

ARGUMENTS

PROS

- It is a precision tool that can be used in precision agriculture
- Speed up the breeding process
- Undesirable effects of conventional breeding can be eliminated (e.g. Linkage drag)
- Improves sustainability
- Decrease yield loss due to pests and diseases
- Increased food quality

BREEDING



- Organic farming principles differ across geographical areas and may not be applicable everywhere
- Concerns about problems such as overcoming of resistance by pests and pathogens (e.g. super weeds)

CONS

- Maintain biodiversity
- Combat climate change (e.g. drought resistant varieties)
- Save species

ENVIRONMENT



- Domination of certain varieties
- Increased mono-cropping may lead to habitat loss

- An effective tool to solve immediate crisis
- Sustainable
- Improves the toolbox of breeders
- Improvement of technique upon further research. (e.g. Cas 12,
- Platform for new innovations

TECHNIQUE



- Alternatives that are "less risky" desired
- To be careful in not harnessing the fundamental research too much for its applications
- Non-target effects
- Risks to environment

- Decrease fertilizer or pesticides costs benefitting farmers economy

MARKET DYNAMICS



- Regulation costs are high
- Corporate big companies may benefit
- Affect small companies
- Domination of few companies in the market
- Niche market may have an impact (e.g., Austrian organic farmers)

- A solution to the crucial problems of the society that need immediate actions (e.g. Gene drive)
- Help people suffering from food crisis due to pests, diseases or climate change

ETHICS



- People's belief system is not considered
- Concerns like, if human can alter nature

- Laws need to be updated
- Regulations that are more than 10 years old cannot be used for a novel technology

REGULATION & GOVERNANCE



- No intergovernmental organization/ rules to regulate gene-editing

REPRESENTATIVES:

- Scientists: Plant scientist, Agronomist, Biotechnologist.
- Organic farmer (Austria).
- Small business Owners.
- Companies: Syngenta and Bayer.
- Nature and Environment Federation (Netherlands)
- IUCN NL (International Union for Conservation of Nature)
- Dean of school of Bioethics.
- Others: Acumen IST, Plantum, ETC group (Action group on Erosion, Technology and Concentration), ANDES (Peru), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Re-Imagine Europa, policy advisors, business representatives, NGO (India), Bill & Melinda Gates foundation, Start-ups, Manager of Target Malaria



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