Improving smallholders competitiveness:

role of Cirad and PalmElit

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Role of PalmElit and Cirad:

- Smallholdings and smallholders:
  - From African context to our 6 wills
  - Actual spontaneous development

- Inclusive business project
  - Improving competitiveness of existing smallholdings
  - Improving competitiveness of next smallholdings
  - Building partnerships for the project
Oil palm smallholdings in Africa: about 80% of ha

1st will: PalmElit & Cirad => work on African smallholdings

While 41% of the world oil palm area is owned by smallholders

Huge diversity of smallholders

2nd will: PalmElit & Cirad => work for all smallholders types

<table>
<thead>
<tr>
<th></th>
<th>Entrepreneurial agriculture</th>
<th>Family farming and the Worlds to come</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capitalist firm</strong></td>
<td>Exclusively salaried employees</td>
<td>Mixed, some presence of permanently salaried employees</td>
</tr>
<tr>
<td><strong>Managerial enterprise</strong></td>
<td>Not mobil and held by shareholders</td>
<td>Held by the family or a family association</td>
</tr>
<tr>
<td><strong>Family business farm</strong></td>
<td>Held by the family rarely a family association</td>
<td></td>
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<tr>
<td><strong>Family farm</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Labor</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Capital</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Management</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>Home consumption</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Legal status</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Land status</strong></td>
<td></td>
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</tbody>
</table>

In synergy: in a cooperative, sharing a small-scale mill,...

In competition: land access

Artisanal and industrial processes:

3rd will: PalmElit & Cirad => keep 2 ways for smallholdings development

- Allows development everywhere
- Many labours including women
- Sometime more incomes
- Lost of oil
- No effluent treatment
- Sometime high oil acidity

- High oil extraction rate
- Controlled oil quality
- Effluent treatment
- Huge investment
- Localised development
Traditional oil palm groves: specific of family farms in Africa => but out of development schemes

4th will: PalmElit & Cirad => improving competitiveness of palm groves

TRADITIONAL GROVES AND PLANTATIONS

Niger Delta, Nigeria - One third of African Oil Palm area - traditional palm groves 1.1 million ha, medium and smallholders plantations 270,000 ha and agro-industrial plantations 110,000 ha. (PIND) 2011
Planting material is the main limiting factor

5th will: PalmElit & Cirad => focus on planting material limiting factor

<table>
<thead>
<tr>
<th>Types of planting material more generally used</th>
<th>Selected (100% T)</th>
<th>Unselected (25%D + 50%T + 25%P)</th>
<th>Local (99% D local)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smallholders' main cropping systems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil palm plantation with design ex: 143 palms/ha</td>
<td><strong>X</strong></td>
<td><strong>X</strong></td>
<td></td>
</tr>
<tr>
<td>Wild grove + isolated palms in food crops plots</td>
<td></td>
<td><strong>X</strong></td>
<td><strong>X</strong></td>
</tr>
<tr>
<td>Expected yields (in % of selected oil palm yield in the same conditions)</td>
<td>100%</td>
<td>60% FFB</td>
<td>40% CPO</td>
</tr>
</tbody>
</table>

Cochard B. et al. 2001. Intérêt des semences commerciales de palmier à huile.
Technical support helps smallholders to plant selected palms

6th will: PalmElit & Cirad => work with local partners providing technical support to smallholders

Series of planting material used
- Non selected => Selected
- Selected => Non selected => Selected
- 100% selected

Oil palm mill
Actual spontaneous development
Far away from oil palm mills

By self funding and synergy between the different types of smallholders: Managerial enterprises & family business farms can invest in artisanal mills to operate their own production as well as subcontract with neighbours until the mill is saturated at the peak season.

Each planter find his planting material by himself => unselected palms are planted
Actual spontaneous development
Inside oil palm mill supply area

By self funding and with competition between the different types of smallholders for land access and land titling inside the mill supply area.

The agro-industry can be passive or can invest in a « win-win » relationship with smallholders by providing them selected planting material, fertilisers, ... against their FFB.

Agro-industry can easily spread high quality planting material inside its mill supply area to get a high OER back from smallholders bunches.
How to improve smallholders competitiveness?

- from our 6 wills
  Actual spontaneous development

- Inclusive business project
Improving competitiveness of existing smallholdings

PalmElit & Cirad => 60% progress (FFB + EOR) / 50 years

Results: genetic progress included in CIRAD® seeds

Genetic value of Cirad® Seeds
(Other than fertilization and management progress)

- Nord sumatra (no water deficit)
- Côte d’Ivoire (-340 mn/an)

1.2%/year
55 kg/year
Improving competitiveness of existing smallholdings

PalmElit & Cirad

New PM: Low Lipase

- Less strict harvest calendar
- Less lost of over-ripe FFB
- Less FFA in artisanal red oil palm: better taste and longer storability

How to improve competitiveness of existing smallholdings?

Replanting with high yielding and low lipase planting material:

- Progressive replanting of isolated palms in food crop plots, of palm groves owned by people or by community, without any other main changes of the cropping system which is convenient for some family farmers, helped by government extension services

=> New, for family agriculture, with no environmental impact

- For all smallholder types, progressive and regular replanting of smallholders’ plantations, starting by the plots with the less producing planting material, the oldest plots, the plots with high mortality
Improving competitiveness of existing smallholdings

Replanting with high yielding and low lipase planting material:

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- Localised development
How to improve competitiveness of next smallholdings?

Providing an access to high yielding and low lipase planting material for every types of smallholders

1. Promoting smallholders association far away from mills to get an access to high quality planting material, supported by development funds managed by local projects

2. Promoting inclusive business association for new oil palm development on already farmed land, changing partially land use in farms, with zero deforestation of HCV area

3. Where agro-industrial mills are not saturated during peak season, promoting extensions of smallholdings inside mill supply area by win-win relation (cost price seedlings)
Far away from mills: Smallholders association, development funds and project

The development funds finance local projects. Smallholders association benefit from:
- Planting material to create the first oil palm plot (seedlings for 2ha)
- Small-scale processing units managed by smallholders association (SA)

For the extensions, the SA gather the planting material orders together.
Oil palm development on already farmed land
Inclusive business association “by alliance sharing”

The investor build the oil palm mill and holds 50% of the Alliance sharing. Government helps to create Alliance and bring technical support. Farmers are benefiting from plantation credits guaranteed by the mill. They also participate in decision-making by holding together 50% of the share according to their planted areas.
Where mills are not saturated during peak season
Smallholder development with an agro-industry

The agro-industry provides cost price selected seedlings to smallholders interested to extend their oil palm area. By the way, the agro-industry spreads in its mill supply area, low lipase selected oil palm with better yields and high oil extraction rate.
How to improve smallholders competitiveness?

6 wills
Actual spontaneous development

Inclusive business project

- Government extension services
- ONG
- PalmElit local dealer
- Investor
- Development funds
- Development bank
- Agro-industry

Smallholders Associations

Building partnerships
Thanks for your attention