

Changes in Crop Production and Implications for Research

Theme: *Sustainability*

Thursday July 22, 2021

9:00 AM to Noon (SK/AB Time)

- 9:00 AM Welcome
Amaethon Report Summary: Crop and Soil Management Cross Cutting Issues
Discussion
Guidance for sub-theme breakout discussions
- 9:45 AM Break
- 10:00 AM Sub-Theme Breakout Discussions on Cross Cutting Issues

Sub-Theme 1: Cropping Systems (Issues from Amaethon Report)

- Conservation Tillage: maintain the benefits, solve the problems.
- Impact of increased tillage on soil quality.
- Impacts on soil microbes and nutrient availability.
- Enhancing soil quality and health
- Technology and knowledge transfer and uptake - New models for knowledge and technology transfer?
- Reduction in pesticides - Cultural management practices, targeted spraying.
- Alternatives to pesticides - RNAi technology and the replacement of existing technologies (e.g application of glyphosate).
- Cover crops/Intercrops - Intercropping and cover crops. Most profitable crop combinations for intercropping not well understood and crops most suitable for land cover.
- Regenerative Agriculture and Profitability: What research is needed to document the benefits of different crop management practices?
Defining a system of regenerative agriculture and its impact on soil and water quality and profitability.

Sub-Theme 2: Diversified Crops (Issues from Amaethon Report)

- Small Acreage Crops. Improve the profitability of minor acreage crops (< 2 million acres). Areas of adaptation
- New winter crops: durum/canola/peas



Sub-Theme 3: Climate Change (Issues from Amaethon Report)

- Surveillance - changing pathotypes, areas of adaptation due to climate change
- Abiotic stresses - impacts of climate change, a holistic, multi-disciplinary integrated approach using agronomy and breeding to adapt to changing environments of severe weather.
- Assessment of Soil C capture in cropping systems: Rapid methods to assess soil C capture under different crops.
- Reducing greenhouse gas emissions
- Weather forecasting - improving seasonal effective precipitation forecasting and daily forecasting for improved pesticide applications and nutrient management

Noon Sub-Theme discussions complete. Thank you!

Pre-registration is required. **The deadline to register is July 12, 2021, at Noon CST.** Each breakout group will have a moderator and recorder. We hope to accommodate all registrants but reserve the right to limit participation if registration exceeds the capacity of our breakout groups. Please consider volunteering to help with the breakout groups.

Registration link: <https://forms.gle/t51pDY6t39attmx78>