

Kingdom of Morocco

The Prime Minister

Agency for Promotion and Economic and Social Development
of the Southern Provinces of the Kingdom



Prickly Pear Cactus in Southern Moroccan Regions



From historical patrimony to a technological future



The Kingdom of Morocco, rooted in the desert

- Open on a sea and an ocean, standing against four mountainous chains, anchored in the Sahara desert
- Aridity matters beyond the mountains to the East and to the South
- Prickly pear is present everywhere, but half of the planted area is below the last mountain chain
- The southern Provinces are roughly 60% of the country's area



Prickly pear cactus in Moroccan Southern Provinces



- *Opuntia ficus indica* has been present here for more than four centuries (Guetna)
- Instead of “Hindia” , “Karmouss Ennsara”, it is called here “Aknari” ...
- Primary use is here forage, whereas it is mainly used as fences in the rest of the country
- 30.000 Ha around Guelmim, 60.000 with neighbouring Province
- Located mainly on secluded hills with a high biodiversity index



The Agency of the South and its cactus program



- Role : Setting up programs in partnerships to achieve synergies in human development in Moroccan Southern Provinces
- Enhancing value of natural resources (huge potential)
- Started 2 years ago a program together with UNDP, the provincial council of Guelmim, and eight municipalities of Guelmim's Province, adding up to 25.000 Ha:

Aferket

Asrir

Echchati Abied

Laksabi

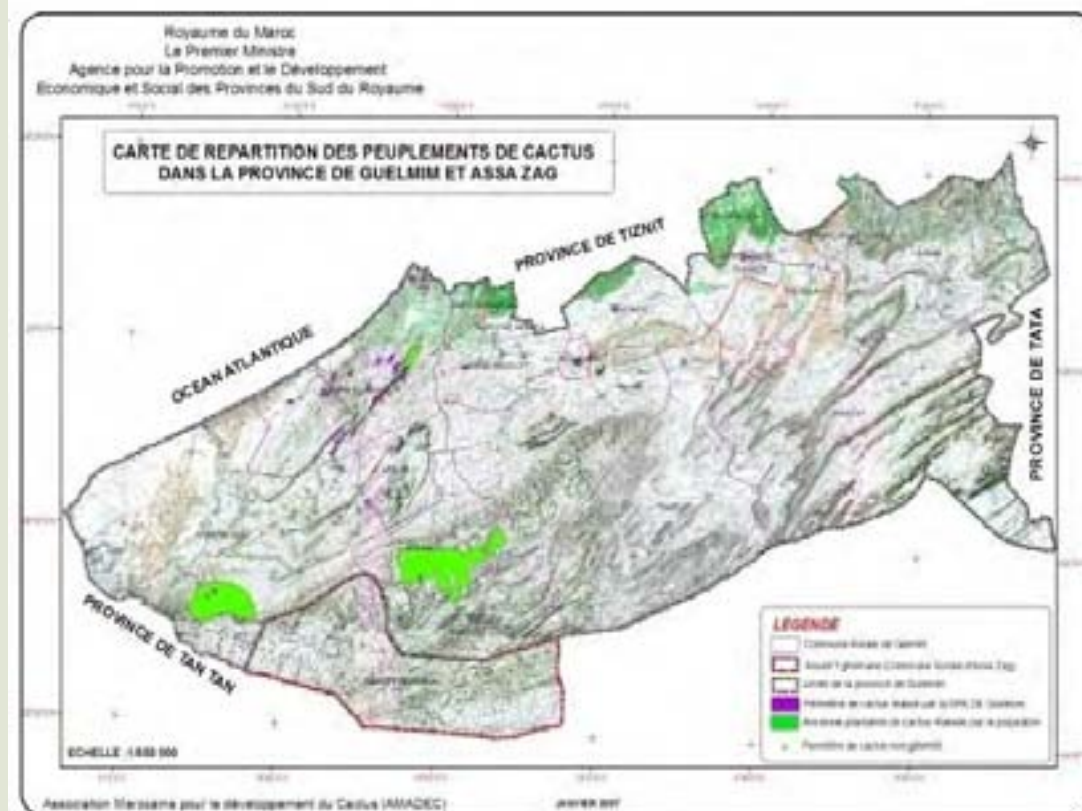
Lebyar

Rass Oumlil

Targua Wassay

Tigit

»



First action = opening up cactus ranges



- A 1.5 Mio US \$ program was set up with the General Direction of Local Collectivities (Ministry of Interior)
- 170 km stabilized on 4 major dirt road axes
- Opening up major zones of cactus plantation throughout more than 220 kms
- New access to more than 10.000 ha de plantations.



Set of actions = Studies, formation, demonstration, small livelihoods

- Plantation demonstration
- Studies of different kind carried out =
 - Inventory of traditional knowledge
 - Research on cattle food formulation
 - Marketing for oil
 - Potentialities of apiculture
 - Economic Interest groupings
 - International expertise
- Formation stages = apiculture, processing methods for cattle food, jam, oil, nopalitos...
- Chicken farming on cactus fruits

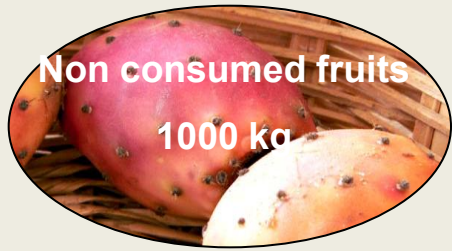


Cattle feed = 2 units of production

- Local livestock (mainly camels, sheeps and goats) need food complementation during many months of the year
- Cactus (fruits and pads) is plentiful all year round, and can provide a basis for cattle food formulation (silage)



Cattle food production



After drying



Oil: 1,75 Liters

Seeds 35 kg

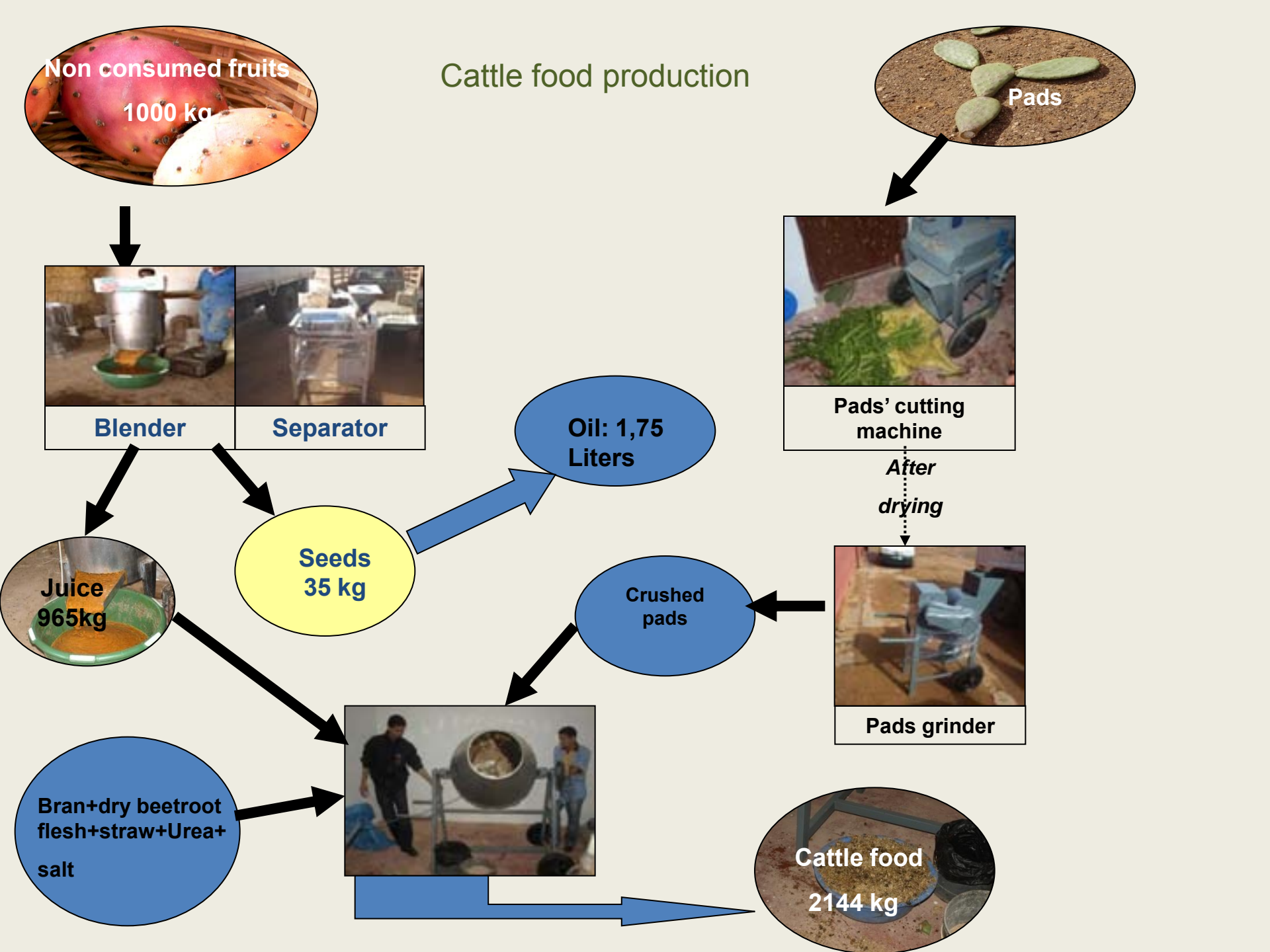
Crushed pads

Juice 965kg

Bran+dry beetroot flesh+straw+Urea+ salt



Cattle food 2144 kg



Cooperative for cactus processing, beekeeper union and green technology = will be presented in a short movie



Fruit processing unit =

- Taking advantage of 60,000 Ha of plantation close to Guelmim
- Almost six month of fruit production (Aissa & Moussa)
- Spineless fruit sold in supermarket, nationally and internationally



Futuristic vision = the cactopole

- Industrial quarter devoted to cactus transformation on 25 Ha
- Close to the national road, close to Guelmim, close to the provincial water treatment plant



Cochineal = A possibility?

- Aknari goes back to the name of Canary Islands
- Potentialities (land, workforce, latitude) vs constraints (introduction of a parasite)



We're open to every new idea and partnership !!

Thank you for your attention

-Karim Anegay, October 18th 2010



And welcome to the mid congress tour
organized by the Agency of the South!!