Workshop Results

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#CropBoosterP

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Workshop: Goals

- Gain an expert's understanding of
  - main challenges for the food and agriculture sector
  - crop boosting priorities
  - socio-economic and environmental impacts
  - other possible strategies that should be considered
- Advise European policy makers about technologically-possible and socially-acceptable crop improvement strategies

Workshop: Breakdown

Focus groups

Farm level	4
Agri-business	2
Consumer	3

Experts

Farm-level	16
Agri-business	11
Consumer	8

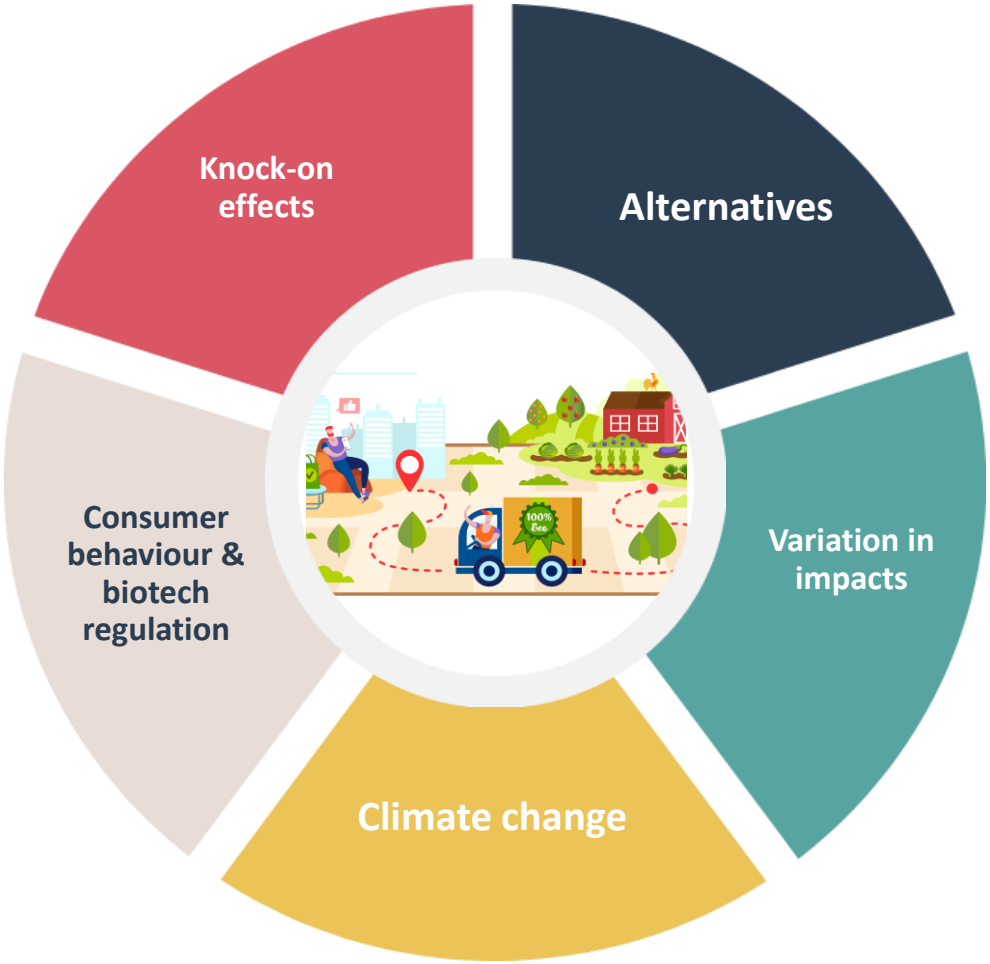
Workshops

Farm-level
(May 2020)

Agri-business
(May 2020)

Consumer
(June 2020)

Key themes


Knock-on effects
Alternatives
Consumer behaviour & biotech regulation
Variation in impacts
Climate change

Knock-on effects

- Experts raised concerns regarding trade-offs associated with crop boosting options such as altering the growing season, increasing the size of harvestable parts, and decreasing negative and toxic compounds

Knock-on effects

"…decreasing the negative and toxic compounds and elements. I would be extremely careful… need to remember that these negatives are there for a reason, which is about the natural preservation [against] some-kind-of pest or insect..."

– Agri-business expert

Knock-on effects

"I'm not excited about increasing the size of harvestable parts, and the reason being, increasing the size has negative impacts on quality or taste profile"

– Consumer

Alternatives

- Participants questioned whether the aims of particular CropBooster options were best met through crop improvements or some other type of intervention.

Alternatives

"I don't think any of these are important for human nutrition, because I don't think it's the plant's fault that we have malnutrition as a problem in Europe, be it lack of or too much. It is how we eat and what we choose to eat."

- Farm-level representative

Alternatives

"I think that urban agriculture is becoming very important right now for food security in European cities, and there's a huge movement in that. I think the aspects of urban agriculture in adapting crops to would be interesting."

– Consumer

Variation in impacts

- Concerns regarding geographical variation in impact of particular cropboosting options

Variation in impacts

"We have to keep in mind that different regions have different needs and different characteristics. When we talk about sustainability, we tend to use a general European concept that cannot be applied the same way in the northern, in the center or in the southern parts."

- Farmer-level expert

Variation in impacts

"… in Europe [nutrition] is not really the issue. So, I wonder if this will be much more relevant for Southeast Asia and African crops…"

– Plant breeder

Climate change

- The impact of climate change and
- the need for crop improvement options that respond to it

Climate change

"… is issues around climate change and making sure that future agricultural production practices are compatible with the concerns that climate change brings."

– Consumer

Climate change

"So the probably upcoming effects of climate change and the desertification of many places in the European Union. That will be something important to consider, very, very important."

- Farmer-level expert

Consumers and GM regulation

- A theme shared between agri-business and consumer group representatives was the regulation and consumer acceptance of biotechnology
- These were acknowledged to be a significant barrier to certain crop improvement strategies

Consumers and GM regulation

"…you think a range of breeding technologies… you think yes, that sounds really good. And when you dig deeper it's a genetic modification, there's going to be a lot of resistance from a consumer perspective to GM crops."

– Consumer

Consumers and GM regulation

"… it's also a big problem that if, again, coming back to these new kind of breeding technologies, if Europe is allowed to import these foods or products made from these foods, then our farmers just don't stand a chance, I think."

– Plant breeder

Summary

- Consider potential trade-offs
- Target local or regional crop improvement challenges
- Directly address the multiple challenges posed by climate change
- Target issues *best* addressed through crop improvement, rather than those for which competing alternatives exist
- Not to solely rely on biotechnology