Links to Video Clips Demonstrating Robot Technology

Sub-Module: Robotics

The following videos demonstrate what the future of produce harvesting can look like in the horticulture and plant science industry.

Root AI –Reveal (1:03)
https://www.youtube.com/watch?v=c-JduOfLEpc
Root AI—Going Cross-Crop (1:11)
https://www.youtube.com/watch?v=Lh7NO7h7hAM
Root AI—Introducing Virgo (2:27)
https://www.youtube.com/watch?v=XlXSGqvP-A8

Robotics Arms Race (2:15)
https://www.youtube.com/watch?v=-PtqZA2enkQ
This video shows the use of robotics for picking fruit in an orchard in New Zealand.

Michigan State University and United States Department of Agriculture Apple Picking Robot (1:56)
https://www.youtube.com/watch?v=lake45LOd98
This video shows research and development of an apple harvesting robot and how the robot works. The work was done at Michigan State University.

Robots Working at Metrolina Greenhouses (0:35)
https://www.youtube.com/watch?v=xBIwj6SMuLc
Metrolina Greenhouses is one of the largest greenhouse growers in the United States. This brief video shows how they utilize robots in the production of different floriculture crops.

Autonomous Grape Harvesting Robot Development (7:48)
https://www.youtube.com/watch?v=ssWetc3PHkY
This video highlights the development and the process in which a grape picking robot was developed at the British Columbia Institute of Technology, as a senior capstone project.

Robotic Lawn Mower Video (1:49)
https://www.youtube.com/watch?v=t415Y8YkSd4
In this clip, the student will learn about robot lawn mowers and the general practices and operation of the equipment.

ISO Groep:
The following series of videos are from the ISO Groep (https://www.iso-group.nl/en/) in the Netherlands. The short videos show several new technologies and automation techniques utilized in the horticulture and plant science industry. There are several other videos found on their website.

ISO: Introducing a New Generation of Machinery using Artificial Intelligence (AI) (1:01)
https://www.youtube.com/watch?v=YMjLCPing6Y
This video gives a brief overview of the work and process of how the ISO Groep is creating the new generation of automated greenhouse and horticulture machines for the industry.

ISO: Automated Tomato Grafting; ISO Graft 1200 (1:39)
https://www.youtube.com/watch?v=a8uGVHft8vI
This video shows automated plant grafting of tomato plants.

ISO: Automated Cutting Planter; ISO Cutting Planter 4000 (1:59)
https://www.youtube.com/watch?v=VGE69FbxD_g
In this video, you will observe cuttings being automatically planted using the planting machine.

ISO: Automated Cutting and Planting of Roses; ISO Robot 1800 (0:50)
https://www.youtube.com/watch?v=UT1i6fIVSl0
The robot shown in this short video clip, carries out two functions; taking or making rose cuttings and then planting or sticking the cuttings.

Metrolina Greenhouse Cutting Sticking Robot (1:03)
https://www.youtube.com/watch?v=MYJ1C7_N9Ow
Metrolina Greenhouses is a large greenhouse production company in the United States. In their production, they utilize a cutting sticker robot, that can plant or stick about 2,000 cuttings per hour.

Robot-Assisted Pepper Packing (2:20)
https://www.youtube.com/watch?v=m0IcEjgUDVQ
Robots assist with fruit and vegetable post harvesting processes. In this video, you will see how robotics and machines assist with packaging bell peppers.

AGROBOT Robotic Strawberry Harvester (1:29)
https://www.youtube.com/watch?v=M3SGScaShhw
Agrobot showcases an innovative robot strawberry harvester, developed for field cultivation and harvesting, in addition to protected environment (greenhouse and hightunnel) production.

Weed Control in field sugar beet production (2:50)
https://www.youtube.com/watch?v=N-zZm01iBQU&t=104s
IN this video, one can observe a robot that plants a sugar beet field, while maintaining a database. This database is then helpful when later in the growing cycle; it can precisely apply any herbicide. This robot technology could also be applied for fertilization and pesticide application.

Disclaimer
Mention of trade names, specific products, or companies described in the different modules does not imply endorsement or adoption of a particular practice by the Horticulture and Natural Resources Department and Kansas State University, nor criticisms of similar products or companies not named. This information is provided as educational reference tool and all links shared were obtained via publicly available sources.