HVA

HVA International (Est. 1879)

Amsterdam, The Netherlands

Positive Agriculture Since 1879

Global Population Increase

The world’s population is increasing and projected to reach 10 billion by 2050, necessitating more food.

One factor few consider, however, is that more and more people are transitioning into middle class than ever before. This drives up consumer demand and demand for foodstuffs is expected to increase by 70%.

Water Scarcity

Natural resources are becoming increasingly scarce: Agriculture is consuming 70% of the world’s fresh water, while global demand for water will increase by 50% by 2030. This is being exacerbated by climate change which is causing changes to rainfall patterns that are challenging to predict.

Soil Erosion

One third of the world’s soil is also considered to be highly degraded due to erosion, high salinity levels and pollution. Fertilizer is also becoming increasingly difficult to come by due to conflicts.

Conscious Consumers

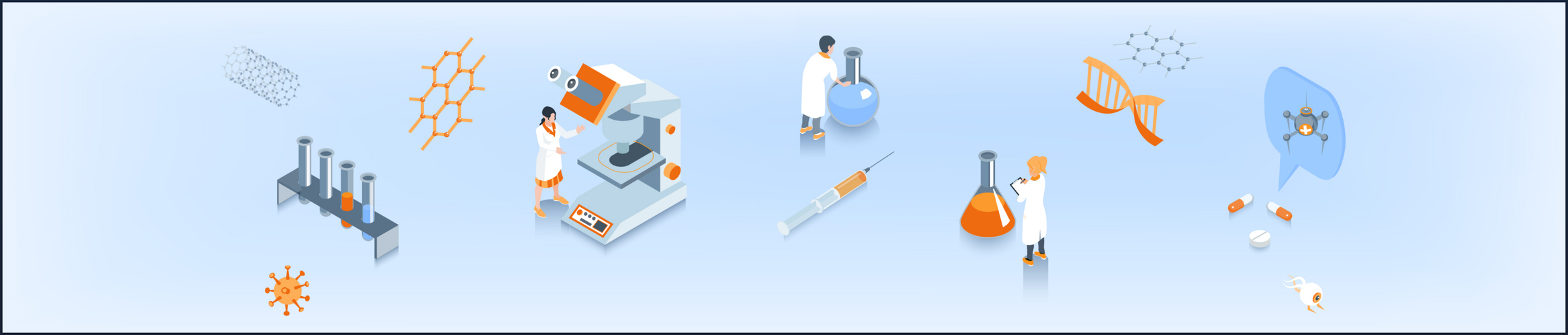
Consumers are demanding that food products be produced in an environmentally sound manner and are demanding greater traceability.

Consumers are also more health conscious than ever before and insist that pesticides not be used, and that fair trade be employed so that workers are paid livable wages (Good Agricultural Practices).

AgriTech Trends

Technology is disrupting traditional agribusiness and helping to attract young agripreneurs.

The agri-industry is undergoing a revolution thanks to IOT (Internet of Things) as well as genetic editing such as CRISPR, e-commerce and blockchain in the supply chain.



The Dutch “answers” thus far

Greenhouse Technology

Precision Agriculture and Modernization: precision fertigation

Vertical Farming (Limited space)

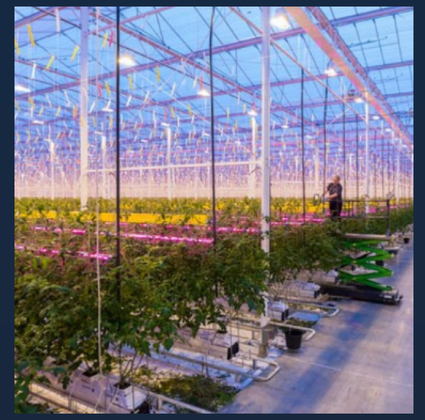
Irrigation Techniques: drip irrigation, hydroponics

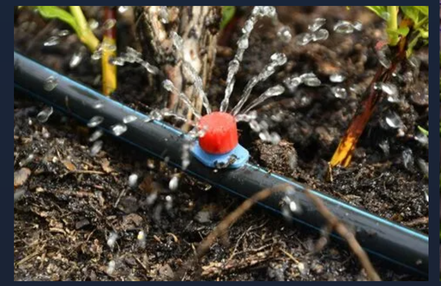
Crop management: crop rotation, Integrated Pest Management (IPM)

Breeding programs for high yielding, disease resistant crops, seed selection and management

Climate control techniques (indoor)

Controlled drainage: water level management, nutrient management





Robots replacing tractors?

Autonomous tractors with LiDAR, sensors and onboard video cameras

Robotic harvesting (indoor and outdoor)

Weeding robots

Crop monitoring robots/ drones

Robots used in precision agriculture for fertigation, weeding, pesticides application

Thank you for your attention!