



OCP Policy Center Conference series

Rehabilitating agricultural systems based on farming diversification and crop/livestock integration in order to enhance food security in Morocco

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Introduction

Agriculture: a key sector in Morocco

'Green Morocco Plan': investments to boost productivity

Morocco's agriculture: *many constraints*

- vast majority of smallholding units
- climate hazards
- limited investments
- poor farmers' education.



Diversified crop/livestock farms: key to sustainable farming systems (Ryschawy *et al.*, 2013)

Reviewing the recent achievements of the agricultural sector in Morocco

Assessment of sustainability in a water stressed country

How to address future challenges?

Climate hazards and agricultural prices' volatility

Global food crisis: major social and political effects

Morocco relatively immune: good harvests
Livestock numbers rising to 1980's levels

2014: severe drought → economic slowdown
Climate uncertainty: major challenge for the country.



Global scale: persistent food prices' volatility

More economic troubles for the public authorities

Increase in production costs, whereas "farm gate" prices stagnate

Work constraints in agriculture

High levels of work load in farming activities
280 hours for one ton of milk delivered (Sraïri *et al.*, 2013)

In many situations, family members largely involved



Livestock: a mean to secure the income and overpass constraints

Limited remuneration per hour worked: less than 20% of that of cash crops



More predictable tensions in the work market

Sustainability with scarce water

Increasing levels of climate uncertainty for Morocco

Renewable water almost entirely mobilized

Drip irrigation and groundwater : too easy “solutions”?

The need of regulation authorities to avoid anarchy

Desalination: an utopia?



Dependency vis-à-vis imported genes?

Intensive animal systems

Relying on imported genes

Which profitability?

Local breeds quite neglected



Vast majority of horticultural crops destined to exports

Imported inputs: seeds, fertilizers, etc.

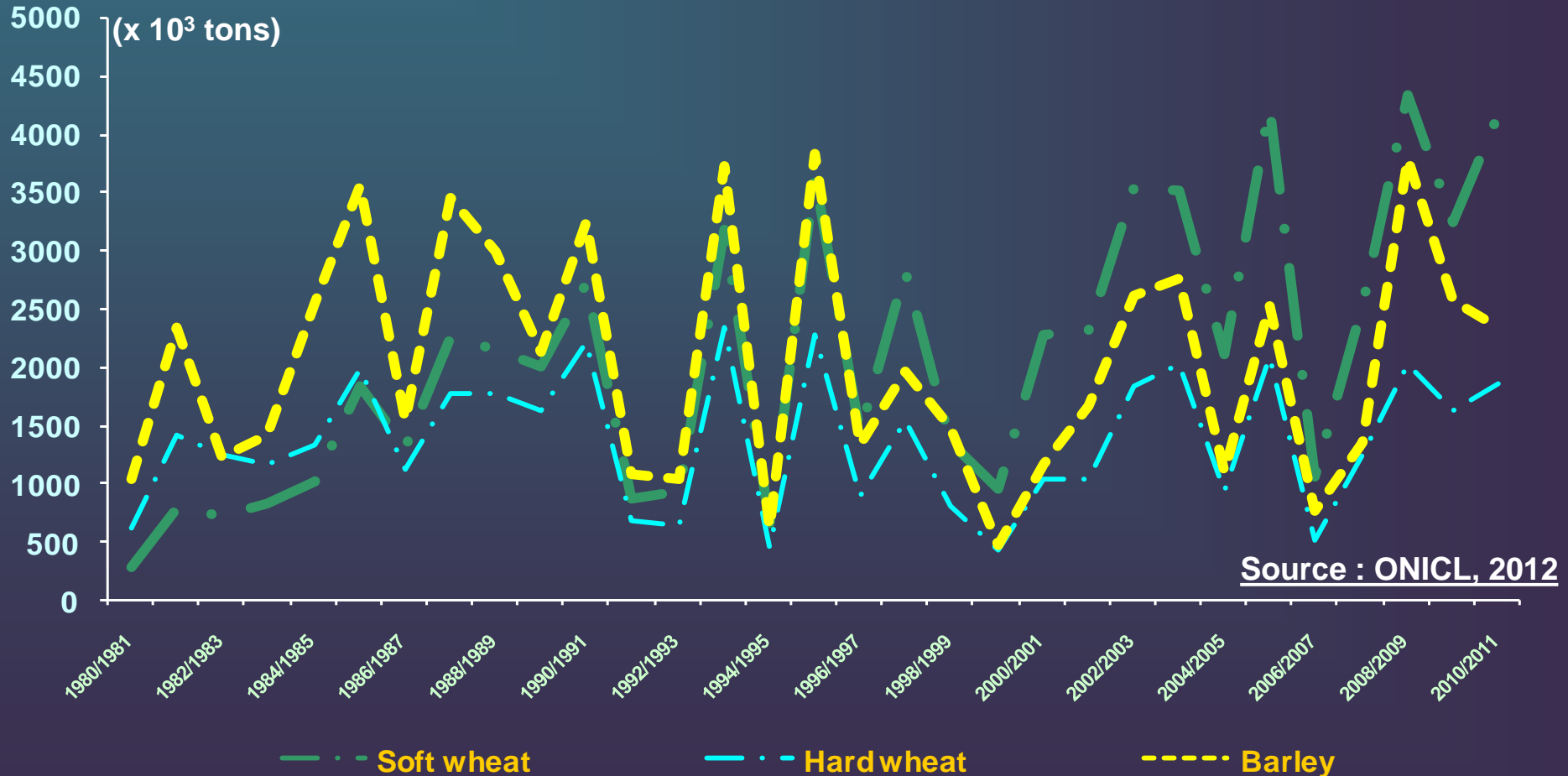
Vulnerability due to unstable global prices: major trouble for the citrus and olive oil sectors

Fluctuating harvests and imports

Levels of cereals' output: highly variable

Depending on rainfall. *No real improvement in the agronomic practices*

More than 80 kg of soft wheat imports *per capita per year.*



Towards a diversified agriculture

Complexity of agricultural affairs

Farms generally managing rain-fed and irrigated plots

Taking advantages from complementarities: manure, by-products, labor management, etc.



Crop/livestock integration to avoid risky options

Promoting good agricultural practices

Sharing the efforts and the incentives of the agricultural development with all kinds of farms

Conclusion

Integrating crops and livestock: ensuring sustainability

Investments in training and technology transfers

Systemic assessments of farming activities to be encouraged



Crucial role of rainfall in a country mainly arid and semi arid

Building networks of R/D with the Euro Mediterranean countries: promote innovations

Agriculture: a risky business.



Diversifying incomes' sources for rural dwellers: better education

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Thanks for your attention

