


# MCPB

Manna Center for Plant Biosciences

AGGGGGATAAATTAATACTCAATTCTAGATTTATTTATTTGCAACGATFCCATCTATACCTAGAGAATT  
ACCACAAATGGGATTTGAATTTGTTCTGGATTTGTACTGTGATAATCCATTTTGCTTTGCTTGATTAG  
CAT **AND THE PEOPLE OF ISRAEL CALLED THE BREAD MANNA EXODUS 16:31** AAG  
TTACGAGTGACGGATCATCTGTGTTCTCGAACCATCTTTTTAACGAACTCTCTAGAACCCTTTTTCTT  
AATCCATTTCTTCTCTTCTTCTTTGCGTTTTTTGTTTGGAAGTAA GAAAAAGATGGATGCTAATT  
CGACGACATGGATTTCCGGTGACGGCGCCTCGTTTTCTTAAAGTCG AGAAAGAGATCCAACAAG  
ATATGAAACTCCTGAGAATGGCGATGAAG **TEL AVIV UNIVERSITY**  **אוניברסיטת תל-אביב** CTT  
ATTTGTTTTCTGCAGTGCATTACACTGGAACCTTTGCTTGATGGGACGAAGTTTGATTTCGAGTCGTGA



## CII Agri Technology and Mechanization Summit 2015: An Israeli –India Agenda for Food Security

Prof. Daniel Chamovitz

Dean, George S. Wise Faculty of Life  
Sciences

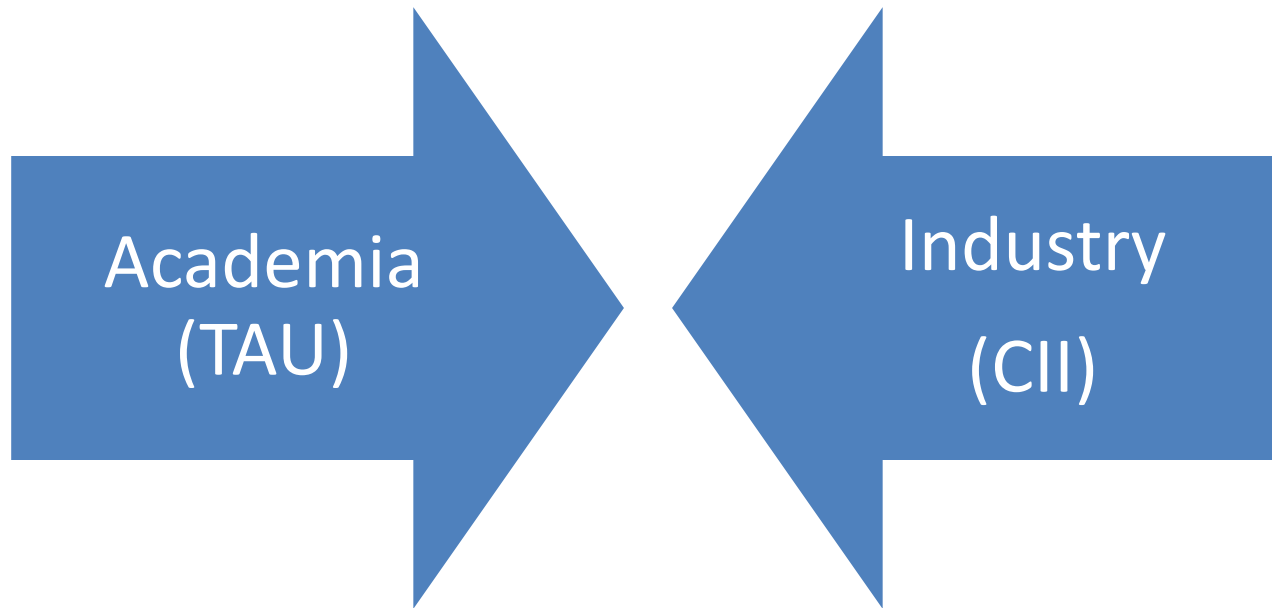
Tel Aviv University

# 1982 – Kibbutz Ketura

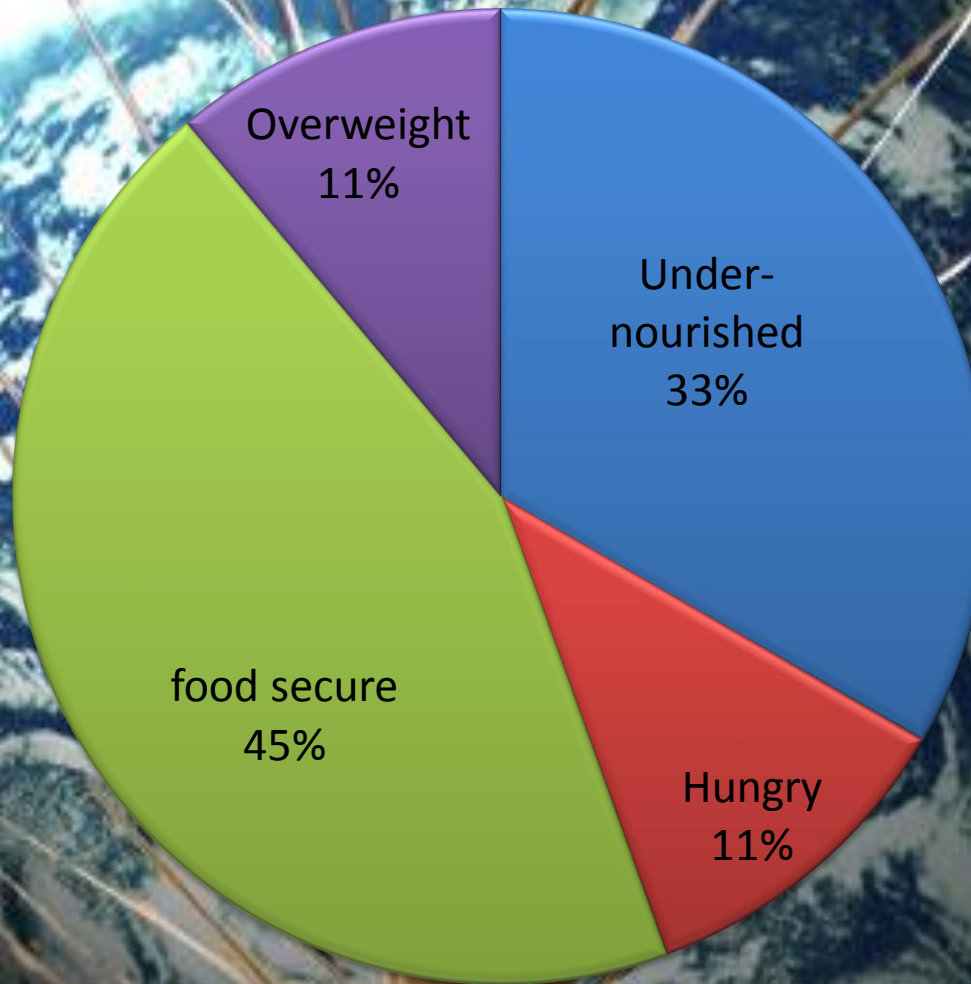




# Converging interests in Food Security



Out of 7 billion people in the world, ...



Over half suffer from food insecurity!



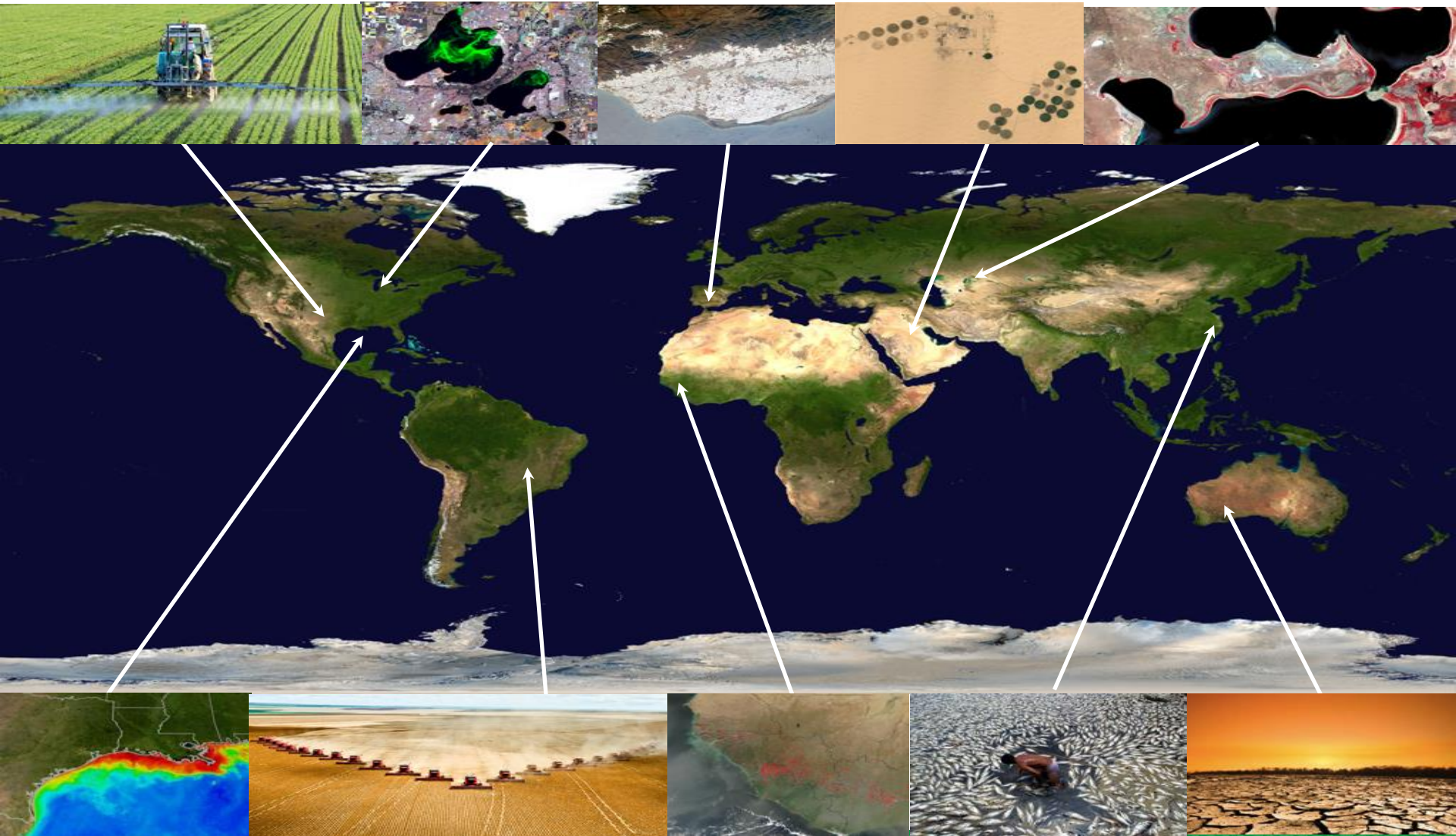


# I'm an optimist





# Problem: Modern Agriculture is not sustainable



# Food Security has long dominated Israeli ethos



1912



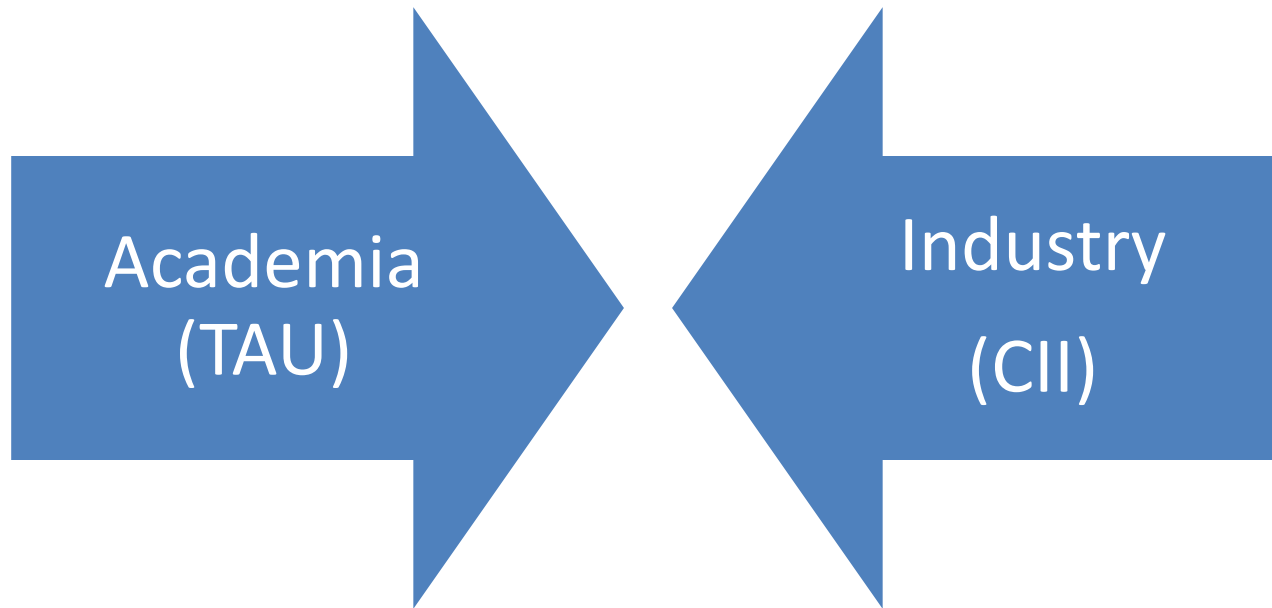
2012



# Israel – a Food Security Success Story

- 80% of the land is classically unarable
- BUT, we produce > 80% of all our food needs!
- Most of our horticulture is harvested from the desert and with brackish water!

# Converging interests in Food Security





How can we juxtapose  
advanced technologies  
with consumer awareness?

# Needs

- Crops with higher yield per water input.
- Crops with higher nutritional properties.
- Crops with increased resistance to pathogens.
- Crops with increased resistance to environmental stress.
- Practices which are environmentally viable in the long term.
- Significantly improve supply chain.



# Manna Center Program for Food Safety & Security

Biology, Chemistry  
and Engineering

Education

Multidisciplinary  
Academics

Multidisciplinary  
Activities

INDUSTRY  
Research

Economics,  
Law and  
Policy

Public Outreach

Public Health  
Nutrition



# International Summer Institute in Food Security – July 2014

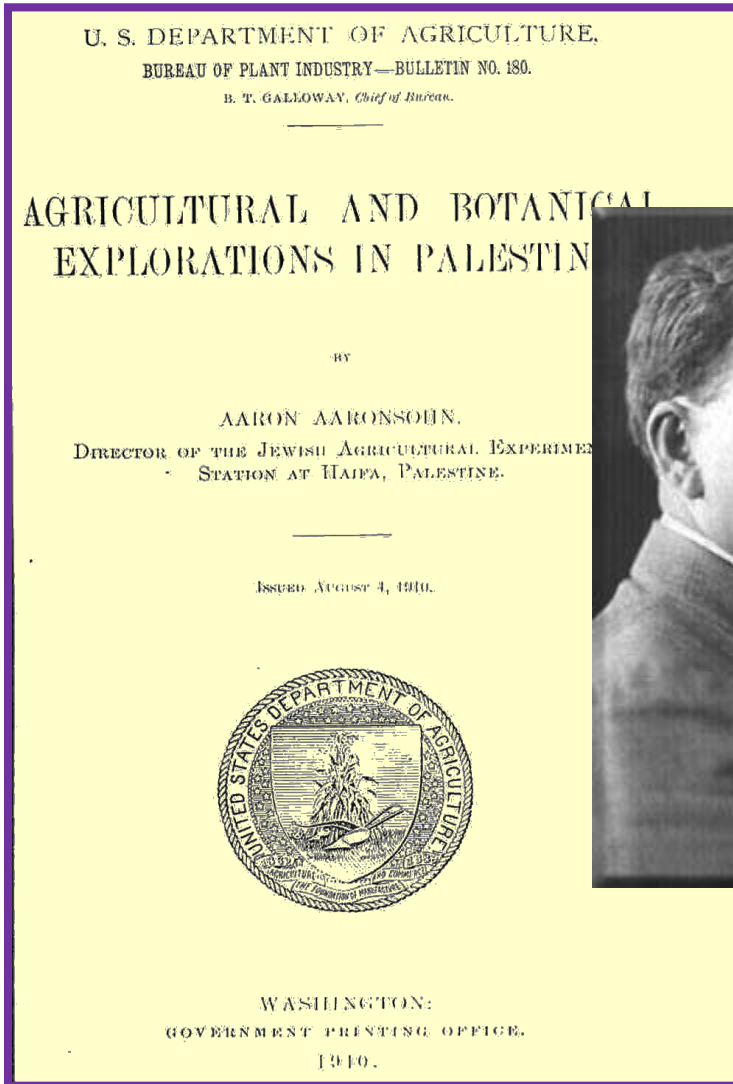




# TAU M.Sc. Students from Vietnam – October 2014



# Early Israeli Food Security: Aaron Aaronsohn and the “Mother of Wheat”



“.....The cultivation of wheat may be revolutionized by the utilization of these wild forms.”  
(Aaronsohn, 1910)

It is im-  
... may be thus  
... who know what is being de- present in the  
interesting races by selection and with our present  
... dization will agree with me in saying that the culti-  
... may be revolutionized by the utilization of these

... that we are justified in hoping to produce races  
to the semiarid regions of Algeria, Tunis, Syria,  
n, and America. If we secure races that will enable  
the yield by as much as 1 bushel per acre on these  
world's total production of wheat will be very ma-  
... ed.

The study of the wild types of our cereals should not serve merely botanical and historical ends. It has a practical, an economic—I may even say a social—importance. Its ultimate aim is to produce a little more bread at a little less expense where production is difficult and costly, and to render this production possible where up to the



Increasing the quality and yield of wheat can be achieved by introducing and combining beneficial genes from the “mother of wheat” into domesticated wheat.





# India and Israel have common interests in promoting Food Security

- A food-secure world is a politically, economically, environmentally and morally secure world
- Encourage an India-Israel partnership that will promote:
  - Technology development and innovation for the benefit of agro-science in both countries
  - promote multilateral collaborations that will also benefit the Indian agro-industry
  - A positive image for Israel in Europe and unaligned nations, not connected to military matters

# There are no simple solutions



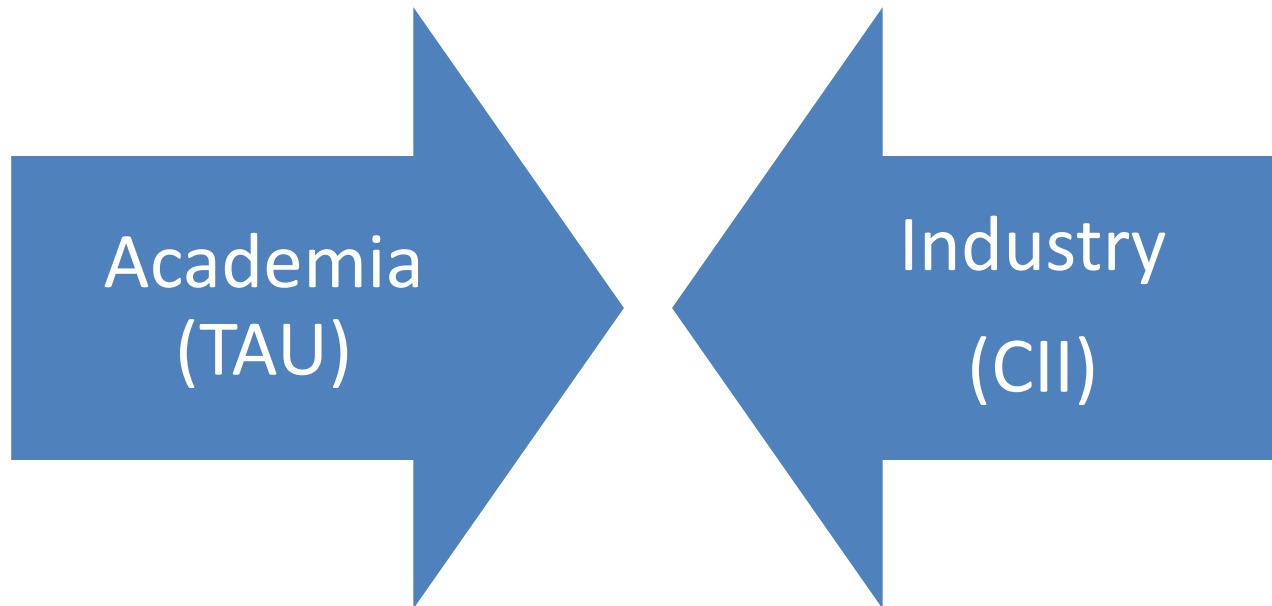


# Multi-Disciplinary Research is ESSENTIAL





# Converging interests in Food Security



धन्यवाद!