

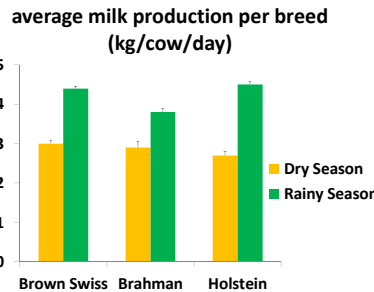
# Sustainable milk and beef production in Nicaragua: actions and opportunities for an inclusive value chain

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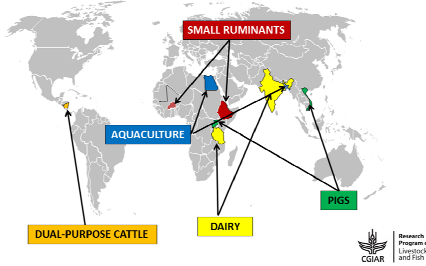
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## Cattle Sector in Nicaragua

- Major pillar of economy (36% of agricultural exports)
- Increasing demand
- Adapted disease resistant breeds/crosses
- Extensive, low productivity
- Soil degradation and deforestation
- 63% of agriculture GHG emissions



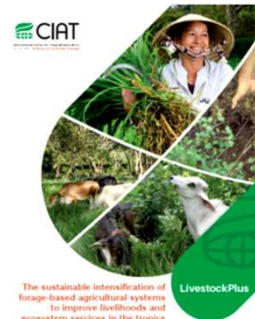
## Nicaragua dual purpose cattle value chain part of CRP Livestock and Fish



## LivestockPlus

Sustainable intensification: integration of improved forages

- Genetic intensification: superior cultivars
- Ecological intensification: improved agro-ecological practices
- Socio-economic intensification: reinforced institutions and policies



## Partners

- Farmers
- Cooperatives
- Solidaridad Network
- National Agricultural University
- Heifer International
- Regional Research Institute CATIE

### Farmer Field Schools + Model Farms



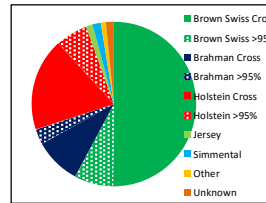
### Silvopastoral Systems



### Improved Forages



### Mapping of genetics



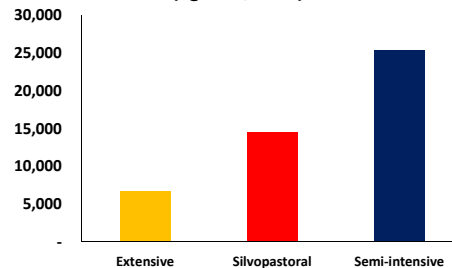
### Reinforcement of institutions and policies



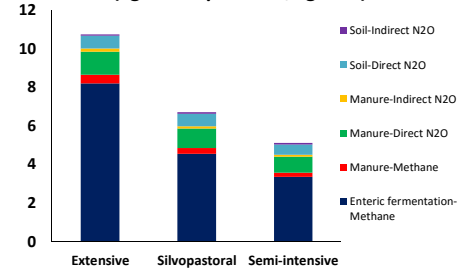
## Perspectives

- Increased Productivity
  - Milk 700 kg → 1400 kg/cow/yr (+100%)
  - Increased live weight gain (+100%)
  - Lower age at first calving (-33%)
  - Reduced calving interval (-20%)
- Socio-economic intensification
- More diverse ecosystems
- Reduced ecological footprint
  - Reduced GHG emissions (-50%)

### milk production increases (kg milk/farm)



### greenhouse gas emissions reduce (kg CO2 equivalent/kg milk)



## Further needed

- Emphasis on integrated pasture systems
  - Silvopastoral systems
  - Dry season feeding (including conservation techniques)
  - Good management practices
- Territorial learning alliances
- Investments for cooperatives and small dairy/meat processing enterprises
- Payment for Ecosystem Services, private sector involvement

