Value addition and diversification in agriculture

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Agriculture remains the backbone of many low and middle-income economies...

Data source: World Development Indicators
Agriculture remains the backbone of many low and middle-income economies and is crucial to achieve the SDGs.

Data source: World Development Indicators
There are large differences in agricultural productivity - value addition is essential

Value added per worker in agriculture in 2016 (or latest year available, constant 2010 USD)

Vanuatu (2014): USD 2,598

Data source: World Development Indicators
Coconut products

**Kernel**
- Copra
- Crude coconut oil (CNO)
- Refined coconut oil (RBD)
- Biofuel
- Virgin coconut oil
- Desiccated coconut
- Coconut water
- Coconut milk
- Coconut vinegar
- Coconut flour
- ...

**Husk**
- Coconut fibre
- Coir yarn
- Coir twine
- Textiles
- Mattresses
- Molded coir products
- Brushes
- Brooms
- ...

**Shell**
- Charcoal
- Activated carbon
- ...

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Vanuatu's coconut product exports

Vanuatu share of coconut products (2016-18, % of total coconut exports)

Data source: Vanuatu National Statistics Office
Diversification can help mitigate weather and climate-related risks

• Vanuatu is one of the most vulnerable countries to climate change
  – 21st out of 181 countries according to the 2017 ND-GAIN climate vulnerability score

• Agriculture is major receiver of climate-related impacts
  – crop losses and damages to agricultural infrastructure due to floods, storms, and droughts
  – Rising sea levels
  – Changing precipitation patterns
  – Increase in weeds, insect pests and plant diseases
Diversification can help mitigate price risks
Diversification can help mitigate price risks
Coconut products
- example of a diversified coconut export structure

Sri Lanka coconut products exports in 2018 (value shares)

Data source: Sri Lanka Coconut Development Authority
UNCTAD project on cotton-by products in Eastern and Southern Africa

• Cotton sector in many African countries characterized by low value addition
• Project aims at strengthening the capacity of beneficiary countries to
  – assess the potential value, market situation and prospects for cotton by-products
  – formulate evidence-based policies that improve the value added of cotton by-products
  – devise investment profiles to attract potential investors
• Project implemented in United Republic of Tanzania, Uganda, Zambia and Zimbabwe from 2016 - 2019
Cotton-by products

COTTON PLANT

SEED COTTON

LINT

- Spinning (yarns)
  - Non-woven
    - Medical uses
    - Ragtearing
  - Textiles
    - Towels
    - Bed linens
  - Industrial
    - Canvas
    - Footwear
    - Belts
  - Weaving yarn
  - Knitting yarn
  - Other

Planting seed

SEED

- Cake / meal
  - Flour
  - Feed
  - Fertilizer
- Meat
- Oil
  - Salad / cooking oil
  - Cosmetics
  - Pharmaceuticals
  - Waterproofing
- Hulls
- Linters

COTTON STALKS

- Pulp
  - Particle board
  - Fuel briquettes
  - Substrate for mushroom cultivation

Focus area of UNCTAD project:
"Promoting cotton by-products in Eastern and Southern Africa"

Source: Adapted from Cotton Development Organisation, Uganda
Cotton-by products can contribute to development objectives

- Income opportunities for farmers
- Small-scale, rural business opportunities, including for women
- New business opportunities for entrepreneurs
- Improved nutrition
- Substitution of fossil fuels
- Substitution of wood charcoal (deforestation)
- Reduced pollution
Financial projections for selected cotton stalk-based businesses

<table>
<thead>
<tr>
<th>Item</th>
<th>Briquetting plant</th>
<th>Pelleting plant</th>
<th>Mushroom farm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>20 MT/day</td>
<td>4 MT/day</td>
<td>3,600 kg/yr</td>
</tr>
<tr>
<td>Total capital investment (US$)</td>
<td>69,000</td>
<td>25,000</td>
<td>14,850</td>
</tr>
<tr>
<td>Total revenues / year (US$)</td>
<td>350,000</td>
<td>59,000</td>
<td>5,832</td>
</tr>
<tr>
<td>Net profits / year (US$)</td>
<td>35,000</td>
<td>8,000</td>
<td>3,644</td>
</tr>
<tr>
<td>Net profit margin</td>
<td>10%</td>
<td>14%</td>
<td>25%</td>
</tr>
<tr>
<td>Return on investment, annual</td>
<td>53%</td>
<td>32%</td>
<td>25%</td>
</tr>
<tr>
<td>Investment payback period (months)</td>
<td>23</td>
<td>38</td>
<td>49</td>
</tr>
</tbody>
</table>

Sources: Estimates by UNCTAD, CIRCOT and Uganda Industrial Research Institute
Summary

• Agricultural development is a crucial aspect of the sustainable development agenda

• Value addition and diversification can help to mitigate risks and contribute to achievement of SDGs

• Large potential for value addition and diversification exists in coconut sector
Thank you.

More information:
https://unctad.org/en/Pages/SUC/Commodities-Special-Unit.aspx

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