

Webinar: Design Elements for Gender-Responsive Breeding — starting points and unresolved issues.

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Topics

- Where are we coming from? Summarize conclusions from the Gender, Breeding and Genomics workshop held in Nairobi, Kenya in 2016
- Unresolved issues? Examine the evidence gap on gender differentiated trait preferences: why it exists and what needs to be done about it?

"Must-have" features of gender-responsive plant or animal breeding

Targeting

- •Define social target groups at national and regional scales in terms of gender, living standards and where they live in breeding mega-environments
- Use a sampling frame to collect representative data on social target groups' trait preferences

Priority setting

Characterize and prioritize desired traits for prototype products aimed at target group(s)

Trait values

 Define gendered trait values, determine whether these are heritable and assess genetic, economic and cultural trade-offs

Genomic

- Target crosses based on well-defined products for well-specified gender-disaggregated target groups in the associated breeding environments
- Develop varieties for these target groups using genomic selection to gain precision and accelerate the breeding process

selection

 Manage product advancement as a multidisciplinary team decision based on feedback from different sources, including representative, sex-disaggregated end-users

Feedback

Conclusion: What's missing?

Capacity for strategic assessment of (1) "Who are we breeding for?" and (2) "What is the economically, culturally and socially important demand for gender-differentiated traits and products that breeders can realistically develop?"

Review of evidence on gender differences in trait preferences

- Documentation of gender differences in trait preferences
- Methods used
- Patterns in gender-differentiated trait preferences (GDTPs)

Literature search: 'gender', 'farmer', 'woman' 'traits', 'plant breeding', 'preference', 'seed', 'selection' 1985-2016, Web of Science, EVFA, SOWIPORT, JSTORE, CAB, PRGA cases, dissertations. Of 300 studies reviewed, 39 explained rationale for GDTPs



Big Gaps

Deficit of evidence on gender-differentiated preferences relevant to breeding in

- Studies of agricultural marketing and demand
- Women's crops
- Roots, tubers and bananas
- West Asia and North Africa
- Most studies of traits preferences are one-off and not designed to provide broad geographical coverage or extrapolate generalizable conclusions to a well-defined population
- The vast majority of 300 studies reviewed did not investigate causal relationships between trait preferences and gender roles or norms

Findings: Some trait preferences are unique to women or men



Identified only by women

- Vigour
- Tall height for ease of harvest
- Adapted to diverse growing conditions
- Leafiness
- Storage life
- Ease of dehulling
- Quantity of useable flour
- Fuel quantity from stover
- Cooking time
- Taste
- Grain colour

Identified only by men

- Resistance to water logging
- Adapted to intercropping
- Yield/ha
- Suitability for local dish

Source: E. Weltzien, A. Christinck, F. Rattunde, J. Ashby

Findings: gender differences are not clearcut --Some trait preferences are shared but more important to women



Production traits more important to women:

- Earliness
- Ease of harvesting, and transport
- Grain traits
- Pest and disease resistance
- Multiple, successive harvests
- Requirements for weeding

Other post-harvest and food processing traits

E. Weltzien, A. Christinck, F. Rattunde, J. Ashby

Patterns

Men and women

- Farm same crop under similar conditions
 –trait preferences tend to be similar.
- Farm same crop under different conditions
- Farm same crop with different objectives
- Farm different crops ("women's crops vs. men's)
 - trait preferences tend to diverge.
- ****Preferences and patterns are not static

What's missing?



Capacity for strategic assessment of

- (1) "Who are we breeding for?" and
- (2) "What is the economically, culturally and socially important demand for gender-differentiated traits and products that breeders can realistically develop?"

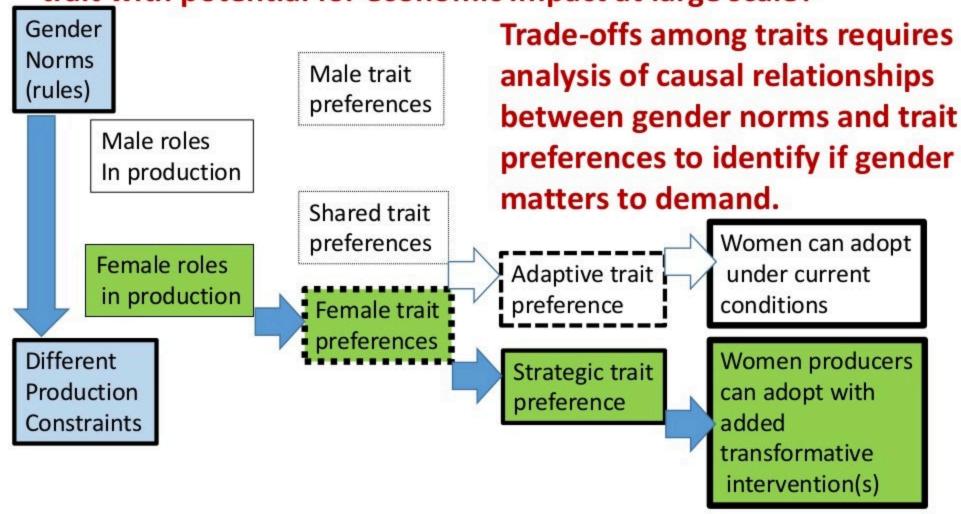
1. Who are we breeding for?

Who is the priority CGIAR target beneficiary (end user) for the breeding program?	Targeting Consumers	
Targeting producers	Poor consumers Men Women	Non-poor consumers Men Women
Non-poor producers Men Women	Breeding to improve low-cost staples (classic green revolution)	Not CGIAR Mission
Poor producers Men Women	? Unique female trait preferences	Breeding to improve competitiveness in high-value, export or boutique markets

Trait prioritization is not allied to well-defined targeting of the intended beneficiary group and their trait preference(s): generalizable at scale!

2. What's the (gendered) trait most in demand?

Breeders' question: what's the feasible, high priority gendered trait with potential for economic impact at large scale?



Next Steps: better targeting and trait prioritization



Progress towards genderresponsive breeding programs requires an improved evidence base

- with comprehensive geographical coverage
- representation of wellidentified target populations
- profiles of the gendered trait preferences associated with different gender roles and constraints

Challenge - next workshop



What kind of research is needed from social scientists and breeders to target well-defined beneficiary group(s) at scale

and identify where, how and for whom gender matters

in the demand for improved crops or animal breeds?





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