

Improving the date production chain in the Moroccan oases through small mechanization inputs to support the governmental development strategies

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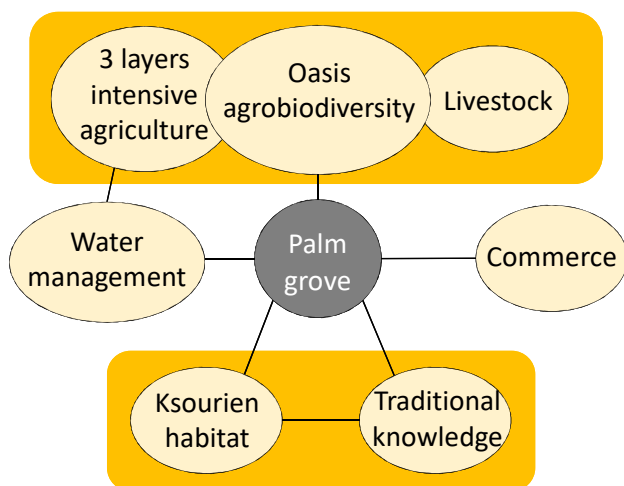
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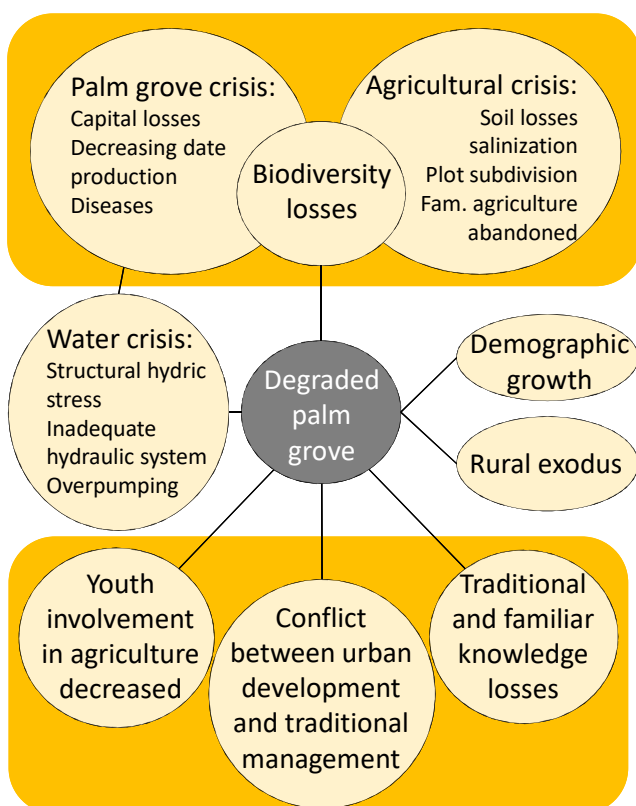
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Traditional palm-based oasis ecosystem:



Degraded oasis ecosystem:



Main oasis degradation factors:

- Land and water scarcity
- Salinity
- Silting and desertification
- Negative impact of pests and diseases
- Loss of traditional knowledge

Moroccan date production main problems:

Farmers	Cooperatives/ associations	Economic Interest Groups (GIE)
<ul style="list-style-type: none"> • Lack of interest by young generation • Lack of money • No palm renovation • Informal agreement with brokers and buyers • Poor logistic for transport and marketing 	<ul style="list-style-type: none"> • Poor marketing • Health certification (ONSSA) difficult to be obtained • HACCP principles rarely followed 	<ul style="list-style-type: none"> • Equipment inadequate or insufficient • Infrastructure not fitting international certification criteria • Lack of adequate formation • Difficult relations with cooperative and producers

In Moroccan oases, date palm agricultural operations are mainly manual and seldom implemented, contributing to palm grove degradation.

The introduction of small mechanization may reduce drudgery, encourage/attract youths, increase labor productivity and safety.



Proposed mechanization scheme:

- Small size tractor with trailer and multiple tools
- Small size transporter
- Small size excavator
- Motocultivator with multiple tools
- Motorhoe
- Small size self-propelled off-road aerial platform
- Metal ladder (adapted to date palm)
- Power scissors (pneumatic or electric)
- Chain saw (pneumatic, electric)
- Knapsack motorized sprayer
- Motorized static mulcher

