Breeding scheme optimization

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Where breeding scheme optimization fits?

- Encourage formalization of the breeding process.
- Help formalize breeding schemes.
- Design crossing, evaluation, selection strategies.
- Link to pertinent modules.
Philosophy of breeding scheme optimization

Population improvement philosophy

Features
1. Focus on parent selection as early as possible (L)
2. Products are a spin off
3. Moderate size (i)
4. TPE covered early (r)
5. GS focused in recycling

Product development philosophy

Features
1. Focus on product selection as accurate as possible (i)
2. Parents are a spin off
3. Big size (i)
4. TPE covered until PD (r)
5. GS focused in skipping stages
What this module offers partners?

• Direct Support
  – Pipeline formalization
  – Opportunity assessment of strategy
  – Simulation support for proper adoption of technology/strategies
  – Retrospective analyses

• Capacity building
  – Forums for sharing ideas (Community of practice)
  – Workshops/trainings
  – “How to” manuals
Achievements 2020: Direct support

- Formalizing pipelines helps programs addressing structural changes.
Achievements 2020: Direct support

- Simulations help answer important questions.

Heterosis

GS implementation

Recycling strategy

Etc.
Achievements 2020: Direct support

- Retrospective analysis help improve decision making.
Achievements 2020: Capacity building

- Training on continuous improvement methods applied to breeding scheme design.
Achievements 2020: Capacity building

• Knowledge transfer motivates adoption.

CoP meetings
Challenges from 2020

• Critical mass of M2 team to attend the # of pipelines
• Lack of culture of data usage in some programs
• Tradition is difficult to beat
• Population improvement vs product development philosophy
• Definition of market segments and targets in progress
What to expect in 2021?

• Shared services
  – Simulation software, GUls,

• Direct support:
  – Team expansion for greater 1:1 support

• Capacity building:
  – New trainings (Breeding scheme design)