



### **Project Post-It Outline**

To achieve higher and more consistent yields on every field, growers need access to the best agronomic information and advice for each unique farm operation, based on the latest science. To do that, the Canola Council of Canada and our partners continue to make substantial investments in research that improve our ability to maximize the production from every canola seed planted, across every region and in every soil zone.

What innovations are missing in our industry? What questions do you want answered? What hypotheses do you want tested? What is holding us back?

At the 2018 Canola Discovery Forum, we asked attendees to help shape the future of the canola industry by participating in 'Project Post-It'. The instructions for participation are below, followed by the feedback from attendees.

1. Write a question, innovation gap or research priority on one of the post-it notes provided on your table (and identify if it's a gap, priority, challenge, etc.).
2. Place your post-it under the most appropriate pillar on one of the poster boards outside of this conference room. The poster boards are labelled with each of the 5 pillars that the Canola Council of Canada identified as key areas for yield improvement.
3. Repeat steps 1 & 2 as many times as you see necessary
4. The Crop Production & Innovation Team will use your feedback to start discussions, prioritize research and steward innovation.

The best way to meet the need for more canola supply is not substantially increasing canola acres. It is using science and innovation to get more from the acres we sow.

### **Project Post-It Feedback from CDF18 Attendees**

#### Integrated Pest Management:

1. Does low organic matter or soil moisture impact rate of clubroot spore degradation?
2. If liming acid soils is effective as a tool for managing clubroot, why is this practice not accessible to producers?
3. What happens if we lose neonicotinoids? Is there a plan, since seed treatments are a critical first line of defense?
4. Develop a predictive model for cutworms.



5. Prove that clubroot is not everywhere.
6. How do we drive PMRA to include cost / benefit analysis in their legislation?
7. How should blackleg resistance genes be managed? Short term versus long term variety rotation (Different resistance grouping every 2<sup>nd</sup> year? Or use same genetics until signing of increasing blackleg, then shift to different resistance grouping?)
8. Where there may be the risk of insect loss from neonicotinoids, do other insects fill the space?
9. What's the relationship between flea beetle damage and blackleg disease severity?
10. Managing the spread of verticillium during harvest.
11. Develop a quick in field test to differentiate between verticillium stripe and blackleg.
12. When is the correct time to deploy CR resistant varieties? Does early deployment cause potential pathotype selection?
13. Verticillium wilt (stripe) : proper identification and evaluation of losses from disease. Surprised to hear that 37% of PSI lab samples were misdiagnosed.
14. Are different pathogen populations able to flourish in specific environments? Function of suppressive soil, for instance.
15. Critical period of weed control.
16. Oomycete diseases are increasing in importance in our cropping systems. clubroot, aphanomyces, phytophthora, pythium, etc. We need to focus on management strategies for the whole pathogen group, not just focus on clubroot.

#### Genetics:

1. Agronomic solutions to clubroot. Resistance is futile.
2. Verticillium stripe resistance.
3. Survey grower understanding and management strategies for resistance management (blackleg and clubroot).
4. Publicly identify clubroot genetics so that growers and agronomists can rotate resistance genes. A simple class ID system is required.
5. Weeds
6. Weeds
7. Weeds
8. Weeds

#### Plant Establishment:

1. Annual provincial survey of canola establishment.



2. Look at changing mindset from “plant emergence” to “plant emergence awareness.” Ie. if you are targeting that, you must do this. Or; if you ended up with that, you will now have to do this.
3. How much is seedling mortality related to seed place nutrients. Can we drop mortality by 10% through fertilizer in side band versus seed row?
4. Herbicide carryover as an extension priority.
5. Flea beetle thresholds: we use scoring charts for sclerotinia risk. Why don't we use scoring risk factors to assemble practical thresholds?
6. Quantitatively assess indirect effects of uneven emergence and low plant stand on yield (eg, influence on pest and disease management). Important as there is often little or no direct effect.
7. Will canola avoid neonicotinoid ban? Do we need bee health research specific to getting ahead of this?
8. Small versus big seed for plant vigor.
9. Can we develop more precise seed placed phosphorous recommendations? 20 actual P2O5 is safe.
10. Will trend towards lower plant densities mean slower clubroot spore multiplication?

#### Harvest Management:

1. Promotion of yield loss monitoring and checking loss pans
2. Combine performance in straight cut canola
3. Model airflow dynamics in large bins

#### Fertility:

1. When and how will phosphorous be replaced with increasing yields, considering the concerns for stand establishment with seed row placed phosphorous?
2. Gap: Addressing micronutrients.
3. Challenge: Adoption of foliar fertilization.
4. What is the impact (yield, economic, environmental) of non-traditional fertilizer products such as foliar fertilizers, micronutrients, and enhanced efficiency products?
5. Develop a liquid lime product/practice for simple application.
6. Prove lime does anything.
7. Will broadcasting fertilizer products be considered as a sustainable practise into the future?
8. Addressing nutrient interactions.
9. Challenge: Adoption of liquid fertilizer.