Enseñar la explotación de
la tierra, no la del hombre

**EULACIAS 1st Mexican Implementation Workshop BFS-WU March 11-14 2008**

EULACIAS
SUSTAINABLE FARMING SYSTEMS CO-INNOVATION

# Integral development of dairy farming in North West Michoacán

Ricardo Améndola

# National context 1

Dairy production and milk supply a sensible topic in Mexico involving food security and sustainability of the sector. During the 1980's import represented about 40% of the supply.

Fear of farmers due to NAFTA imports of Skim Milk Powder from the USA (2008 starts with no more quotas).

Frequent farmers demonstrations, recently one where they milked cows in the Centrum of Mexico City (by the Ministry of Agriculture) giving milk away to the public.

Topic weekly in the news in national papers, concern similar to that of maize and beans, main components of the Mexican diet.

# National context 2

Evolution of production has been unstable.

Contraction in the second half of the 80's, rapid growth during the 90's, close to stagnation in the first half of this decade.

Price paid to farmers the main factor coupled to these changes.

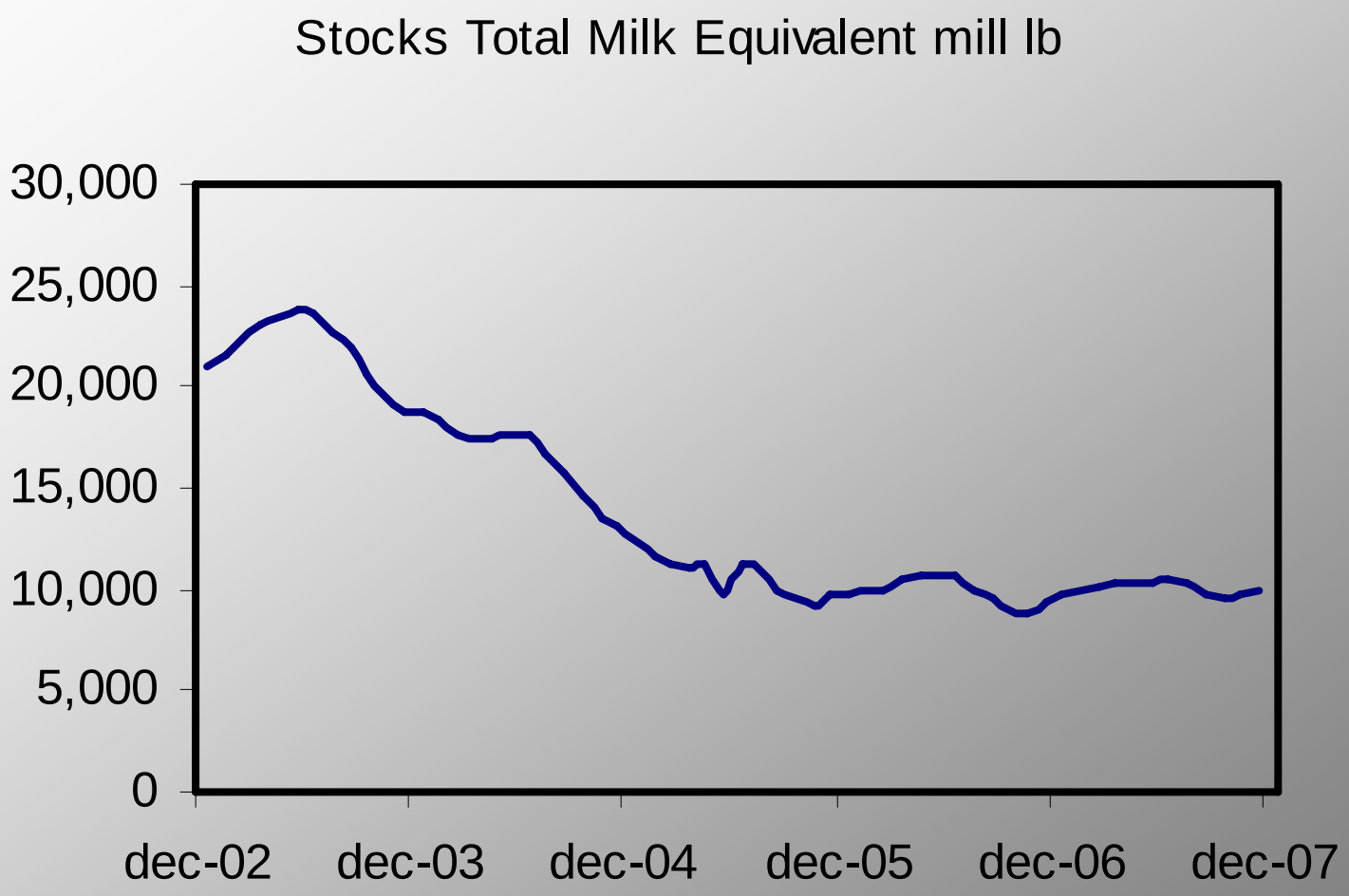
Until 2007, price paid to farmers decreased, favoring the industry.

Perspectives of international milk prices have been favorable, at least until the beginning of 2008.

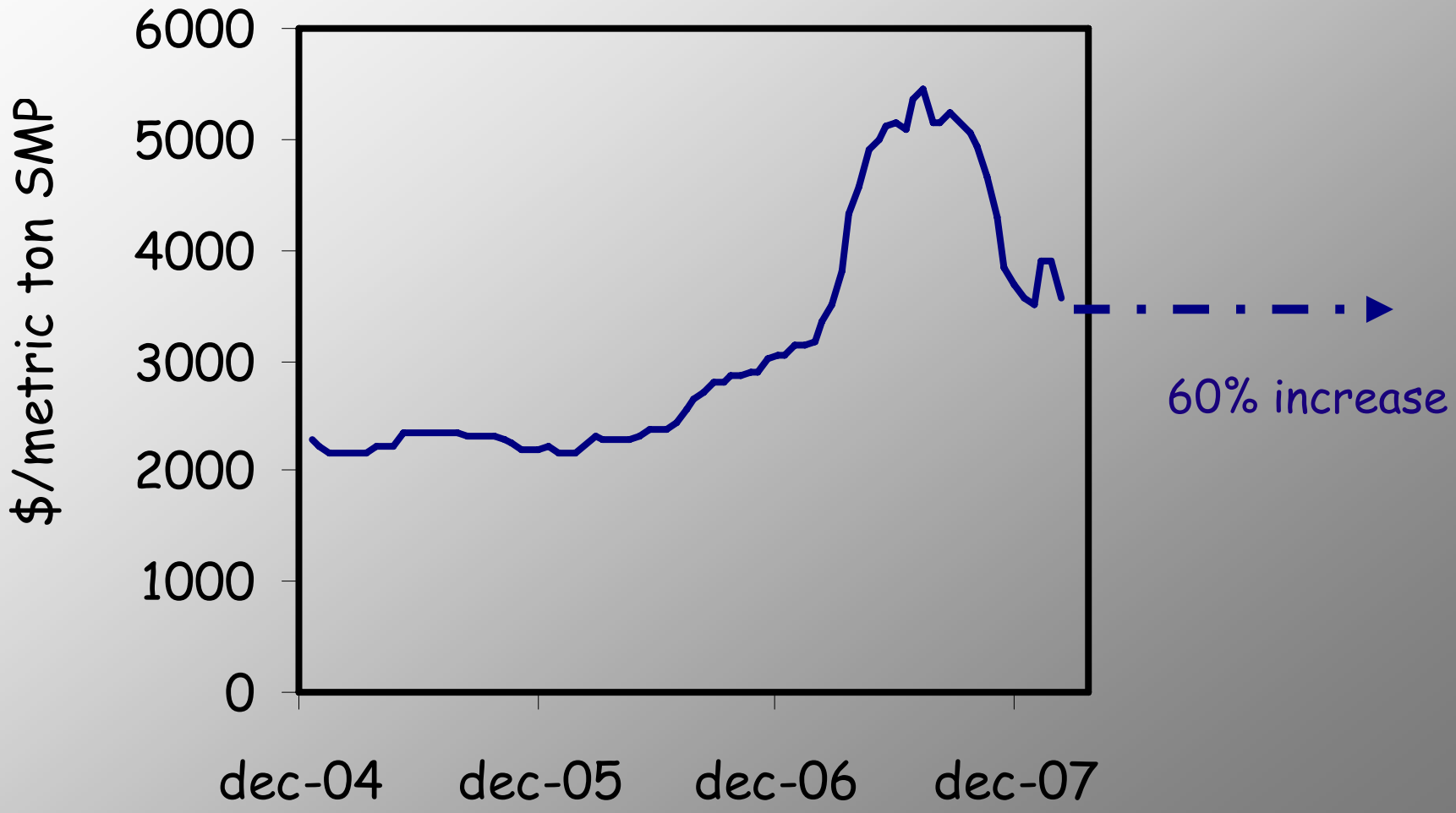
# National context 3

- Since the 80's unjustified expectations on the dairy production potential of tropical Mexico.
- Highest (and increasing proportion) of production under temperate sub-humid (with or without irrigation) or arid conditions with irrigation.
- Increasing integration pressure on smaller farmers.
- Rising prices of feedstuffs reduce margins.
- Many farmers have been going out of business .

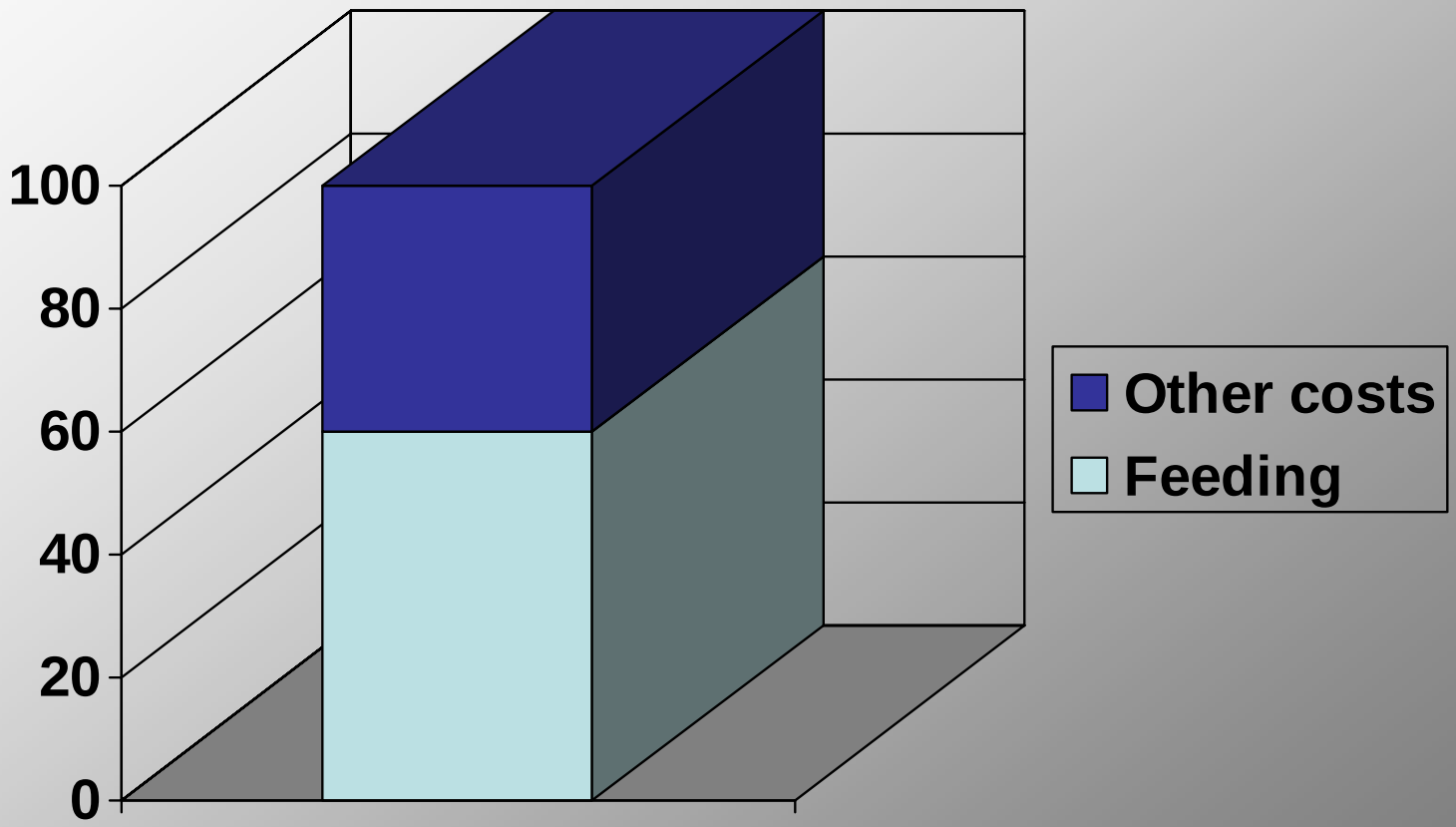
# Changes in 2007: reduction in Stocks



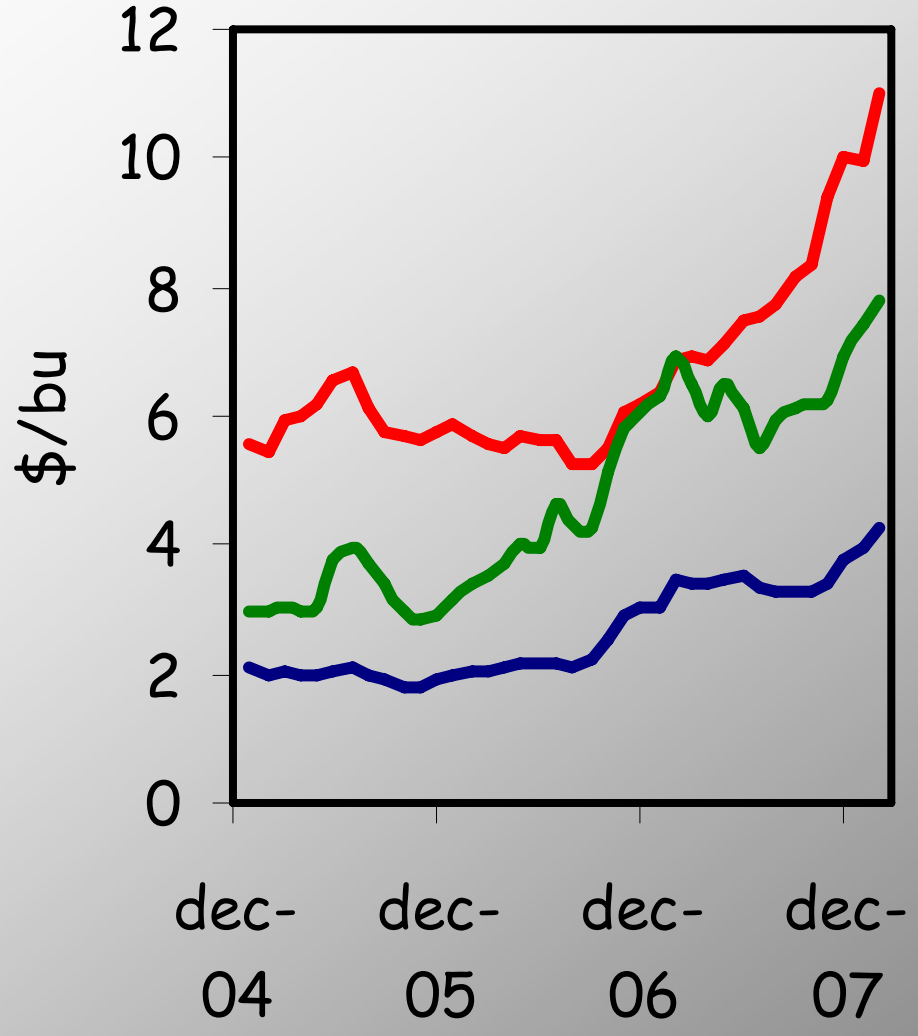
# Changes in 2007: increase in milk prices



# The other end of margin: production costs are non competitive



# Changes in 2007: increase in feeding costs




Average 80% increase


San José de Gracia
San Luis Potosí
Aguascalientes
México
Guadalajara
Querétaro
San José de Gracia
Morelia
Ciudad de México
Chapingo
Puebla
© 2006 Europa Technologies
Image © 2006 NASA
Image © 2006 TerraMetrics
©2006 Google
Puntero 20°51'58.86" N 101°08'17.19" O
Secuencia 100%
Alt. ojo 793.35 km

# Local Situation: dairy production the most important activity.

- With only 0.4% of the area of Michoacán Marcos Castellanos (MC) produces 21% of the milk in the State.
- About 80% of the land in MC devoted to dairy production.
- More than 50% of the economically active population works on dairy related activities.

# Production system

- Family based up to 20 cows

- Semi-specialized 20 ~ 100 cows

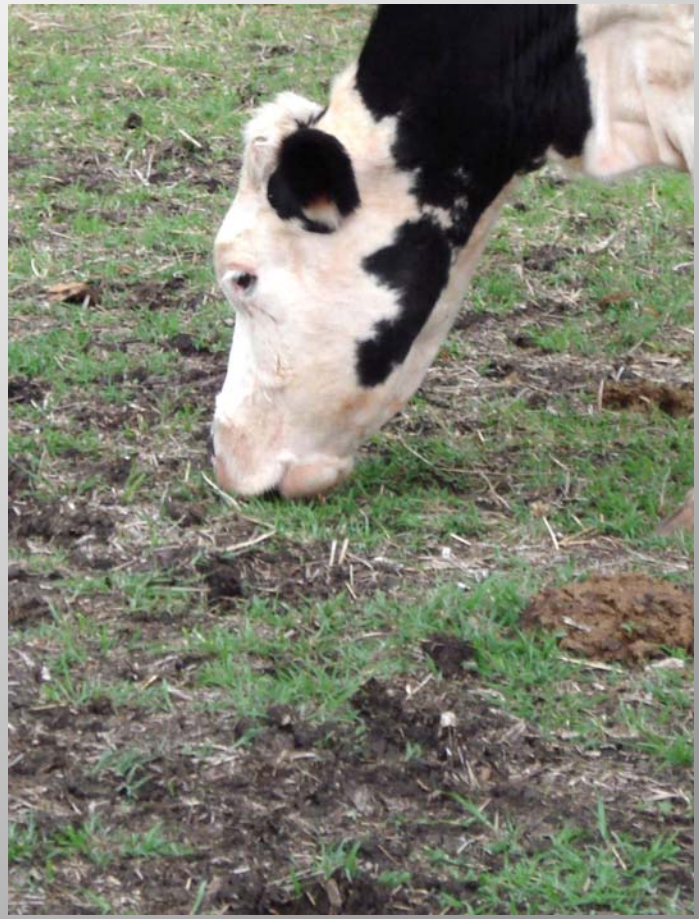
# 7 months dry season, a huge challenge in terms of feeding cows the whole year round

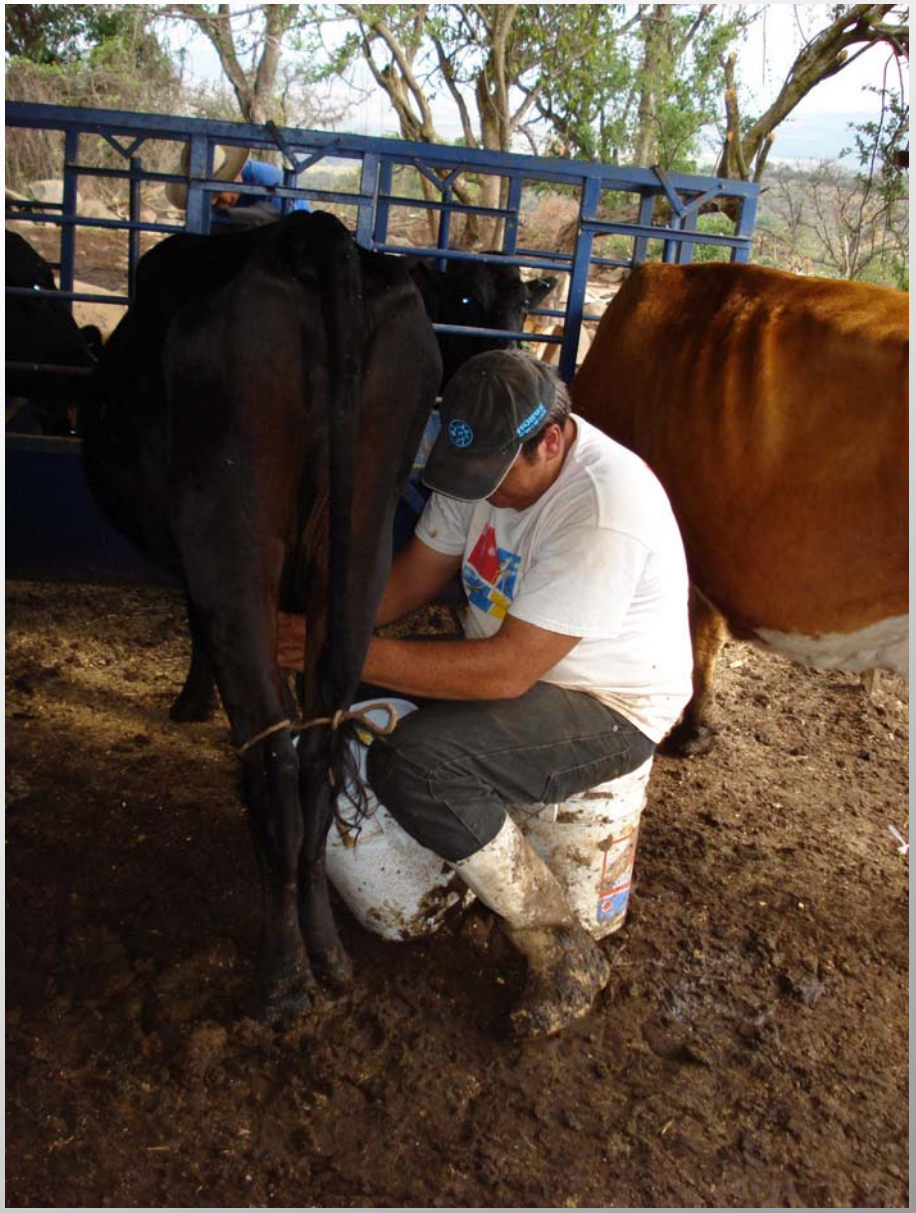
# Deficient forage cropping and forage conservation practices

# (Un) Sustainability of dairy production in Marcos Castellanos

Erosion in agricultural (forage agricultural) soils with consequences for water quality

# Overgrazing leading to reduction in biodiversity, vegetation cover and soil erosion





Low quality of the product.

Poor quality of life

Water pollution (dairy industries)

No interest in animal welfare

# Other technical elements of the dairy system

Management leading to very low sanitary quality (safety) of the product is one of the main limitations for improvement of trade conditions and price.

Other component, main trade to small family based local dairy industries

Pre-diagnosis

+

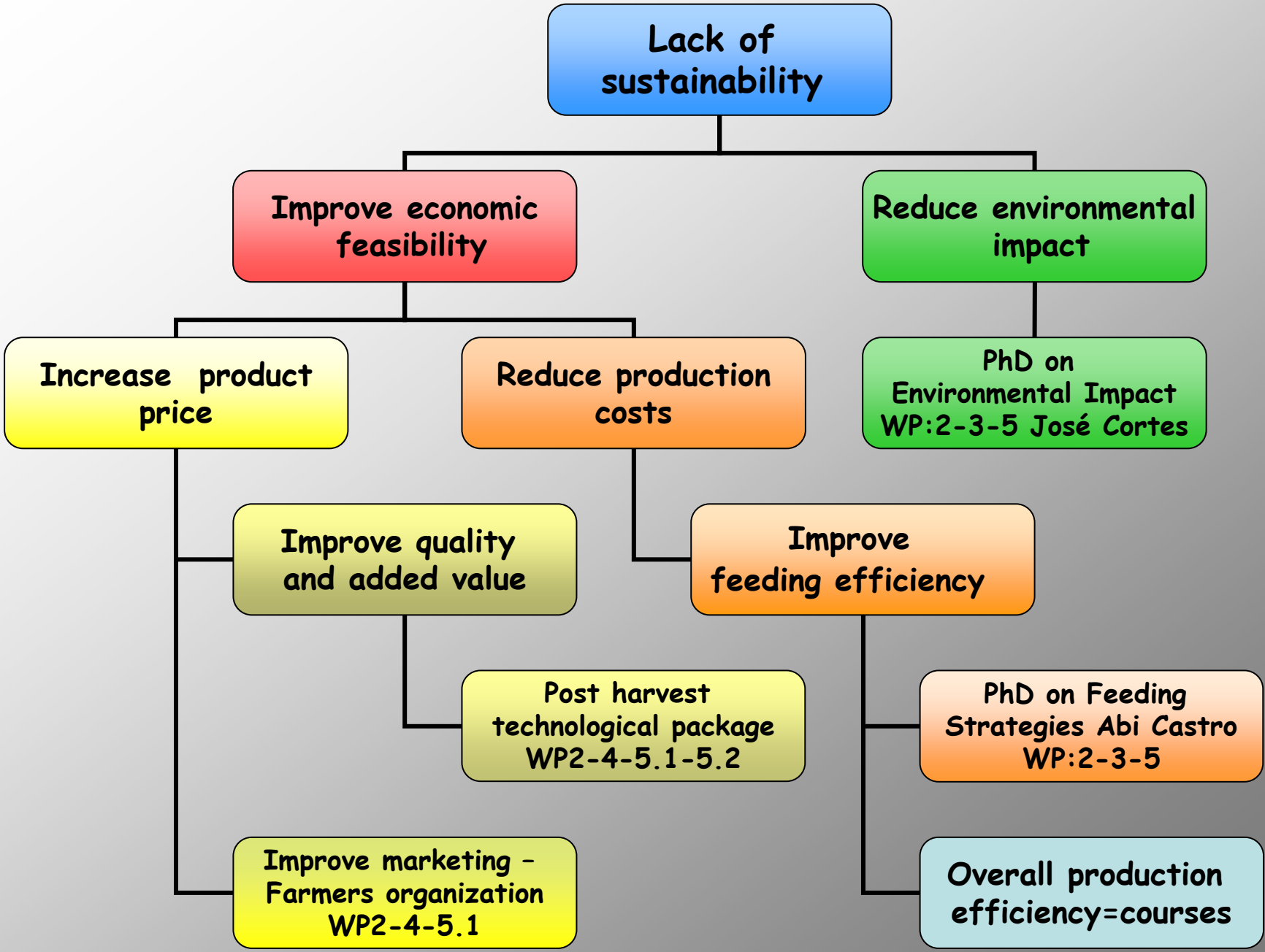
Impact Pathway Workshop

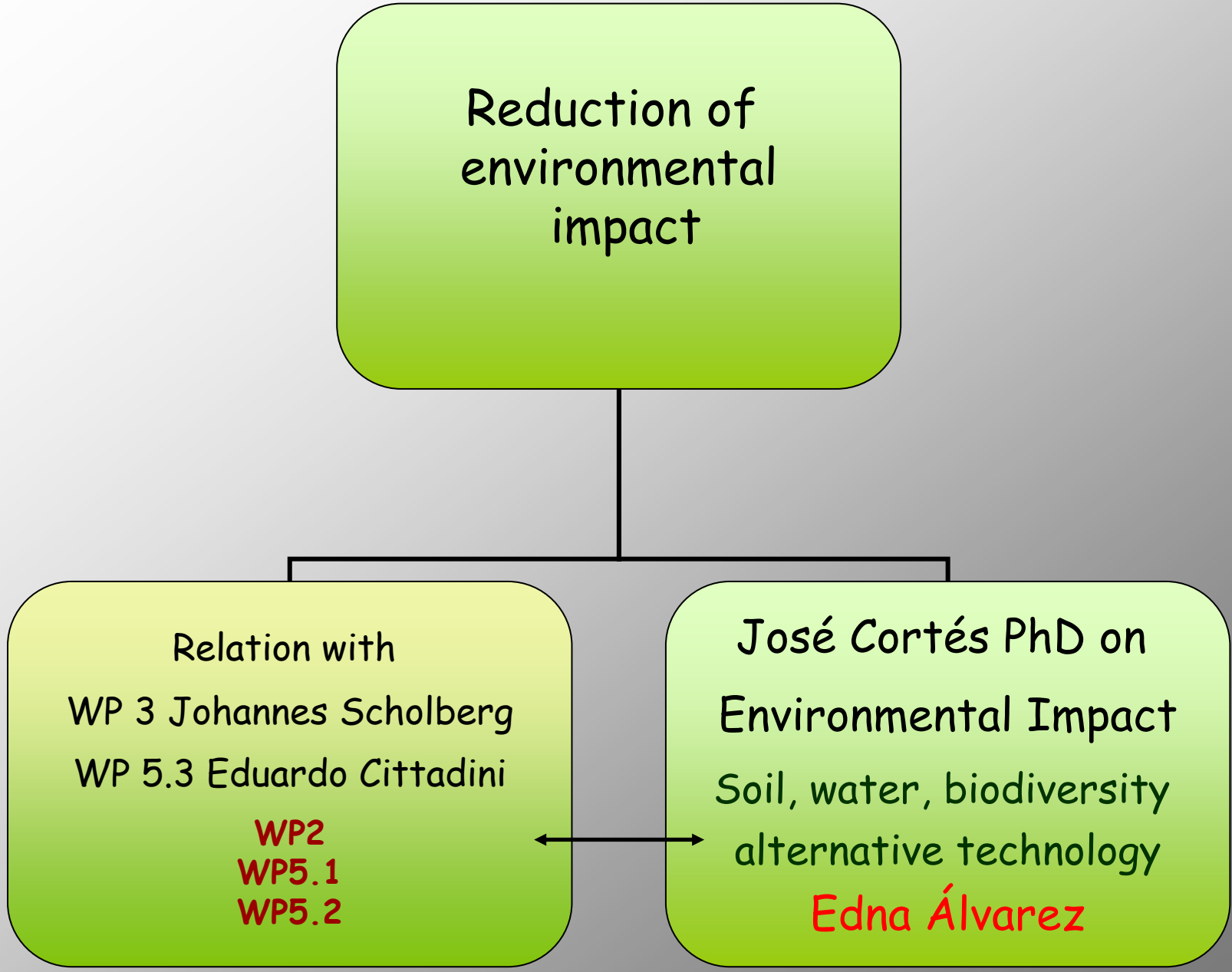
+

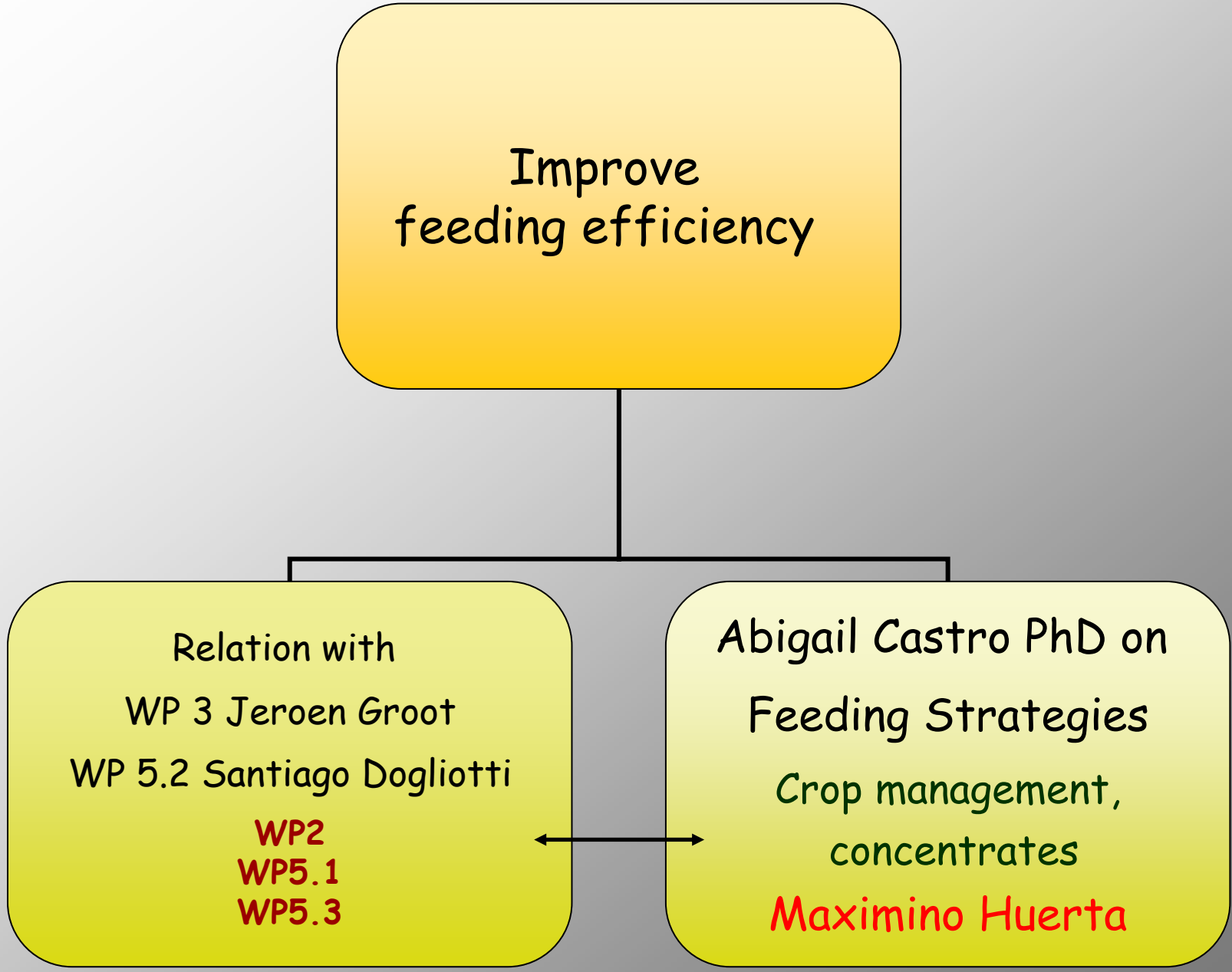
Workshop with farmers

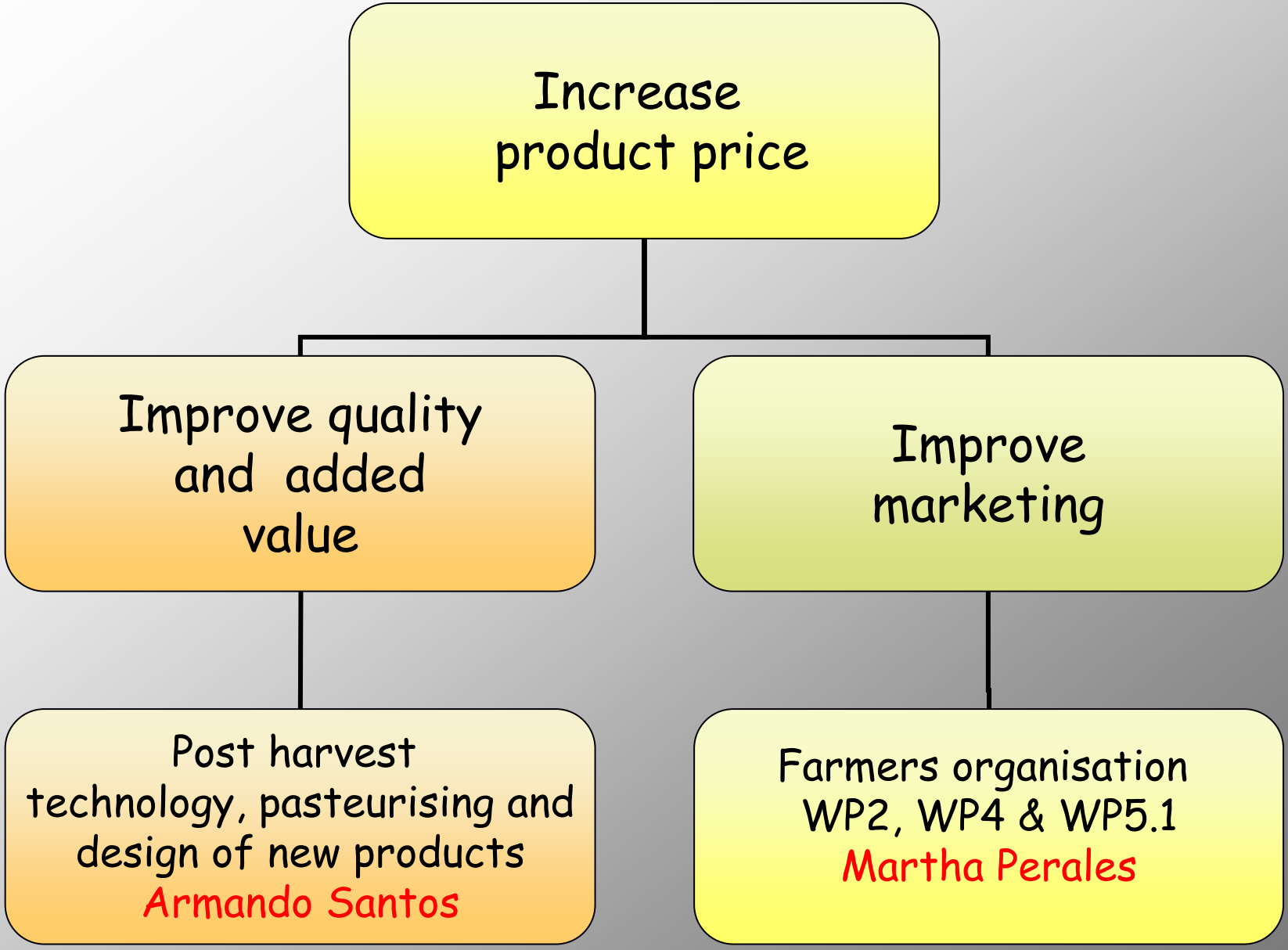
↓

Problem tree


Lack of sustainability
Improve economic feasibility
Reduce environmental impact
Increase product price
Reduce production costs
PhD on Environmental Impact WP:2-3-5 José Cortes
Improve quality and added value
Improve feeding efficiency
Post harvest technological package WP2-4-5.1-5.2
PhD on Feeding Strategies Abi Castro WP:2-3-5
Improve marketing – Farmers organization WP2-4-5.1
Overall production efficiency=courses


Reduction of environmental impact
Relation with
WP 3 Johannes Scholberg
WP 5.3 Eduardo Cittadini
WP2
WP5.1
WP5.2
José Cortés PhD on
Environmental Impact
Soil, water, biodiversity
alternative technology
Edna Álvarez


Improve
feeding efficiency
Relation with
WP 3 Jeroen Groot
WP 5.2 Santiago Dogliotti
WP2
WP5.1
WP5.3
Abigail Castro PhD on
Feeding Strategies
Crop management,
concentrates
Maximino Huerta


Increase product price
Improve quality and added value
Improve marketing
Post harvest technology, pasteurising and design of new products
Armando Santos
Farmers organisation
WP2, WP4 & WP5.1
Martha Perales

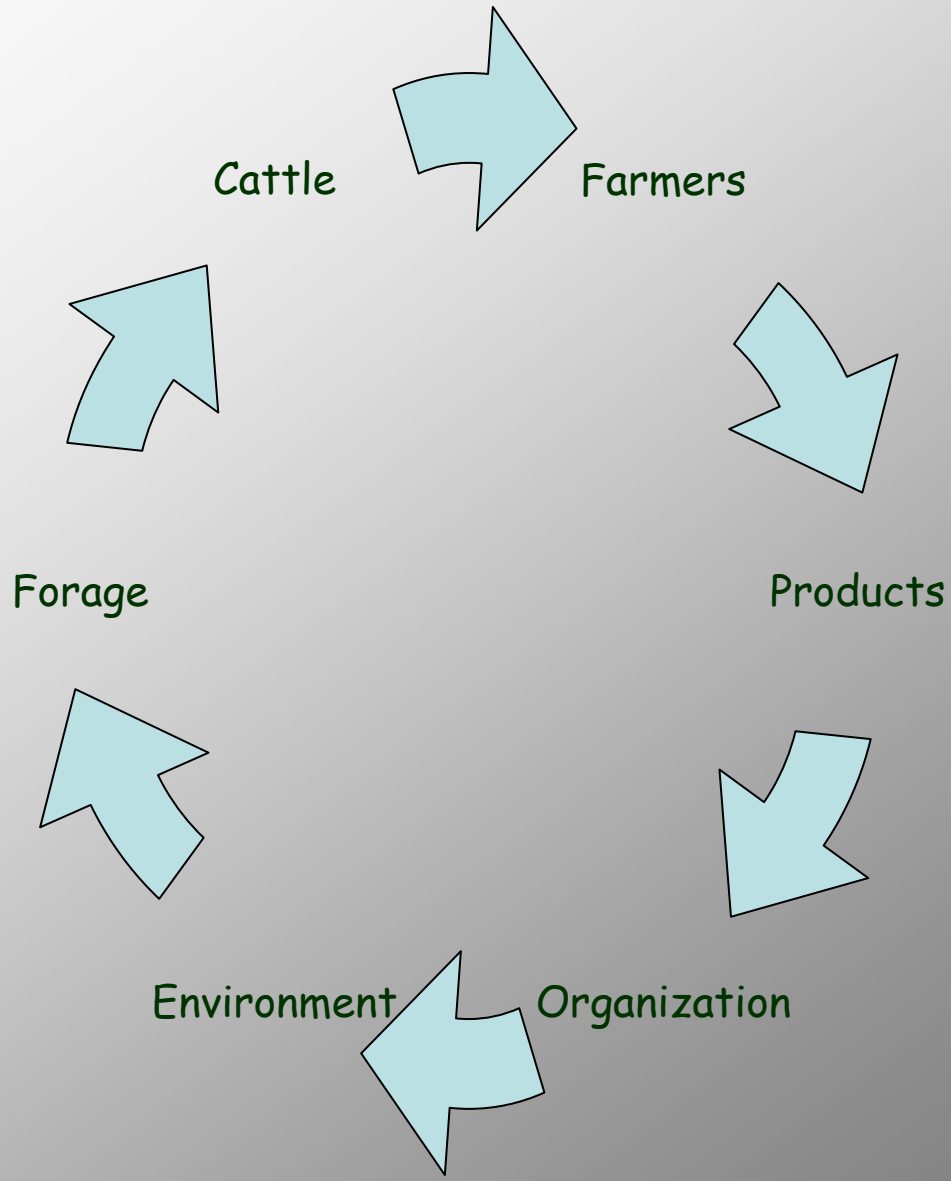
# Post harvest technology, pasteurising and design of new products: Armando Santos

- Armando has been for more than a year and with high impact training farmers in aspects of milk quality and elaboration of different products.
- For 6 months he appointed two just graduated B.Sc. which worked daily with farmers on product development and product quality.

# Relationships with WP 4 and WP 5.1
# Martha Perales

- Region description and drivers identification.

- Farm typologies.


Cattle
Farmers
Products
Organization
Environment
Forage