Mentimeter Quotes Mini Public Hohenheim

What is your academic background? (23 answers)

- 9 people: "Agriculture"
- 3 people: "Social Science"
- 7 people: "Economics"
- 2 people: "Technical Engineering"
- 2 people: "Other"

What is your cultural background? (24 answers)

- 1 person: "Belarusian"
- 1 person: "African"
- 1 person: "Latin"
- 1 person: "American"
- 1 person: "Czechoslovak"
- 1 person: "Native Hawaiian"
- 1 person: "Dane in Germany"
- 1 person: "Brazil"
- 1 person: "Chilean"
- 1 person: "Chinese"
- 1 person: "Latin American"
- 1 person: "Russian"
- 1 person: "Nigerian"
- 1 person: "Italian"
- 1 person: "Dutch"
- 1 person: "Arabic"
- 1 person: "Super Mexican"
- 1 person: "Bolivian"
- 1 person: "Latvian"
- 2 people: "European"
- 3 people: "German"

What is a robot for you? (22 answered, up to 3 answers possible)

- 1 time mentioned: "immature"

- 1 time mentioned: "servant"
- 1 time mentioned: "coming soon"
- 1 time mentioned: "efficiency"
- 1 time mentioned: "alienation"
- 1 time mentioned: "automatic"
- 1 time mentioned: "helper"
- 1 time mentioned: "friend"
- 1 time mentioned: "automation"
- 1 time mentioned: "naive"
- 1 time mentioned: "weapon"
- 1 time mentioned: "autonomous"
- 1 time mentioned: "fascination"
- 1 time mentioned: "r2d2"
- 1 time mentioned: "metal"
- 1 time mentioned: "help"
- 1 time mentioned: "inequality issues"
- 1 time mentioned: "c – 3po"
- 1 time mentioned: "tool to ease work"
- 1 time mentioned: "automatical"
- 1 time mentioned: "sensor"
- 1 time mentioned: "not human"
- 1 time mentioned: "hardware"
- 1 time mentioned: "tool"
- 1 time mentioned: "automated machine"
- 1 time mentioned: "Automatization"
- 1 time mentioned: "programmed"
- 2 times mentioned: "autonomous machine"
- 5 times mentioned: ai
- 3 times mentioned: device
- 3 times mentioned: future
- 6 times mentioned: machine
- 4 times mentioned: "technology"

Scales: On a scale from 0 to 5 how strongly do you disagree (0) or agree (5) with the following statements: (21 answers)

- Robots will help to increase productivity in agricultural production: 4,2
- With economic growth, small farms will benefit from new technology: 2,7

- With economic growth, large farms will benefit from new technology: 4,6
- Robots designed in the [Global] North will support small farms in the [Global] South: 2,6

How [do you think] does the implementation of agricultural robots affect productivity? (21 answers)

1. It depends on the context -we cannot compare the Americas with Northern Europe
2. It may not affect the shear yield itself but it may increase the amount of crops that a farmer brings home
3. Will for sure increase, at least in the large, established farms with money to spend. However, the productivity of small-scale farms may decrease due to disability to keep up with progress in economy
4. It can help increase productivity to a certain extent. But what happens when we, hypothetically, reach 100% optimization of production?
5. There is no definite answer – while yields for highly productive farms may increase the productivity for small farms might drop because of the high input in terms of financial investment.
6. In general, it could improve the productivity. In the context of developing countries specific aspects would need to be considered. Distribution, maintenance, knowledge of the use of the robots are key to guarantee the correct usage.
7. It depends on scale of farms. Large scale farmers would mainly increase flexibility and they would decrease inputs. Small scale farmers could rapidly increase their yields.
8. Be hindering possible failures, mistakes or misuse of appliciances of human labour that leads to losses, crop damage, etc.
9. Depends on definition (if yield only – not that much), for large farms most likely yes (if not, why would anyone invest)
10. Huge potential for highly mechsnized farming system. But what about rural poor farmers? Problems of access, lack of knowledge, maybe even no electricity available.
11. Dexterity, flexibility, speed, etc of robots is poor in unstructured enviroments and with highly variable tasks, so productivity will drop…
12. Proper implementation will probably increase yield per hectare
13. R&D in robotics should strive for productivity overall but it wouldn't work the same when farmers are not all equal in size and income, as well as with products. You`ll need as many different robots as agriculture task you seek to improve.
14. Productivity would increase in large-scale farmers specialized in cask-crops with reduced genetic and biophysical variability.
15. It could increase productivity in developed countries, but these technologies might face barriers in poor countries (e.g. Teaching farmers how to use them?)

16. I would expect productivity to grow, as one of the purposes to use robots is to use a land (scare resource) in a more smarter way. However, uncertainty factor is always there. For ex. Using robots will require educated people behind- otherwise…?
17. The robots for agricultural purpose will increase the productivity. In terms of removing, the advanced technology will be more efficient and accurate providing better condition for plants.
18. Productivity of industraized farm goes up.
19. It can increase productivity by reducing the impact of pests on crops, since robots have the capability of detecting pests before they attach a crop.
20. Productivity with robots have no definite answer. Productivity in labour – yes productivity in yield- maybe productivity in capital – maybe there is disparity between large and small farmers with the use of robot but there are opportunities with robots.
21. Will definitely increase, for lager farmers. Others issues as income inequality, workforce training etc. should be addressed.

How [do you think] will small farms be affected by the implementation of agricultural robots (20 answers)

1. If factory farms adopt robots, we´ll see the continued assimilation of small farms and a decline of small farmers (and thus crop diversity).
2. It could be that they benefit productivity-wise but depending on the robots price and how well it can be adapted to their needs. If the robot was one-function only it wouldn't work in a small farm where several tasks must be performed.
3. Internally the effect will be minimal. The external effect, however, will probably result in decrease the profit of the small farmer. Unless he has a specific market share, that is difficult to roboticize.
4. Implementation of robots in small-scale agriculture could threaten livelihood strategies based on diversification, as robots might increase the specialization level in only one or few crops/livestock.
5. The size of robots will have an impact on small farms because usually small farms are very small and in other instances not in one area, so robots would not work on very small farms.
6. The effect could go beyond the purely agricultural and economic aspects. Externalities might arise regarding cultural aspects, rural networks and even indigenous beliefs.
7. Farms in developed countries are more likely to benefit than small farms in developing countries.
8. Thanks to the decreased size of machinery (robot), the productivity will increase since the use of huge size of machinery was not available for small farms.
9. I think it could really depend on how and in what part of the entire agricultural supply chain such robotics are implemented. Maybe it could also benefit small farms in other ways than it does larger farms.

10. Again, depends on the context. Generally, robots are applicable not only for the big but also smaller farms, since the technology is scalable – you can just buy some few robots for a small farm. But again poor farmers will struggle: financing, access, …
11. Small farm can suffer as for them mb it will be hard to afford robots without any kind of subsidies. I believe that there will be still certain demand for food produced in a traditional way "made with love" and cultivated with a human care.
12. Negatively in case of increased competition from large farmers who can afford the robots. Also taking into consideration that a small farmer in a developing country might not even posses a smartphone, implementation of a robot can be difficult,
13. Robots might represent a risk for culture and traditions of small farmers.
14. If the cost is low enough and the access to the latest technologies is fair for the small farms, they will be definitely benefit from it.
15. Robots /= specialization. Eventually technological progress will produce robots that mimic human action, but saving the labour costs.
16. Small farms in the Global North will be able to stay in the market for longer because they can mend not finding workforce and having unattractive working conditions. Financial stability is a necessity for that though.
17. If we consider that small farmers have already access to other contextual factors, in order not be marginalized from markets, access to inputs, etc. Robots may save labour hours/strength and therefore keep farmers, farming.
18. If they have access to robots, it could lead to higher competitiveness on the world markets, on the other hand it demands high skills to keep it working. If they are not skilled enough the looses in case some problems can be significant for them.
19. Small farms might be outcompeted by bigger farms
20. Small farmers will benefit only if the robots are designed to meet their farmin needs. The constraint for small farmers will be the cost of the robots. Farming co-ops could give them the hiring or purchasing power for robots.

How do you think the development of robots in the Global North will affect the Global South? (19 answers)

1. Probably negatively, unless regulations are applied, for robots implementation.
2. It could enhance the software and technology dependency that already exists and create a monopoly of robotic related services in the North towards the South.
3. Depends on the readiness of the South to new technologies and readiness of the North to invest not only in robots but in educating people to use them to full capacity, maintain them etc.
4. It has a big chance of creating even more dependency, even more competition for resources and new types of "competition". The advantages of robots do not yet meet the needs of small scale agriculture in the Global South, which is dominant.

5. As in all innovation processes, there are going to be winners and losers. But as history has shown, technological adaption has massively improve the lives of the non-inventors.

6. Could result in remote exploitation of land resources. Disruption of human labour systems in the Global South.

7. It might perpetuate dependency and ineuitable trade of technologyXnatural resources since it has always been made. Through colonization, neoliberalism etc.

8. There is a danger of increasing dependency of Global South and North and also increasing gap between them, because North would probably have better access to robots.

9. It will affect it the same way as it has for the last centuries. Global North does not develop to improve Global South. There is always one clear beneficiary.

10. I am afraid that robots development will worsen the situation and further increase the gap between Norths and Souths. Also cultural and mentality aspects might play the role.

11. There is some much deparity. It will only continue to create more dependence for the Global South. There should be regulations and the Global South.

12. It will really depend on the flexibility and adaptability of the development of robots. Trade relations and political stability may also be important factors to consider.

13. It would have a negative impact because robots developed in the Global North are developed under conditions from the North, as such they might not be as efficient in the South. Again most farmers in the South are illiterate to operate robots.

14. (1) are farmers in the South even ready to use robots? (education, interest) (2) robots will increase the technological gap. Not only differences in seeds, irrigation or machinery, but also robot ownership.

15. Competitiveness of agricultural industry in South will be diminished unless it adapts or develop the technology. The investment for the tech will be set by government and foreign institution. It will be likely to damage employment of agriculture in the South.

16. The Global South could be exploited more and the gap between the South and the North will become larger because the South may be more dependent.

17. Poor farmers in the Global South will hardly be affected directly. However, big investors from foreign countries will use robot technologies and thus, reduce on-farm labour opportunities for people in DC. This could negatively affect the Global South.

18. In many ways. First, technologies would face acceptance barriers and high costs for small farmers. The use of them by large companies might affect prices of food, leading small farmers not to be able to compete and to lose money.

19. If not participated along the process, it could pretty much be affected for luch of representation of our concerns.

What do you take with you from this mini public? (18 answers)

1. Very nice to see a crossover of agriculture and innovation.
2. The Mentimeter for sure but also a lot of new information about how robotics is developing to play a substantial role in agriculture.
3. Widely diverse expectations and valuations of the future. No discussion about natural resources used to produce robots/machines.
4. Having it in mind as a way to create great amount of qualitative data.
5. Thank you for the good session. It was a real pleasure to hang out with knowledgable researchers. Well organized, insightful session.
6. Different view on using robots and other possibilities how solve global issues. Its open new topic of interest for me. Thank you for organising.
7. The scene is more diverse than I thought. What´s good for one may not be good for the other.
8. Robots are the future to improve productivity and reduce production costs, save labor, time. Looking forward to robotic production 😊.
9. It is importance of having people with different cultural and academic backgrounds discussing the future of technological development.
10. Its been worth while, It's a good way of getting qualitative and quantitative data in a very limited time. A big thank you to the organisers and speakers and fellow colleagues.
11. An open discussion on the questions of high importance today and in the future – food security, new forms of farming and technologies, potential complications and effects.
12. Your effort to collect a representative data is appreciable.
13. More info needed beforehand about the organisation of the event. Missing discussion between experts and students!
14. A glance of the possible appliances of robots in agriculture that I was totally unaware. I´m happy with the critical consciousness of all participants.
15. Very nice explanations, interactive and interesting. Share news about particular argument and make it available for us.
16. It´s interesting to see that people are pessimistic about the development of robots (or technology in general)
17. It is hard to predict and try to expect the unexpected, but hearing the ideas and opinions of differing perspectives can really help make this task easier.
18. What about biodiversity?