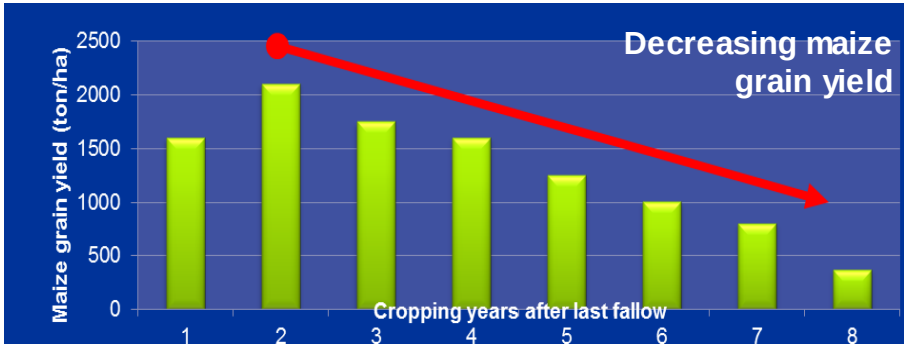
Session 2.2:
Increasing Crop Production: Case of Benin

Prof Dr Ir. Pascal Houngnandan

Vice- President of the National University of Agriculture, Benin

Problems and challenges leading to low agricultural productivity

- Low Soil Fertility
  - Farmers struggle with poor soil fertility due to severe nutrient mining without replenishment
  - Fertilizers are neither accessible nor affordable by farmers due to high cost and short supply
  - Long fallow periods that help to improve soil fertility is reduced due to demand for food
- Consequences: 1. Low crop productivity, 2. Food insecurity, 3. Rural poverty



- Solution: Increase soil fertility and crop production using legumes

How Did We Make a Difference? --- through IAEA assistance!

IAEA Technical Cooperation support (BEN5005, BEN5007) in collaboration with the FAO and the Government of Benin:

- Human capacity built in the use of N-15 isotope tracers to measure which legumes and how much they capture nitrogen from atmosphere through biological nitrogen fixation (BNF)
- Establishment of Laboratory to produce affordable bio-fertilizers to enhance BNF
- Field experiments at pilot sites to test the technology
- Mentorship through advisory and expert assistance
- Field days to sensitize farmers on the technology

Outputs, Impacts and Dissemination

- During 2016-2017, >16 000 bags of biofertilizers produced and distributed to farmers
- Area covered by inoculating soybean increased from 2200 ha in 1999 to 400 000 ha in 2016
- Maize yield increased by 50% and legume 100% without additional mineral fertilizer
- Over 400 000 ha, an estimated USD 13.5 million saved from importing mineral fertilizer
- 5000 farmers trained, adopted technology and annual income per farmer increased by an average of USD 600
- Up-Scaling approach:
  - FUPRO (Federation of Farmers Unions in Benin) provided 30 000 000 fcfa (USD 55 000)
  - PACER (Strengthen and Increase Rural Economy Project) funded by IFAD contributed a total of 49 000 000 fcfa (USD 89 130)