SARAMI BEEF CATTLE PROJECT

Economic Growth

Cattle-Beef Value Chain
THE SARAMI PROJECT

The Enterprise Challenge Fund (ECF) supported Sarami Project demonstrates:

• Successful private sector intervention
• Established a sustainable business model
• Benefits cattle-beef value chain including smallholder cattle producers on the island of Espiritu Santo
ECF provided a $A1.375 million grant to Sarami (30% of project cost) allowing:

- In-field purchasing of steers and heifers from smallholders;
- Cattle transport from smallholder properties to Sarami Estate;
- Establishment and maintenance of improved pastures;
- Production of silage from forage sorghum;
- Use of silage as a cattle feed component; and
- On-farm integration and management of cattle for finishing.
**BUSINESS PROCESS**

**Smallholder Cattle Producers**
- Breeding
  - Retain breeding cows
  - Improve genetics through access to improved bulls
- Background
  - Grow out steers and heifers for finishing
- Sell
  - In field sale to Sarami Estate

**Sarami Estate**
- Finishing
  - Place cattle on improved pasture to optimise growth rates
- Genetics
  - Improve genetics and make bulls available to smallholders
- Nutrition
  - Pasture Improvement
  - Weed management
  - Forage crop
- Sell
  - Sell to Santo Meat Packers when cattle can achieve price premium.

**Santo Meat Packers**
- Purchase
  - Purchase cattle on a weight price schedule that encourages larger carcases and improved quality beef
- Process & Export
  - Slaughter and process into the full range of beef primals and other products
- Sell
  - Sell full range of beef products to local and export markets and optimise returns
Sarami Estate Buyer talks with smallholders to determine if there is a truckload of cattle available (8-12 small cattle).

Sarami Estate Buyer visits smallholders, selects cattle to purchase and makes an offer to the smallholder.

Smallholder agrees to sell and Sarami Estate Buyer pays the smallholder in cash.

Purchased cattle are loaded into the truck for transport and delivery to Sarami Estate.

Once 40 cattle have been purchased from smallholders, an improved commercial bull from Sarami Estate is delivered to improve herd genetics.
<table>
<thead>
<tr>
<th>INVESTMENT</th>
<th>ACTUAL OUTCOMES</th>
</tr>
</thead>
</table>
| Cattle genetics - Smallholder and Sarami Estate | • Current smallholder genetics with good nutrition are capable of producing carcase weights in excess of 300kg.  
• Improved commercial bulls have been provided to smallholders under an incentive program.  
• Stud Brahman herd being developed (embryo transfer technology and QLD Brahman genetics). |
| Cattle purchase & transport                    | • In-field purchasing under the Sarami project are highly preferred by smallholders due to:  
  • Improved returns for small cattle  
  • Reduced need to grow out cattle to abattoir target weights  
  • In-field negotiation and cash payments  
  • No need to deal with transport logistics or costs  
  • Participation in the commercial bull incentive program  
  • Benefits that flow from confidence in management, technical and commercial advice provided to smallholders by Sarami |
HEAVY TRACTOR USED TO PREPARE LAND FOR IMPROVED PASTURE
## Sarami Project Investment and Outcomes

<table>
<thead>
<tr>
<th>Investment</th>
<th>Actual Outcomes</th>
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</thead>
<tbody>
<tr>
<td>Cattle handling, management and induction</td>
<td>• Improved cattle yards constructed - work well with cattle that are unfamiliar with yards. Fitted with weigh and crush pens to assist induction processes, allows drafting to ensure that the cattle liveweights achieve abattoir requirements prior to delivery.</td>
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</tbody>
</table>
| Pasture improvement               | • 600 hectares of improved pasture established using heavy tractor machinery for ploughing and paddock preparation. Signal grass inter-grown with Hetero legume. Trials - Hamil and Mulato grasses and Centro as an alternative legume.  
  • Stocking rates and periods on the improved pasture need to be actively managed to be sustainable.  
  • Sound weed control practices are highly important in maintaining improved pasture. After weeds are brought under control, Sarami conducts manual weeding practices as a maintenance program. |
SARAMI ESTATE CATTLE YARDS
### SARAMI PROJECT INVESTMENT AND OUTCOMES

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| Forage crop and silage production | • Forage sorghum has been grown and utilised for the production of silage.  
• Silage was produced using a mechanical harvester and treating the silage with a high quality enzyme additive to enhance fermentation.  
• A silage heap of 7000 tonnes has been produced.  
• Cattle feeding, using silage as the main component supplemented with copra meal and rock salt and mixed in a feed mixer, has been successfully demonstrated.  
• Trials were conducted using root crops as a supplement in the feed formula. This was discontinued due to the logistics of accumulating sufficient root crop when required. |
SILAGE PRODUCTION
# Cattle in the Pacific

## Number of Cattle in the Pacific Islands - 2010

<table>
<thead>
<tr>
<th>Countries</th>
<th>2010</th>
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<tbody>
<tr>
<td>Fiji</td>
<td>312,000</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>160,000</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>94,000</td>
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<tr>
<td>New Caledonia</td>
<td>90,000</td>
</tr>
<tr>
<td>Samoa</td>
<td>30,000</td>
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<tr>
<td>Solomon Islands</td>
<td>14,500</td>
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<tr>
<td>Micronesia</td>
<td>14,000</td>
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<tr>
<td>Tonga</td>
<td>11,300</td>
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<tr>
<td>French Polynesia</td>
<td>7,300</td>
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<tr>
<td>Guam</td>
<td>140</td>
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<tr>
<td>Cook Islands</td>
<td>130</td>
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<tr>
<td>Niue</td>
<td>115</td>
</tr>
<tr>
<td>American Samoa</td>
<td>110</td>
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<tr>
<td>Wallis and Futuna Islands</td>
<td>60</td>
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Source: FAOSTAT
VANUATU BEEF SLAUGHTER

Vanuatu Beef Slaughter

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<tbody>
<tr>
<td>Head</td>
<td>1,000</td>
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- Red: Santo Abattoir
- Blue: Port Vila Abattoir
VANUATU BEEF TRADE

Vanuatu - Beef Imports
Chilled/Frozen

Source: COMTRADE

Vanuatu - Beef Imports
Import Source

Source: COMTRADE

Vanuatu - Beef Exports
Chilled/Frozen

Source: COMTRADE

Vanuatu - Beef Exports
Export Destination

Source: COMTRADE
### Cattle Distribution

#### Vanuatu Farm Size Distribution

<table>
<thead>
<tr>
<th>Description</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td><strong>Description</strong></td>
<td></td>
</tr>
<tr>
<td>Farm Size</td>
<td></td>
</tr>
<tr>
<td>Number of Farms</td>
<td>3187</td>
</tr>
<tr>
<td>Percent of Farms</td>
<td>41%</td>
</tr>
<tr>
<td>Number of Smallholder Farms</td>
<td>3070</td>
</tr>
<tr>
<td>Percent of Smallholder Farms</td>
<td>96%</td>
</tr>
<tr>
<td>Average Farm Size</td>
<td></td>
</tr>
<tr>
<td>Number of Cattle</td>
<td>13,1789</td>
</tr>
<tr>
<td>Percent of Cattle</td>
<td></td>
</tr>
<tr>
<td>Number of Cattle on Smallholder Farms</td>
<td>39,089</td>
</tr>
<tr>
<td>Percent of Cattle on Smallholder Farms</td>
<td>24%</td>
</tr>
</tbody>
</table>
Sarami Business Driver & Risks

Business Driver

- SMP encourages the production of heavy carcase weight steers and heifers.
- SMP premium allows Sarami to purchase steers and heifers from smallholders at a higher price and then to add value to these animals by growing them out to heavy carcase weights
  - Private sector driven approach that responds to a cattle market that pays a premium price for improved quality cattle (higher carcase weights in younger cattle) and is structured into breeding/backgrounding (by smallholders) and finishing operations (by Sarami).

Risks

- Restructuring of the SMP price schedule.
- Normal farming risks
  - Low animal disease risk and drought mitigated by silage.
<table>
<thead>
<tr>
<th>Weight Range</th>
<th>May-09</th>
<th>Mar-11</th>
<th>May-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>300kg and Over</td>
<td>180</td>
<td>190</td>
<td>270</td>
</tr>
<tr>
<td>260kg to 299.5kg</td>
<td>160</td>
<td>170</td>
<td>240</td>
</tr>
<tr>
<td>230kg to 259.5kg</td>
<td>130</td>
<td>140</td>
<td>200</td>
</tr>
<tr>
<td>190kg to 229.5kg</td>
<td>110</td>
<td>110</td>
<td>199.5</td>
</tr>
<tr>
<td>189.5 and under</td>
<td>80</td>
<td>80</td>
<td>90</td>
</tr>
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**SANTO MEAT PACKERS - STEER PRICES**

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<tr>
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PROJECT BENEFITS

• **Cattle Purchases from Smallholders**
  - Purchases - 558 transactions - 21 locations – Average $A305 per head.

• **Sales & Added Value**
  - Sales – Average $540
  - Added Value - $A0.45 million.

• **Indirect Benefits**
  - Intercommunication technical, management and commercial advice - Sarami buyer to smallholders – More powerful than agricultural extension officers advice.
  - Sale of 400 heifers to Solomon Islands 2011 – Negotiating for further 400 artificially inseminated heifers and 20 commercial European bred bulls.
SMALLHOLDER CATTLE – ESPRITU SANTO
**ECONOMIC BENEFITS**

- Smallholders that sell steers & heifers to Sarami at \( \approx 300\text{kg} \) stand to benefit in the region of $A100 to $A150/head.
- Steers that Sarami grow out from 300kg to 600kg liveweight provide a contribution to farm overhead and fixed costs of $A150 to $A200.
- Smallholders can restructure their cattle herds to increase the number of cows in the herd, to reduce the numbers of steers and surplus heifers through selling younger lightweight cattle to Sarami and to improve weaning rates. This strategy provides the following outcomes for smallholders:
  - Herd of 6 produce 2 more per year and improve income by $A575.
  - Herd of 24 produce 5 more per year and improve income by $A750.
  - Herd of 60 produce 11 more per year and improve income $A1,500.
Replication in Fiji

- To establish a sustainable business model in Fiji there is a need to work in both the cattle raising and the meat processing/wholesaling spaces.

- Fiji has a beef supply deficiency and although there is a market for quality beef in tourism and for more discerning local customers, there is no structure in place for identification of indigenously produced improved quality beef.

- Customers sourcing quality beef must rely on reputation.
  - Inherent problem is purchasing managers distrust of single supplier arrangements and potential for substitution.

- There is potential for a third party beef quality grading system in Fiji.
  - **Keep Simple**: eg over 240kgCW; animal age (<6 permanent incisors) exclude poor muscling & fat cover, dark meat and yellow fat.
Imports

**Beef & Beef Offal Imports**

- Almost 3,000 cattle are required to produce 100 tonnes of quality hind quarter beef cuts.

**Fiji - Beef Self Sufficiency**

- Source: FAOSTAT
Possible Cattle Ranch Interventions in Fiji

- Develop stud herds sourcing genetic material from Sarami.
- Improved commercial bulls for smallholders under a delivery incentive program.
- Upgrade of cattle handling yards.
- Pasture improvement program.
- Use of contractors for land preparation and pasture improvement.
- Develop forage crop and silage production program.
- Develop cattle feeding utilising sugar sector byproducts in conjunction with silage.
- Encourage in-field purchasing logistics:
  - In-field negotiation and cash payment
  - Support transport logistics /costs
  - Improve confidence in management, technical and commercial advice
Possible Partners

Primary Partners
- YAQARA RANCH / OTHER > 250 CATTLE.

Secondary Partners
- TEBARA MEATS / ALI’S HALAL / FIJI MEATS / SOUTH PACIFIC BUTCHERY / WHALEY’S / NAUSORI MEATS / LEYLANDS / CITY HALAL / MARAVU

Third Party Beef Quality
- LIVESTOCK & CROP COUNCIL OF FIJI – Owner and promoter of beef quality description system
- FIJI MEAT INDUSTRY BOARD (FMIB) – Implementer of beef quality description system.
CONCLUDING REMARKS - 1

The Enterprise Challenge Fund (ECF) supported Sarami Project demonstrates:

- Successful private sector intervention
- Sustainable business model
- Benefits along cattle-beef value chain
- Innovative value chain expected to continue to contribute to economic activity in Vanuatu (esp Espiritu Santo) over many future years.
CONCLUDING REMARKS - 2

Implications for Fiji include:

- Need to develop a beef description system
- Opportunity to use Sarami experience:
  - Source of genetics
  - Bull incentive program
  - Pasture improvement experience
  - Forage crop / silage feeding
  - In field purchasing