

THE 3RD STRATEGIC LEADERS' SUMMIT 2021

K A M P A L A

Digital technology in times of covid-19 disruption, enabling Agrobusinesses and SMEs to face the new imperatives.

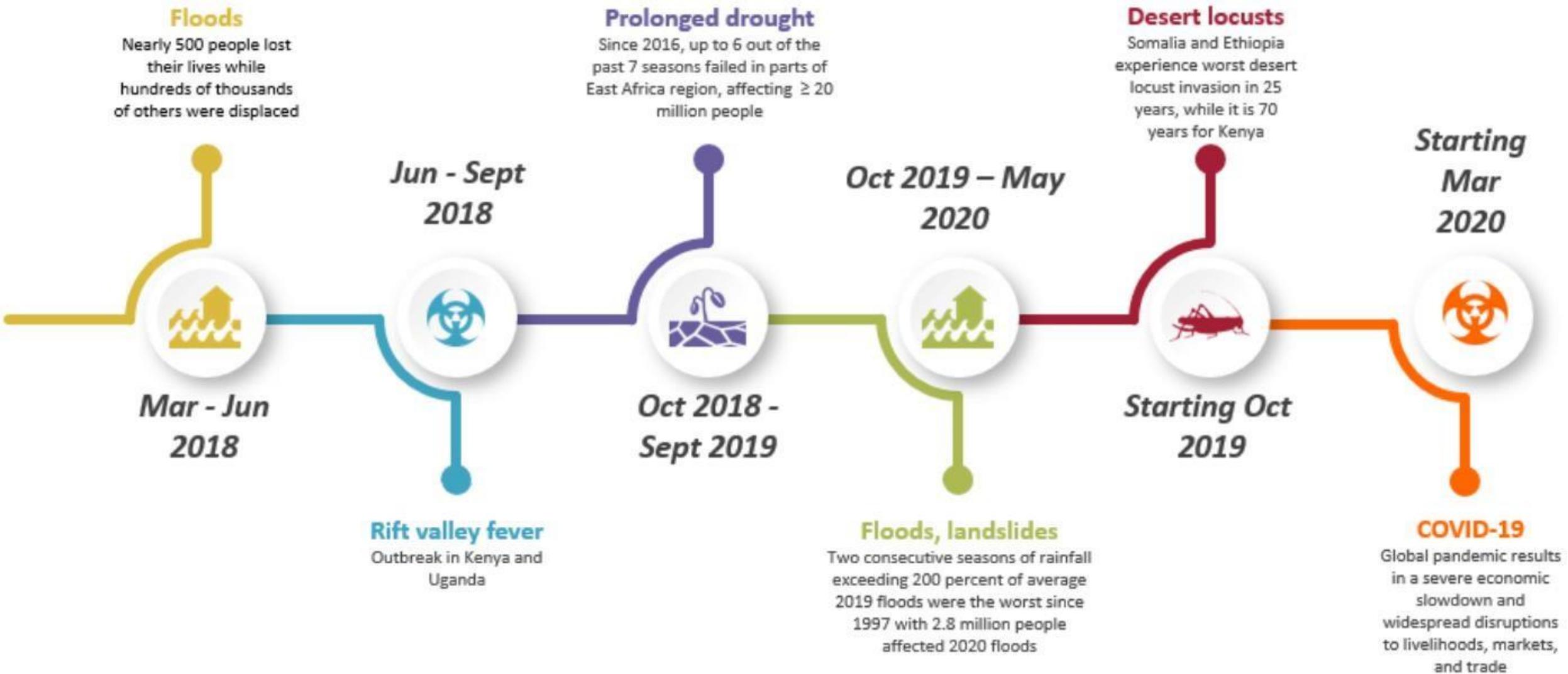


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Agenda

- Covid-19 & impact on agribusinesses
- Can listening to bees help save them - and us?
- Agroscout, AI to solve world hanger !
- Take-away





Source: FAO

Impacts at the farm level

- Input supply (seed, fertilizer, veterinary inputs, etc.)
- Labor availability : Uganda, Burundi, Djibouti and Eritrea & South Sudan
- Extension and advisory services
- Access to grazing and watering points



Impacts along the agrifood value chain

- Interruptions in logistics & processing
- Shortage of food truck drivers and delays in the delivery services
- Interruptions in processing : meat, dairy etc.
- Closure of many informal markets
- Labor shortages, due to the stay-at-home policies



Impacts at the household level

- Job losses affected purchasing power and widened the poverty gap
- Limited access to fresh nutritious foods for the urban poor
- Suspension of school feeding programs with millions of Eastern African children affected.



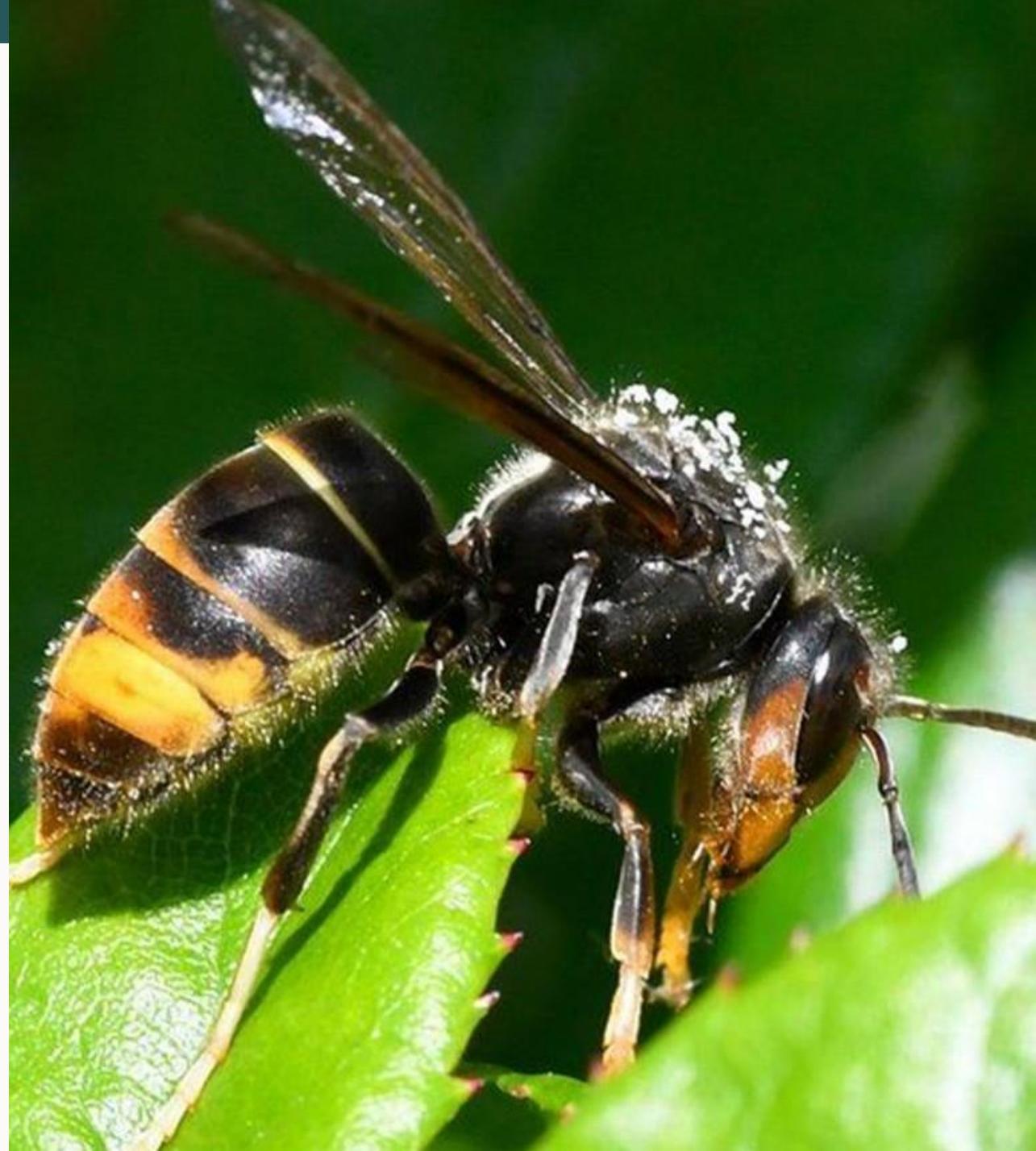
Why Digital Technology ? And How it helps ?

Business cases



Case 1

**Listening to bees to save
them - and us?**



In the past 50 years



300% increase of the volume of agricultural production dependent on pollination

54% decrease in number of honey bees between 1985 and 2005 (UK).

59% decrease in bees colonies between 1947 and 2008 , fell from 5.9 million to 2.4 million (US)



Why are bees so important for agriculture ?



1.4 billion farming jobs

75% of the world's food supply - worth about **\$577bn (£447bn)** a year

Wild bees pollinate **70%** of crops that feed **90%** of the world's population



"Honey bees are the single most important pollinator on the planet,"

Simon Potts, professor of biodiversity at Reading University

"Over-industrialisation, the use of pesticides, the destruction of natural habitats and climate change are all behind this,"



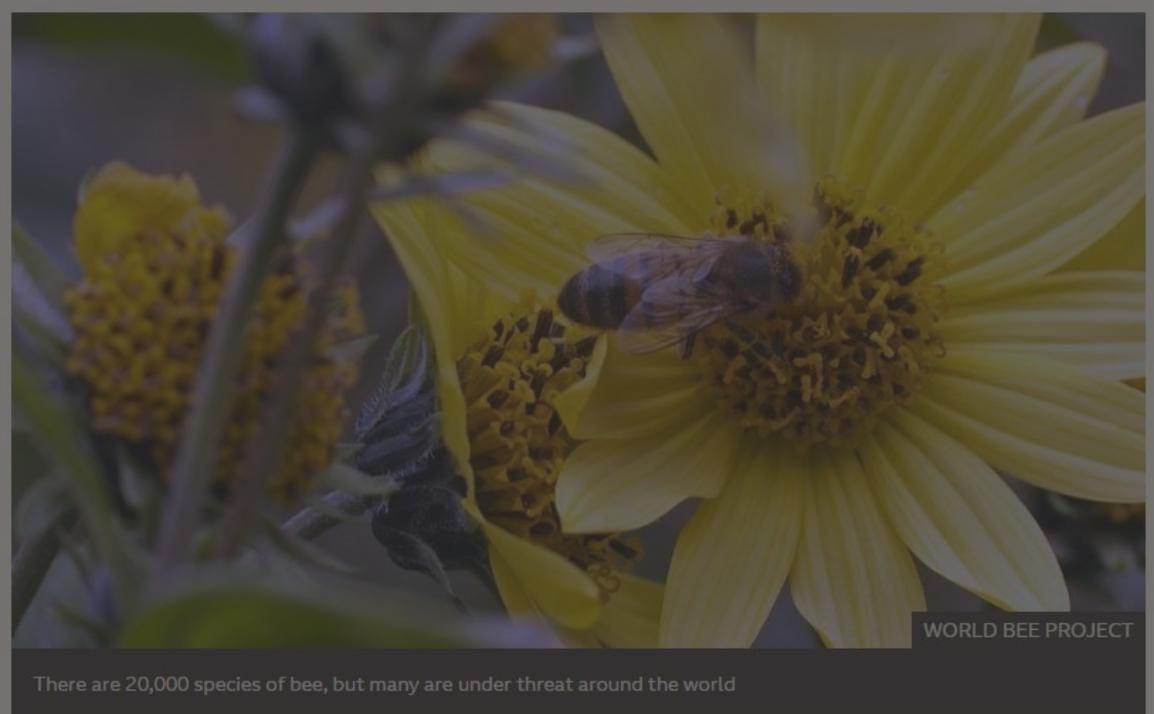
Sabiha Rumani Malik, founder and executive president of the World Bee Project



Can listening to bees help save them - and us?

By Tim Bowler
Business reporter, BBC News
12 November 2018

Climate change



A hope of scientists : Artificial intelligence (AI) & machine learning to save the world's bees?

Why Bees are in trouble ?

- overuse of insecticides
- air pollution
- warming temperatures
- the varroa destructor mite
- interference from electromagnetic radiation

When bees swarm, the existing hive can lose half its population and half of its honey, as those bees about to leave will gorge themselves first.



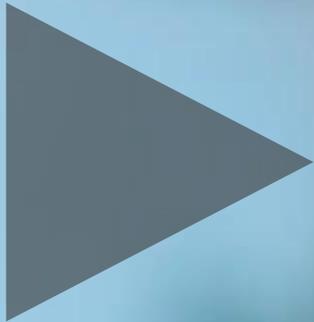
The solution



Oracle with the World Bee Project created a global network of AI "smart hives" to give scientists real-time data into the relationships between bees and their environments.

Six sensors mounted on hives, capturing the sound of the bees' buzzing, the movement of their feet and wings, the weight of their honey, the hive's humidity, as well as local weather and pollution levels.

- Put together the signature of health and unhealthy hives
- Identify early warning indicators of problems
- Minimize swarming Bees by taking preventive actions. (ventilation, temperatures, humidity, temperature and the weight of a hive's honey



Case 2

Agroscout



AgroScout offers sustainable AI agronomy on Oracle Cloud

AgroScout's machine-learning algorithms use Oracle Cloud to analyze drone-captured images of farm fields. By knowing which pests and diseases to treat, growers can save money, improve yields, and feed more people.

[Watch the video](#) 

Oracle Cloud Infrastructure

Challenges facing farmers

2 billion more people will need to be fed in the coming decades
Challenges facing Farmers : pesticides regulations, cost, and environmental concerns

Farmers lose **~40%** of their crops to pests and diseases (FAO)



A drone flies over a farm field capturing images of crops
Machine-learning algorithms analyze the collected image data
Farmers know exactly when and where to spray.







Key Take away ?

- Covid-19 & Environmental challenges facing world agriculture
- Technology and data are key to solving these challenges
- Cloud is an equalizer and an enabler



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