

Meeting the Challenges

Crop Advancement Meeting Guidelines

- 1) **Products & Elite Germplasm**
- 2) **Traits/Donors (Breeding Program)**
- 3) **Program Assessment (Population Improvement)**

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Advancement Meeting Role Play

EiB O₃

Objective:

- Demonstrate highlights of an advancement meeting in practice to get feedback towards a common understanding

Output

- Feedback from this session will be used to make a set of common guidelines for advancement meetings

Outcome

- Breeding program leaders will develop a plan for sponsoring and leading change, including how to implement their own advancement meeting based on best practices.



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Advancement Meeting Components and Participants

Meeting Components

1. Advancement of Products/Germplasm
2. Advancement of Traits/Donors
3. Breeding Program Assessments

Key Participants (CORE Team)

- Management: DDGR or Head of Breeding
- Design: Product Manager or Lead of Cross-Function Design Team
- Engineers: Breeder, Traits Lead
- Manufacturing: Operations Lead, Seed Production

Other Potential Participants (Extended Team)

- Product Design Team: Gender specialist, Socio-economist
- Technical Design Team: National Program Breeder, Phenotyping experts, Biometrician
- Financial/Budget Expertise
- Communication Experts



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High Performers Use RACI

Responsible // Does (or manages) the work

Accountable // Ultimately accountable (Yes/No/Veto).
Responsible for securing resources and organization

Consulted // Provides feedback and contributes to the activity

Informed // Needs to know of the decision or action

R	A	C	I	Director General
R	A	C	I	Funders
R	A	C	I	Head of Breeding (or DDGR)
R	A	C	I	Product manager (or design team lead)
R	A	C	I	Breeding team lead
R	A	C	I	Biometrics lead or quantitative geneticist
R	A	C	I	Traits lead
R	A	C	I	Operations / manufacturing specialist
R	A	C	I	Seed systems specialist



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Key points for this role-play

- We will go over three areas of an advancement process (products & elite germplasm; breeding program assessment & trait exploration/donation assessment)
- These areas will be different acts, divided into scenes
- Focus on the Message / **Don't Get Hung-Up on Definitions** – we lack a common dictionary!
- The advancement meeting we present will likely be the culmination of several meetings in practice
- The goal is to create guidelines **that work for you**

Advancement Meeting Assumptions

- Centers will build their own advancement meeting built on their definitions
- Global/Regional Arena
 - Products or Elite Germplasm (Regional)
 - Traits or Donor For Breeding Program (Global)
 - Program Assessments (Local)
- This is just a general example (strategic mediocrity!) to identify key features to develop more detailed meetings in practice





Advancement Meeting 1 (Products & Elite Germplasm)



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Advancement Meeting 1

High Level Process Flow (Products & Elite Germplasm)

1. Management: kick-off, metrics and action item review
2. Product manager: target setting
3. Engineering: breeding program strategy and product nominations*
4. Management: cross functional decision team to judge strength of nomination
5. Manufacturing: functional and efficiency reviews (FERS)
6. Product manager: next steps strategies
7. Management: breeding focused meeting summary



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Advancement Meeting 1

High Level Process Flow (Products & Elite Germplasm) Scene #1 of 7

Character: Head of Breeding or DDGR (Management)

Topics of the scene: Kick-Off, Metrics and Action Item Review

Pre-meeting:

1. Meeting initiation (date)
2. Invitation to core & extend team members
3. Establishes supportive meetings to the advancement meeting

Meeting:

1. Opening remarks & set meeting expectations
2. Action item review (from last advancement meeting)
3. Metrics acknowledgement
4. Create desire for the process and helps move others through the change curve



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Advancement Meeting 1

High Level Process Flow (Products & Elite Germplasm)

Scene #2 of 7

Character: Product Manager (Design)

Topics: Target Setting

Pre-meeting:

1. Conducts market analysis from a poverty alleviation perspective
 - Assesses segment and set priorities with crop/center R&D management
2. Conducts product design meeting to create the product profile
3. Conducts portfolio rationalization (prioritization)
4. Sets product advancement metrics (stage & gate with breeding community)

Meeting:

1. Communicates prioritizes targets (market segments and TPP)
2. *Review of past product impact (autopsy)*
3. *Sets product or elite germplasm advancement metrics (stage & gate system)*
4. Proposes breeding programs targets
5. Present product profile



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Product Manager Presentation



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Linkage to Pillar A

Defining breeding targets and objectives

Vision: All breeding is oriented to development of products of maximum impact

1.achieve rate of genetic gain of at least twice that of pre-2019 and at least 1% per annum
2. ... activities oriented to the development of products that will be adopted by growers
3. ...clear understanding of for whom and what you're breeding
4.high quality product profiles and that it is clear who those products profiles are serving
5. Distinct germplasm pools and breeding schemes.....

Trait Advancement Meeting

Product Manager

- Product Design Meeting: May, 2019

- Product Design Team

Breeder (CG)	Gender Specialist
Breeder (National)	Miller
Farm Advisor	Seed System
Farm Organization	Value Chain

- Trait fore-sighting assessment

Trait Family	Trait	Trait Value	Task	Trait Inheritance
Stress Tolerance	Drought Resistance	Critical	Discovery	Unknown
Insect Tolerance	Cereal leaf beetle	Important	Deployment	Oligogenic
Stress Tolerance	Salinity Tolerance	Important	Deployment	Oligogenic
Fungal Resistance	Blast Resistance	Important	Deployment	Single Gene

- Initial Technical & Capability Assessment (Trait Specialist)

Trait Family	Trait	Phenotyping	Markers	Sources
Stress Tolerance	Drought Resistance	Poor	None	Gene Bank (Unknown)
Insect Tolerance	Cereal leaf beetle	Field Screen (Average)	Reliable	GH376, H36
Stress Tolerance	Salinity Tolerance	Field Screen (Average)	Unreliable	14356, 18561
Fungal Resistance	Blast Resistance	GrnHouse Screen	Yes	BR 12

- Initial Budget: 200 K/Year To Launch New Trait Projects



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Product/Elite Germplasm Advancement Meeting

Year #1 - Scene 2 – Product Manager

Market Segment Assessment

Kumquat Market Segment	TPE	Region	Gross Production Value	Value Share (% VS)	VS weighted by Country w/in Region		Farm Economic Return Index*	Under Nourished Children	Pop. at Risk	Weighted Envir. Resilience Score*	Gender/Youth Index Score*
					Poverty Count (%)	Poverty Gap (%)		Share of Total (%)	Share of Total (%)		
Industrial	Irrigated	Asia (NE)	4,028	1.4	0.34	0.16	4.5	2.2	1.9	2.1	4.8
Local Consump.	Rainfed, Highland, Low Input	SSA (All)	31,314	8.8	8.22	8.83	7.6	7.4	6.4	6.3	6.7
Local Consump.	Rainfed, Lowland, Low Input	SSA (West)	18,236	5.2	11.80	17.67	12.3	9.3	8.0	9.8	6.2
Local Consump.	Rainfed Highlands	Asia (South)	8,322	2.6	1.7	1.7	5.7	4.5	2.7	3.6	7.2
Local Consump.	Rainfed Lowlands	Asia (South)	6,174.8	6.0	1.0	0.9	4.1	5.4	2.3	2.9	6.0
Export	Irrigated	Asia (S)	8,588	2.4	2.68	3.10	4.3	8.5	5.5	3.0	4.8

- Sub-Saharan Africa (SSA) is a strategic area of development of the CGIAR Center w/ strong relationships with the National Partners
- All market components are aligned with needs and funders interest
- Our breeding teams strength are aligned with success



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Kumquat

Definitions of the traits and economic values

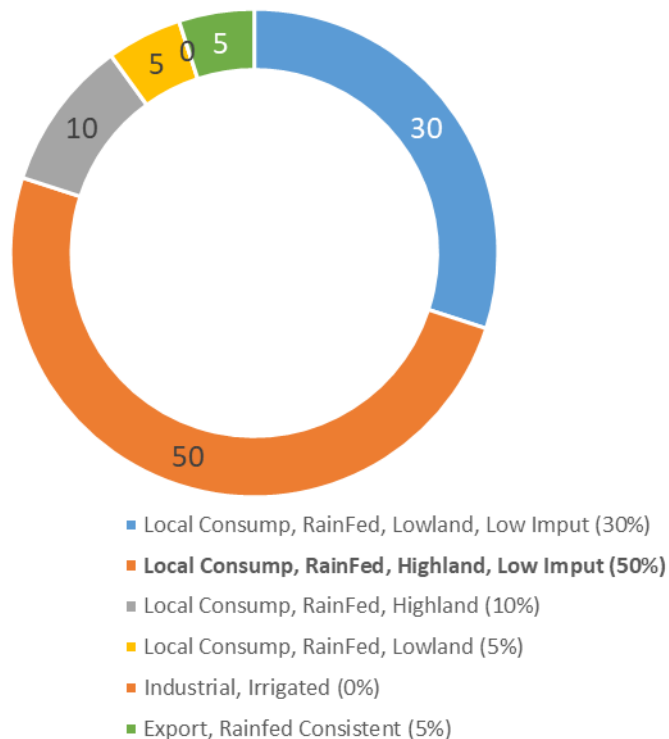
Trait	Most common unit of change in the market	Desired direction of change	Threshold performance	Very good performance (best in market)	Economic trait weighting (US\$/ trait unit) (smallholder female)	Economic trait weighting (US\$/ trait unit) (smallholder male)	Economic trait weighting (US\$/ trait unit) (commercial)
Citric canker resistance	Score 1 to 9	Lower	<2	1	\$1.45/ score	\$1.45/ score	\$1.95/ score
Spherical fruit shape	Ratio (polar: equatorial diameter)	Intermediate	1.3:1	1.2:1	\$0.45/ 0.1 increase equatorial diameter	\$0.26/ 0.1 increase equatorial diameter	\$0.93/ 0.1 increase equatorial diameter
Spine number	Score 1 to 9	Lower	<2	1	\$3.50/ score	\$2.25/ score	\$1.84/ score
Yield under low water	Tonnes/ Ha	Higher	>3T/ Ha	4.5T/ Ha	\$6.60/ tonne	\$7.31/ tonne	\$10.18/ tonne
Scab resistance	Score 1 to 9	Lower	<3	1	\$1.85/ score	\$1.58/ score	\$2.27/ score
Set under high night temps	% flow drop at >32 degrees	Lower	<10% drop	5%	\$0.50/ %	\$0.77/ %	\$0.83/ %
Antracnose resistance	Score 1 to 9	Lower	<4	2	\$2.20/ score	\$1.95/ score	\$1.85/ score
Mechanical harvest	% field yield recovery	Higher	>70%	85%	\$4.75/ tonne	\$5.50/ tonne	\$8.35/ tonne
Mealybug tolerance	Score 1 to 9	Lower	<2	1	\$3.50/ score	\$1.84/ score	\$2.24/ score
Stem-end rot	% loss in storage	Lower	<10%	5%	\$1.10/ %	\$0.95/ %	\$0.35/ %
Day to maturity	Days	Lower	<120 days	100 days	\$1.97/ day	\$1.20/ day	\$1.54/ day

- A higher emphasis in yield traits by both men and commercial producers compared to women,
- More emphasis on quality traits like spine number (women handle the product more), days to maturity (food needs), and stem rot (women see the rot more) by women compared to men,
- Generally a higher emphasis on Mealybug resistance by women and commercial producers compared to men.

Product/Elite Germplasm Advancement Meeting

Year #1 - Scene 2 – Product Manager

Proposed Resource Alignment



<i>Kumquat Market Segment</i>	<i>TPE</i>	<i>Breeding Target Priority</i>	<i>Breeding Resources (%)</i>
Industrial	Irrigated	#6	0
Local Consump.	Rainfed, Highland, Low Input	#2	30
Local Consump.	Rainfed, Lowland, Low Input	#1	50
Local Consump.	Rainfed Highlands	#3	10
Local Consump.	Rainfed Lowlands	#4	10
Export	Irrigated	#6	0

- Product Design Meeting: Jan-April, 2019
- Portfolio Rationalization Team

DDGR	Product Manager
Head of Breeding*	Socio-Economist
Kumquat Breeder	Gender Specialist
Regional Representatives	Stakeholder Relations



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Opportunities and Challenges

- Clear, simple expression of market needs
 - Targeted, prioritized market segments
 - Focused trait targets and clarity on balance
- Touching back to the assessment outcomes during decision meetings
- Clear decisions
- Managing inertia to change, modify, grant exceptions
- Identification, advancement and commercialization that meets the objectives of Pillar A



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Advancement Meeting 1

High Level Process Flow (Products & Elite Germplasm)

Scene #3 of 7

Character: Breeder of Record (Engineering)

Topics: Nominations and Communication of Strategy

Pre-meeting:

1. Collects and oversees the analyzes trial data for presentation at the advancement meeting. Conducts pre-meeting to present data
2. Assesses resources against market segments/TPP
3. Summarizes breeding strategy against the product design

Meeting:

1. Nominates products or germplasm against product profiles and stage & gate system
 - From most advanced material to least advanced material
2. Presents breeding strategy (product development)
3. Presents financial alignment with targets



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Breeder Nomination of Products

Products = all items produced by a breeding program that go to the next person (internal and external clients)



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Advancement Meeting 1

High Level Process Flow (Products & Elite Germplasm)

Scene #4 of 7

Character: decision team selected by head of breeding (management)

Topics: product advancement decision by targeted product profile

Pre-meeting:

1. Reviews advancement data (2 weeks in advance)

Meeting:

1. Assess nominations against the product profile
2. Make decisions: advance, hold, reject based against a pre-determined advancement metric



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Advancement Meeting 1

High Level Process Flow (Products & Elite Germplasm)

Scene #5 of 7

Character: Program Operations (Manufacturing)

Topics: Functional and Efficiency Reviews (FERS)

Pre-meeting:

1. Conduct assessment of standard costs
2. Create with Head of Breeding/Breeders KPI's to increase speed and reduced costs

Meeting:

1. Assess Operations - KPI actions
2. Demonstrates increased ROI against established metrics
3. Submits actions for next advancement meeting to drive speed or efficiency



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Advancement Meeting 1

High Level Process Flow (Products & Elite Germplasm)

Scene #6 of 7

Character: Product Manager (Design)

Topics: Provide Next Step Product Advancement Strategies

Pre-meeting:

1. Assess Seed Systems Strengths/Weaknesses
2. Assess Communication Resources and Crop/Center Strategy

Meeting:

1. Provide initial thoughts of the product/advanced germplasm deployment and communication strategy
2. Develop action items regarding product advancement



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Advancement Meeting 1

High Level Process Flow (Products & Elite Germplasm)

Scene #7 of 7

Character: Head of Breeding (Management)

Topics: breeding focused meeting summary

Meeting:

1. Provides a high-level assessment of the meeting, the meeting outcome and the advancement decisions
2. Identify GAPs and actions for next advancement meeting
3. Provide coaching and identify potential L&D opportunities, catalyze change for improvement



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Advancement Meeting 2

Breeding Program Assessment

(Population and Target Improvement)



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Advancement Meeting 2

Breeding Program Assessment

1. Management: Kick-Off, Action Item Review and Establishing Breeding Program Metrics
2. Engineering: presentation of the long-term and short-term trends, breeding program technical and operational strategy
3. Manufacturing: functional and efficiency reviews (FERS) related to breeder formula
4. Cross Functional Assessment Team: reviewing the breeding program achievement
5. Management: Advancement meeting summation, next step strategies, review of action items



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Advancement Meeting

Flow of Meeting: Breeding Program Assessment Scene #1 of 5

Character: Head of Breeding or DDGR (Management)

Topics of the scene: Kick-Off, Action Item Review and Establishing Breeding Program Metrics

Pre-meeting:

1. Meeting Initiation (Date)
2. Extends Invitation to Core & Extend Team Members
3. Establishes Supportive Pre-Meetings

Meeting:

1. Opening Remarks & Sets Meeting Expectations
2. Action Item Review (From Last Meeting)
3. Reviews Program Metrics Developed in Pre-Meetings

Advancement Meeting

Flow of Meeting: Breeding Program Assessment Scene #2 of 5

Character: Breeder of Record (Engineering)

Topics: breeding program strategy and product nominations*

Pre-meeting:

1. Participate in the Pre-Meeting Metric Establishment meeting
2. Meets with design team to review updates to trait weights
3. Makes gap analysis to the breeding scheme development

Meeting:

1. Provide historical and annual assessments of breeding scheme metrics (eg. trait weights, genetic gains, genetic variance depletion, accuracy increase, selection intensity increase)
2. Proposes future changes to the Breeding Strategy that will assure increasing the rates of genetic gains and deliver products

Breeder's Program Assessment Goes Here



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Advancement Meeting

Flow of Meeting: Breeding Program Assessment Scene #3 of 5

Character: Program Operations (Manufacturing)

Topics: Functional and Efficiency Reviews (FERS)

Pre-meeting:

1. Standard Costs Summary
2. Action Items – Increased Speed/Reduced Costs based upon the breeder's equation.

Meeting:

1. Supports breeder to explain historical assessment of accuracy and selection intensity (metrics: accuracy of trials and number of genotypes)
2. Demonstrates increased ROI against Established Metrics (as metrics on speed, cost reductions or efficiencies)
3. Identify GAPS in achieving the objectives.
4. Submits Actions for Next Cycle



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Advancement Meeting

Flow of Meeting: Breeding Program Assessment Scene #4 of 5

Character: Decision Team Selected By Head of Breeding (Management)

Topics: Assessment and recommendations of the breeding schemes

Pre-meeting:

1. Development of Portfolio Metrics
2. Development of Metrics of Advancement
3. Selection of an Objective Decision Team
4. Review of Trialing Data

Meeting:

1. Recommendation for Improvement of Breeding Schemes
2. Make decisions on investments for new scheme



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Advancement Meeting

Flow of Meeting: Breeding Program Assessment Scene #5 of 5

Character: Head of Breeding or DDGR (Management)

Topics of the scene: Advancement meeting summation, next step strategies, review of action items

Meeting:

1. Summarize the meeting highlights with a validation of the metrics
2. Identify GAPs and actions for next advancement meeting
3. Provide coaching and identify potential L&D opportunities, catalyze change for improvement



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Advancement Meeting (Traits/ Elite Donors To Breeding)



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Advancement Meeting 3

High Level Process Flow (Traits/Donors)

1. Management: Kick-Off, Metrics and Action Item Review
2. Product Manager: Trait Targets Review, Trait Portfolio Review, Economic Assessments,
3. Engineering: Nominations of traits (Stage & Gate 1-6)
4. Manufacturing: Functional and Efficiency Reviews (FERS), Improvements in Trait Deployment Update into Donor Lines for Breeding
5. Decision Team: Nomination Verdict
6. Product and/or Breeding Management: Next Step Strategies, Action Items and Meeting Summary



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Advancement Meeting

High Level Process Flow (Traits/Donors)

Scene #1 of 6

Character: Head of Breeding or DDGR (Management)

Topics: Kick-Off, Metrics Review and Action Item Review

Pre-meeting:

1. Initiate the pre-requisite meetings linked to the relevant advancement meeting for traits
 - Metrics to advance traits or breeding program donors is validated
2. Establish advancement meeting and invite core and extended team members

Meeting:

1. Initiate the meeting providing objectives, outcome and output.
2. Review action items if available
3. Communicate metrics



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Advancement Meeting

High Level Process Flow (Traits/Donors)

Scene #2 of 6

Character: Product Manager (Design)

Topics: Trait Target Review

Pre-meeting:

1. Sponsor/conduct product design meeting to foresight market trends to identify future trait needs.
2. Assess economic trait value of traits within the marketplace

Meeting:

1. Review trait releases and breeding program usage
2. Summarize trait targets for future discovery/deployment
3. Communicate Economic Traits

Trait Advancement Meeting

Product Manager

- Product Design Meeting: May, 2019

- Product Design Team

Breeder (CG)	Gender Specialist
Breeder (National)	Miller
Farm Advisor	Seed System
Farm Organization	Value Chain

- Trait fore-sighting assessment

Trait Family	Trait	Trait Value	Task	Trait Inheritance
Stress Tolerance	Drought Resistance	Critical	Discovery	Unknown
Insect Tolerance	Cereal leaf beetle	Important	Deployment	Oligogenic
Stress Tolerance	Salinity Tolerance	Important	Deployment	Oligogenic
Fungal Resistance	Blast Resistance	Important	Deployment	Single Gene

- Initial Technical & Capability Assessment (Trait Specialist)

Trait Family	Trait	Phenotyping	Markers	Sources
Stress Tolerance	Drought Resistance	Poor	None	Gene Bank (Unknown)
Insect Tolerance	Cereal leaf beetle	Field Screen (Average)	Reliable	GH376, H36
Stress Tolerance	Salinity Tolerance	Field Screen (Average)	Unreliable	14356, 18561
Fungal Resistance	Blast Resistance	GrnHouse Screen	Yes	BR 12

- Initial Budget: 200 K/Year To Launch New Trait Projects



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Kumquat

Definitions of the traits and economic values

Trait	Most common unit of change in the market	Desired direction of change	Threshold performance	Very good performance (best in market)	Economic trait weighting (US\$/ trait unit) (smallholder female)	Economic trait weighting (US\$/ trait unit) (smallholder male)	Economic trait weighting (US\$/ trait unit) (commercial)
Citric canker resistance	Score 1 to 9	Lower	<2	1	\$1.45/ score	\$1.45/ score	\$1.95/ score
Spherical fruit shape	Ratio (polar: equatorial diameter)	Intermediate	1.3:1	1.2:1	\$0.45/ 0.1 increase equatorial diameter	\$0.26/ 0.1 increase equatorial diameter	\$0.93/ 0.1 increase equatorial diameter
Spine number	Score 1 to 9	Lower	<2	1	\$3.50/ score	\$2.25/ score	\$1.84/ score
Yield under low water	Tonnes/ Ha	Higher	>3T/ Ha	4.5T/ Ha	\$6.60/ tonne	\$7.31/ tonne	\$10.18/ tonne
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- A higher emphasis in yield traits by both men and commercial producers compared to women,
- More emphasis on quality traits like spine number (women handle the product more), days to maturity (food needs), and stem rot (women see the rot more) by women compared to men,
- Generally a higher emphasis on Mealybug resistance by women and commercial producers compared to men.

Trait Advancement Meeting

Year #1 - Scene 2 – Product Manager

- Product Design Meeting: May, 2019

- Product Design Team

Breeder (CG)	Gender Specialist
Breeder (National)	Miller
Farm Advisor	Seed System
Farm Organization	Value Chain

- Active Portfolio

Trait family	Trait	Trait Value	Loci	Markers	Frequency	Task
Market	FruitShape	Important	Unknown	None	Low	Discovery
Disease	fruitScab	Important	Validated	Accurate	Low	Deployment
Disease	CitricCanker	Critical	Unvalidated	Unreliable	Present	Marker design

- Initial Technical & Capability Assessment (Trait Specialist)

Trait family	Trait	Phenotyping	Sources
Market	FruitShape	Glasshouse (good)	GeneBank
Disease	fruitScab	Glasshouse (good)	id16005
Disease	CitricCanker	Field screen (average)	id16061

- Initial Budget: 50K/Year To Launch New Trait Projects



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Advancement Meeting

High Level Process Flow (Traits/Donors)

Scene #3 of 6

Character: Trait Lead (Engineering)

Topics: trait discovery program strategy and product nominations*

Pre-meeting:

1. Create a validated trait/donor stage & gate system to assess pipeline
2. Accumulate necessary data for advancement nominations
3. Awareness of future trait work recommendations




Meeting:

1. Review current portfolio of traits with stage & gate placement
2. Nominate traits for advancement
 - Discovery and deployment



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Advancement recommendation overview

Trait	Stage 1 Value	Stage 2 Donors	Stage 3 QTLs	Stage 4 Deployment	Stage 5 Validation	Stage 6 Utilisation
Fruit shape						
Citric canker						
Fruit scab						

Trait Advancement

Fruit shape: Stage 1 → 2

Active Portfolio

- Value: Important (by product manager, 20190901)
- Phenotyping: Good protocol
- **Donors**: Unknown
- **Loci**: Unknown

Recommendation: Proceed to trait development

Criterion	Description	Details	Pass/Fail
1	Demand evaluation	Demand for trait established by a product profile.	<input checked="" type="checkbox"/>
2	Trait essentially unavailable in existing elite germplasm.	Phenotypic variance for trait is low, and/or Current selection methods are inefficient or ineffective.	<input checked="" type="checkbox"/>
3	Funding available for development activities.	Funded grant is in place.	<input checked="" type="checkbox"/>



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Trait Advancement

Citric canker: Stage 4 → 3

Active Portfolio

- Value: Critical
- Phenotyping: Adequate
- **Loci**: Reported but poorly validated (Lin *et al.* 2015)
- **Markers**: Untested/Unreliable (SSR)

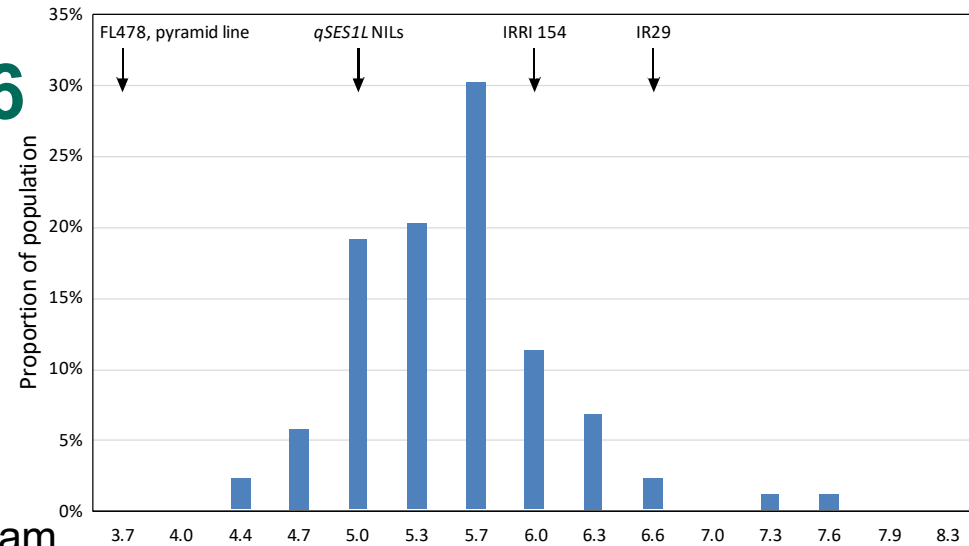
Recommendation: Demote to stage 3: Refine reported loci in BC1 populations with elite recipients.

Criterion	Description	Details	Pass/Fail
1	Genetic architecture determined across several elite genomic backgrounds	QTL mapping done over populations involving several elite recipient backgrounds. Loci must be: <ul style="list-style-type: none"> • Significant at $\alpha = 0.01$ after a minimum of 1000 permutations. • Effect seen across at least 4 distinct backgrounds. 	
2	If repeatable QTLs are identified, effect size, repeatability and interval size appropriately determined.	<ul style="list-style-type: none"> • Minimum $r^2 \geq 10\%$. • Interval size $< 1\text{Mb}$. • Absolute phenotypic effect is of biologically relevant magnitude. 	
3	Determination of advancement strategy	<ol style="list-style-type: none"> 1. If criteria 1 and 2 are satisfied, a significant portion of the genetic variation is oligogenic. Advanced to stage 4 - QTL Deployment. 2. If significant-effect QTLs are not identified, advanced to stage 4 - phenotypic recurrent selection. 	

Trait Advancement

Fruit scab: Stage 5 → 6

- Loci: Validated, Markers: Accurate
- Frequency in elite germplasm: Very low (0% surpassing check)
- **PVE**: 43% of donor value
- **NTD donor**: RPP 99.5% elite recipient, introgression <1cM



Recommendation: Adopt in breeding program

Criterion	Description	Details	Pass/Fail
1	Trait of interest unequivocally expressed.	Must be at the top of the yield trial for the target trait.	✓
2	Agronomic performance suitable.	Yield in top 50% of yield trials, or at least sufficiently high to justify its use as a parent in the breeding program.	✓
3	Pleiotropic effects	Effect on other agronomic parameters assessed and within acceptable range.	✓

Advancement Meeting

High Level Process Flow (Traits/Donors)

Scene #4 of 6

Character: Program Operations (Manufacturing)

Topics: Functional and Efficiency Reviews (FERS)

Pre-meeting:

1. Prepare Standardized Costs for the Trait Discovery and Deployment Process
2. Determine Areas of Improvement for Speed and Costs

Meeting:

1. Update Team on the Continuous Improvement of Operations Process of the Discovery and Deployment Process to Develop a Quality Product with Increased Speed and Reduced Costs.

Advancement Meeting

High Level Process Flow (Traits/Donors)

Scene #5 of 6

Character: Decision Team*

Topics: Nomination Verdict

Pre-meeting:

1. Review Pre-Meeting Documentation (2 Weeks in Advance)

Meeting:

1. Review the trait nominations and decide to advance, hold or reject

*Selected By Head of Breeding (Management)

Advancement Meeting

High Level Process Flow (Traits/Donors)

Scene #6 of 6

Character: Product Manager (Design) or Head of Breeding (Management)

Topics: next step strategies and meeting summary

Pre-meeting:

1. Review Pre-Meeting Documentation

Meeting:

1. Summarize Meeting Decisions & Approves Action Items
2. Consider Personal Objectives & Considers a Learning and Development Plan
3. Confirms Internal Breeder(s) Commitment To Use New Breeder Donor Lines
4. Business/Communication Strategy (Product Manager)



**Thank you for
your interest!**

