

# THE UNIVERSITY COOPERATION FOR FOOD SAFETY



Since nineties, the model of Cooperation to Development went through a renovating process

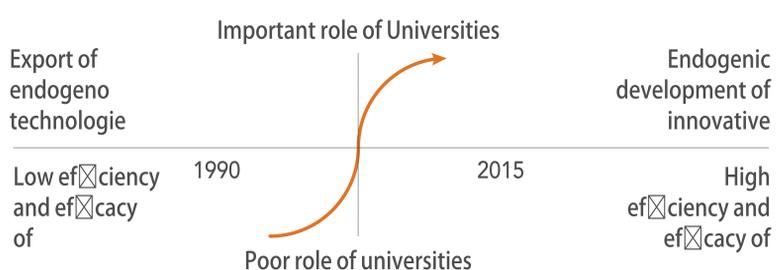
giving birth to **coordinated and integrated programs** consisting in the coexistence of complementary phases: the research and analysis phases are interlaced with the intervention and the operational partnership actions.

The role of the university in Cooperation has grown thanks to the overthrow of transfer process (technology, financial resources, skills) in favor of the endogenous growth and the **sharing of knowledge**, aiming the development of a new and original cultural synthesis.

The University's intervention answers to:

- ▶ The need of improving the efficiency and efficacy of projects (**through analysis and research**).

## Evolution of the conceptual model and of the role of Universities in International Cooperation



- ▶ The need to boost the growth of local human capital through training, exchange of students and teachers, agreements between universities (**operational partnerships**).

One of the very practical results of university participation in development projects has been the processing of new methodologies for intervention based upon the concept of appropriate technologies. This is a way of conceiving technology transfer which is not modeled

on efficiency criteria of industrialized countries, but capable of adapting to local structural constraints. The university operates in accordance with its mission and its competences. It valorizes and qualifies the cooperation projects, acting as a hinge between problems identification and programming of solving strategies.

## A specific and exemplar role: food for everyone



### World population

In 1960: 3,5 billions; today: **7 billions**; in 2050: 9-10 billions

### Population growth

**World: 1,1%**; rich countries: 0,3%; poor countries: 2,3%

### Mission of Agriculture and Zootechny:

provide food, preserving environment

### World's agricultural and zootechnical systems:

**extensive systems:** mostly informal and domestic, small, aimed to auto-consume; they provide food for at least 1 billion people

**semi-intensive systems:** generally owned by groups or cooperatives, medium size

**intensive systems:** medium to large size, the production goes into the market, they provide food for at least 4-5 billions

### Environmental sustainability and production efficiency:

**extensive systems:** environmental friendly but less productive

**intensive systems:** highly productive but with strong environmental impacts; CO<sub>2</sub>, methane, nitrogen peroxide (greenhouse gasses); nitrogenous fertilizers and waste water (nitrates in the water table, ammonia into the atmosphere); chemical residues (from herbicides and pesticides), antibiotics and medicines.

### Conclusions

**The best diet** is based upon vegetal food integrated with animal products.

**Bovines and ruminants** valorize marginal lands: they make high quality proteins from food that is otherwise not edible for humans.

**Family and extensive farming systems** have to be preserved in order to ensure human presidium over the land, against urbanization and neglect.

**Semi-intensive and intensive farming systems** are essential for quantitative food production, they should not be demonized. Nevertheless their high environmental impact has to be minimized with best available technologies.

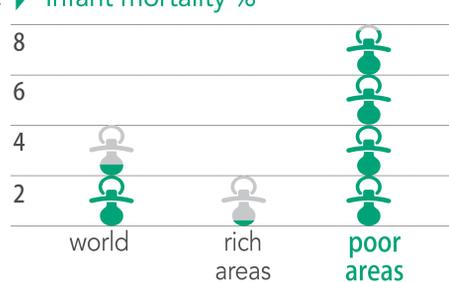
**Several international cooperation projects** are targeted to the family farming and to the medium and small enterprises because they have active impact on food security and on subsistence, by providing environmental services.

**The research in agro-food sector**, also through (and for) international cooperation, aims the innovation of productive processes, business and regional systems.

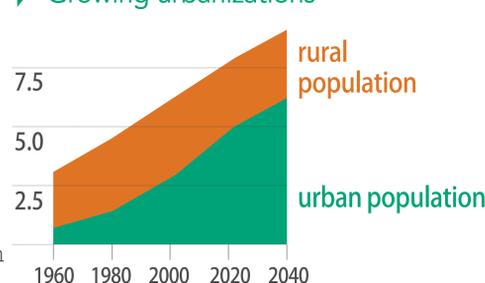
## Youth malnutrition/underweight children %



## Infant mortality %



## Growing urbanizations



## Examples of University's cooperation: the DiSAA for the development



### How to keep a foreign pathogen out of Europe: the case study of Almond Witches

the case study of Almond Witches

Broom in Lebanon. This disease have destroyed more than 100000 almond trees in the last decade. This Broom have been studied by the DiSAA thanks to a project funded by the Italian International Cooperation.



### Training in Haiti: methods and critical issues.

conceptual models and technical

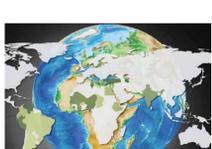
abilities without adapting them to local contexts, forces the stakeholders of this exchange to tune new methodologies and strategies to improve knowledge transfer processes.

best practices for intervention in local farming and food systems worldwide. It makes also a good test bench for the same interventions, and a workshop for a research that aims to innovation of agro-food supply chains.



### Programming and management of the Faculty of Environmental and Food Science in Makeni (Sierra Leone).

International Cooperation plays an important role during the identification of



### Research and innovation of agro-food systems in International Cooperation.



### Microgardens: an opportunity for urban agriculture in southern metropolitan areas.

Since 2005 the DiSAA support the diffusion of Simplified Hydroponics in several development projects (in Dakar, in The Cairo and in the Bethlehem Governorate).

Progetto



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