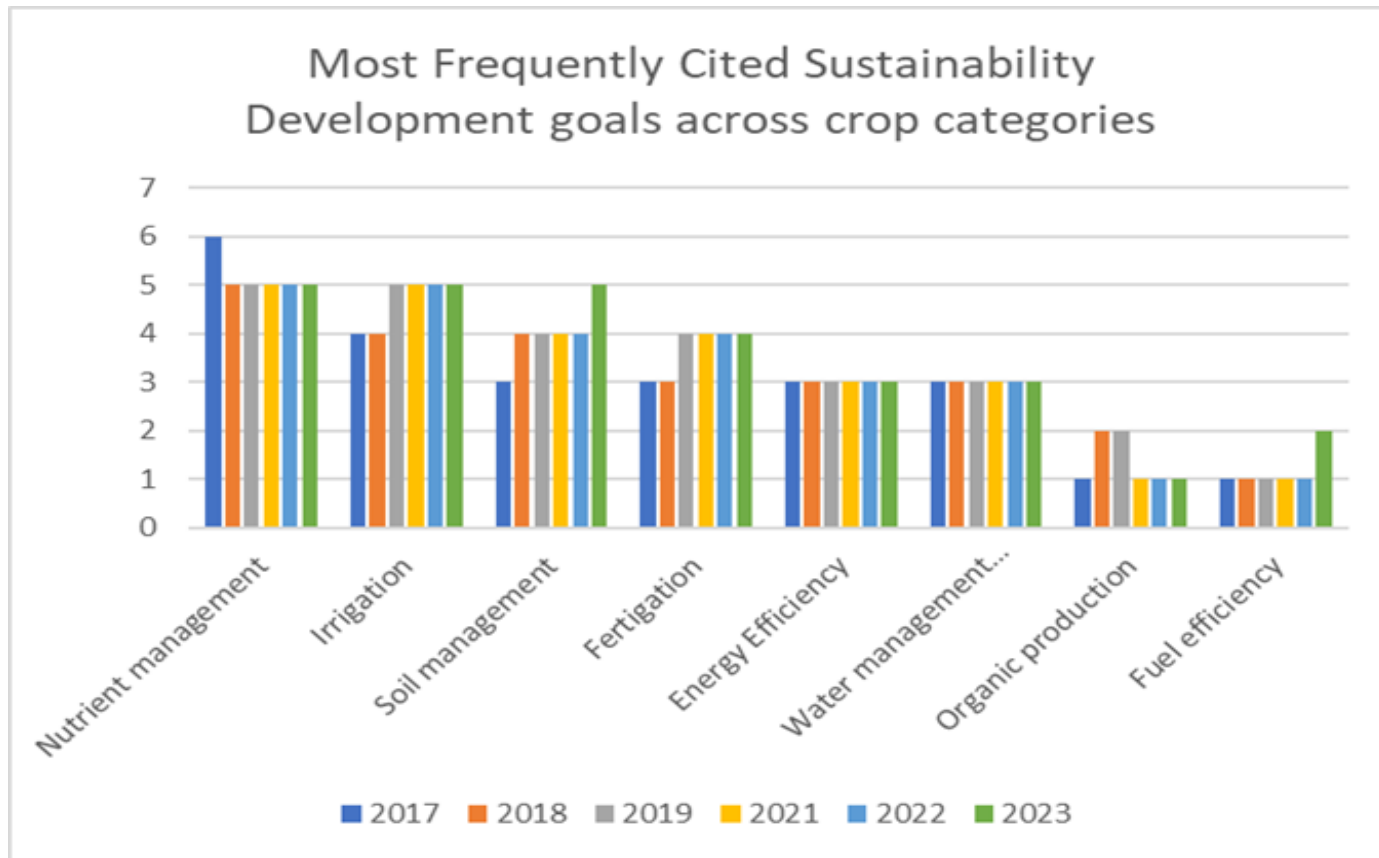
- Aphids & rot (soft, sour, root etc.) were the most common shared research priorities (7/16 priority groups)
- Brown marmorated stink bug, spotted wing drosophila & powdery mildew were the second most common (4/16 commodity groups)



Sustainability

Across crop categories

- All sustainability priorities related to on-farm practices



Sustainability

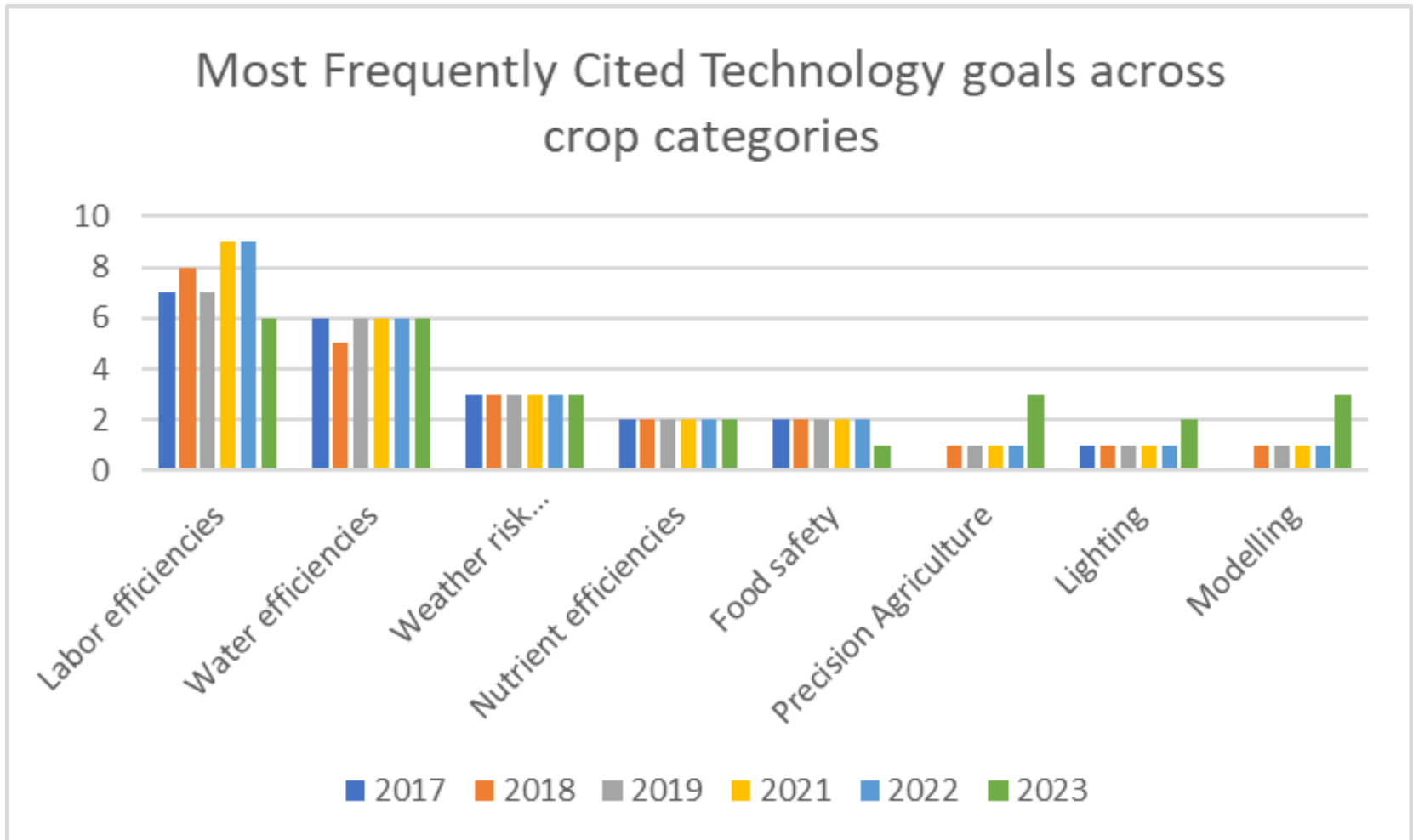
By 2023, 12/16 commodity groups had at least one goal relating to sustainability.

- Three commodity groups have never had a sustainability goal.
- Goals were mainly related to on-farm practices with the majority focused on fertilizer, soil and water management practices.
- While not one of the top cited priorities, reducing greenhouse gases in terms of carbon sequestration & emission reduction was mentioned by 3 commodity groups. However, 2/3 dropped this goal by 2023.
 - In 2023 one commodity group added the goal of lifecycle analysis to determine their emissions baseline.



Technology

Across crop categories



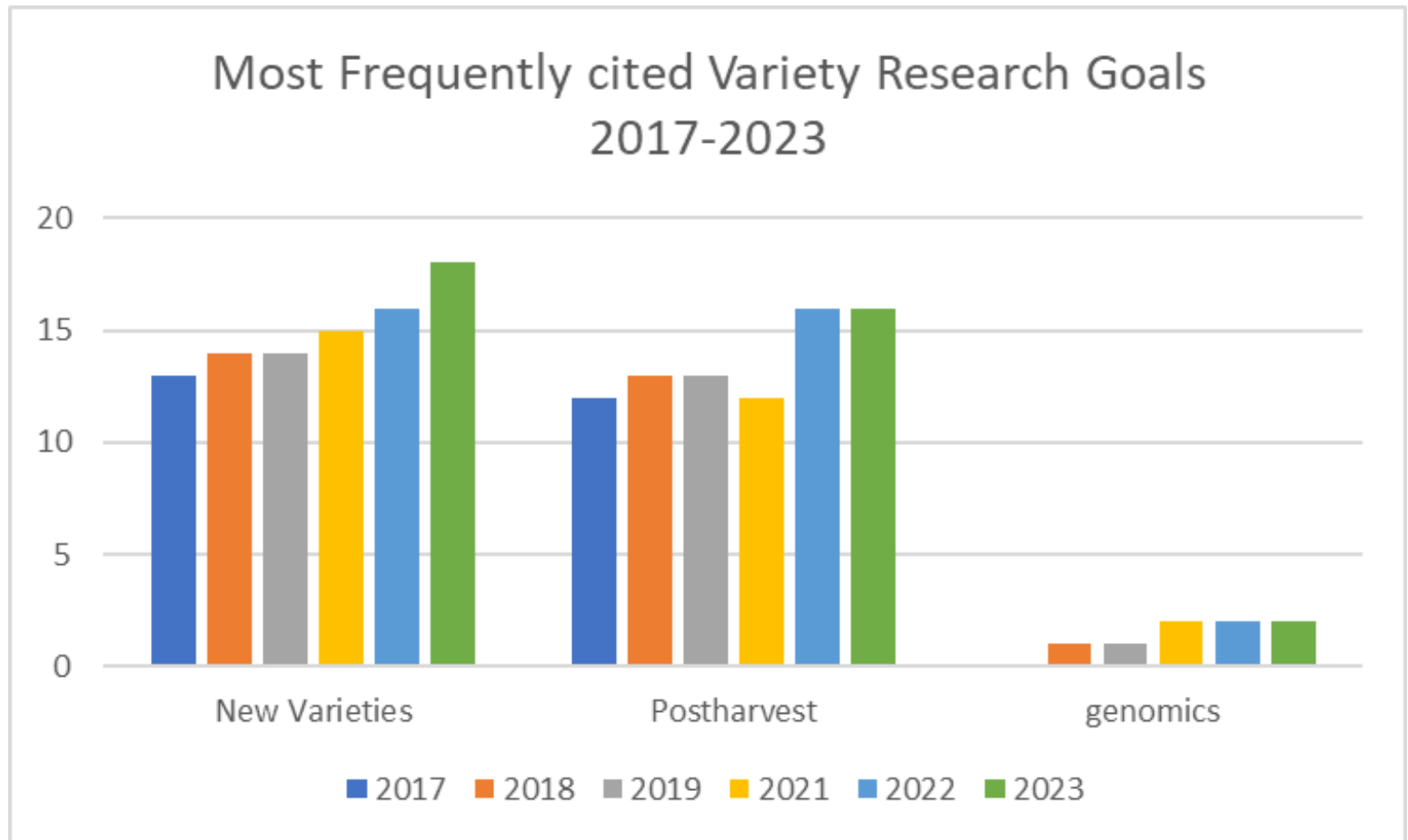
Technology

By 2023 14/16 commodity groups have a technology goal.

- Two commodity groups never have a technology goal.
- Shift away from labour efficiency in 2023, with three commodity groups dropping it as a goal.
- Increased focus on precision agriculture, lighting and data modelling.
 - In the case of precision agriculture & modelling this goal went from non-existent in 2017 to being adopted by three commodity groups in 2023. Lighting went from one commodity group in 2017 to two in 2023.



Variety development



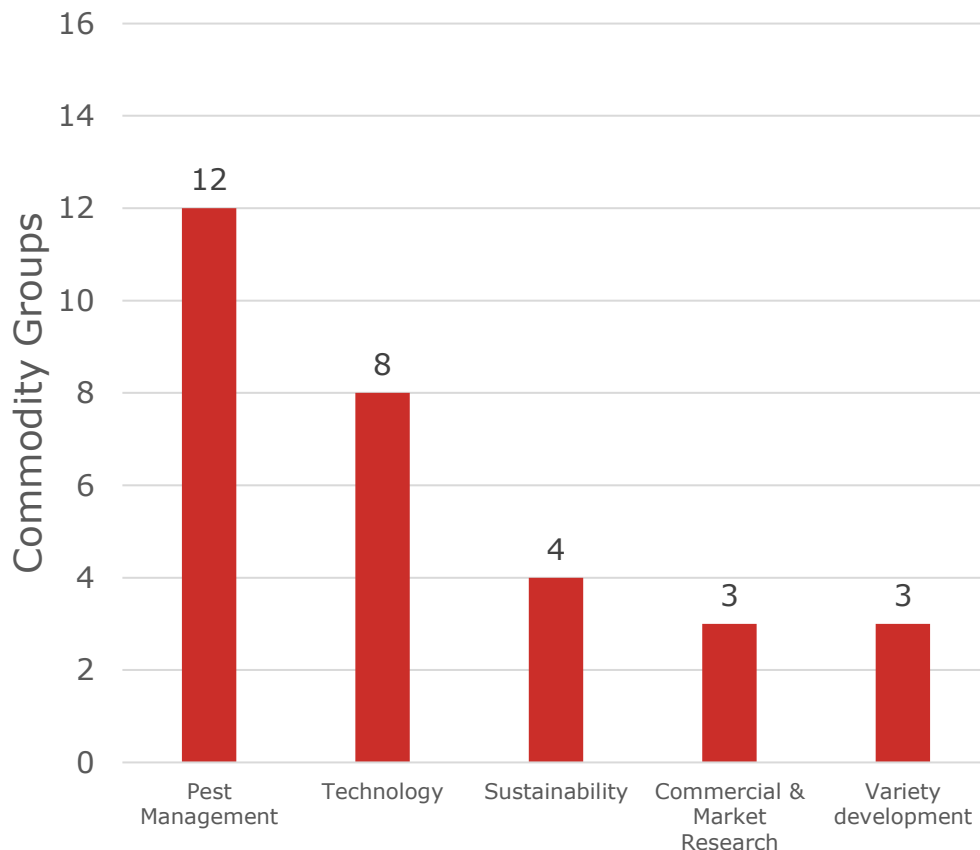


Variety Development

- By 2023, 15/16 commodity groups have at least one variety development goal.
 - Only one commodity group never has a variety development goal.
- Top reason for needing new varieties is adaptation (11/16 commodity groups in 2023)
 - To Ontario
 - To Climate Change
 - Increased pest and disease resistance
- Postharvest (9/16 commodity groups in 2023)
 - Quality
 - Minimize loss

Overall Priority Changes

Commodity Groups with revised priorities since 2017 by theme



- Pest management was the most often updated priority.
- Commercial & variety development the least.
- 11 /16 commodity groups have not updated the majority of their priorities since 2017.

Revisions include two or more added priorities or one eliminated priority.
Does not include changes in priority level.



Next steps

2024-2025

- Industry consultation across all crop categories
- Gain insight on industry needs to support priority setting
- Defining industry priorities
- Begin new priority setting process

Thank you



vineland
RESEARCH & INNOVATION CENTRE

vinelandresearch.com



[@vinelandrsrch](https://twitter.com/vinelandrsrch)



[vineland-research-and-innovation-centre](https://www.linkedin.com/company/vineland-research-and-innovation-centre)



[VinelandComm](https://www.youtube.com/VinelandComm)