

<https://www.youtube.com/watch?v=Qmla9NLFbVU>

The Future of Farming and Agriculture

00:00 – 08:50

I. Watch the video and take notes on the following questions.

1	Autonomous Farming
	What major changes has agriculture undergone over the last century? <ul style="list-style-type: none"> • <i>Farming with horses → with machines → with robots</i> • <i>Fewer farm workers feed more people. → more efficient</i>
	Why have they happened? <i>because of engines and electricity</i>
	Name two examples of autonomous farming robots. <ul style="list-style-type: none"> • <i>autonomous pickers</i> • <i>robots removing weeds / robots using less pesticide than before / weed killing laser</i> • <i>monitoring via cameras,</i> • <i>soil sampler</i>
	How are drones and planes used in farming? <ul style="list-style-type: none"> • <i>they spot unhealthy vegetation and alert the farmer</i> • <i>they monitor crops</i>
	Who can use electronic data in farming? It can now be available to more farmers, not just to “mega famers” (via data sharing).
2	Vertical Farming
	What is the big obstacle in vertical farming? high cost of energy
	And what are the advantages? Because of the artificial light, crops grow day and night all year round → more than outdoors (but at the moment just expensive herbs are profitable)
	What will cause a “turbo-boost“ growth of plants? the use blue and red light wave lengths to optimize photosynthesis
	What is the idea behind the “catalogue of climates“? to recreate original environment/ conditions for all crops locally

3	Livestock
	Why has the demand for meat increased?
	There are now more people in the middle class worldwide who want to eat meat
	Name two technological gadget used in cattle farming.
	<ul style="list-style-type: none"> • smart collars • breath measurement • cameras monitoring illness/movement • microphones to detect cough
4	Fish Farming
	What is the surprising fact mentioned at the beginning?
	consumption of farmed fish has surpassed consumption of fish
	Describe the innovation about fish farming and its “closed system.”
	<ul style="list-style-type: none"> • saltwater fish farms can be built inland → fresh fish for everyone, less energy used for transport • self-sustainable and self-powering system / no interaction with environment • no waste (thanks to bacteria)
5	Alternative Proteins
	How can insects be useful even if people do not really want to eat them?
	protein powder / flour, animal feed
	Why is it necessary to at least start to think about lab grown meat?
	<ul style="list-style-type: none"> • better for the environment as less resources are used • feed the entire planet • avoid killing animals

Stop at 08:50

Please add a personal comment.

Individual answers