**Tithonia diversifolia** for ruminant nutrition - Brazil

**Key Messages**

**Problem:**
- The use of concentrate (maize or soya) in the animal diet is expensive and inaccessible to many producers

**Solution:**
- The tropical plant biodiversity has enormous potential to provide grasses, fodders and trees for animal feeding
- They are a rich source of biomass and are adapted to soil & climate conditions
- *Tithonia diversifolia*, Asteraceae
  - Adapted to acid and dry soils, no fertilizers are needed
  - Applied for dairy and beef cattle
  - Potential alternative forages to be spread by rural extension services in Brazil

**Lesson learned:**
- When the research is aligned with the needs of the rural producer, the results could contribute to the reduction of hunger in the world

**Importance:**
- *Tithonia diversifolia* is a tropical plant that could improve livestock performance in different productions systems and in several countries without the need for traditional techniques like fertilizer, irrigation or agrochemicals. Consequently, this approach could contribute to reduce hunger in a sustainable way. In addition, there are several experiences (Brazil, Colombia and Mexico) that are supporting the benefits of this plant and it has been applied by extension services in Brazil.

**Livestock-based solutions**

- Alternative tropical forage for dairy cattle that can produce high biomass, providing good animal nutrition and milk production parameters, replace concentrates without negative effects on animal performance and reduce enteric methane production of the farm cattle system

**Results and evidence**

**Results:**
- High biomass production (up to 42 ton of fresh material or 8 ton of dry matter)
- High nutritional quality (16% of PB, 47% of NDF and 63.8 of TND)

**Evidence:**
- Observations of the successful implementation of *Tithonia diversifolia* on dairy farms in different countries (e.g. Colombia – Fundación Cipav and Mexico - Fundación Produce) and production systems (dairy, beef and farm scales).

**Multiplier effects**

- Well developed extension services
- Multi-stakeholder integration (University, technician and farmer together)
- Publication of Research (scientific journals and Booklets)
- Farmer to farmer communication (filed days)

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**Partners**

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