Data on farm's perception of pulpy-techniques under irrigation and under rain-fed conditions were collected. Results show that farmers are satisfied with farming and desiring for the following reasons: i) crops perform well, ii) crops can be transplanted, iii) crops recover after 24 hours of harvesting, iv) crop transplants show survival and growth after the first day, v) crops are palatable for livestock and other animals (e.g. gazelle and tortoise that previously did not eat beef crop).

Management of livestock ticks through identification and cataloguing of diseases carrying ticks

The identification and cataloguing of diseases carrying ticks was carried out. The soil catalogued was an important activity for Somalia since the last assessment among pastoralists to identify ticks and associated transmitted diseases was carried out in 1974.

Diseases such as helminths, camel mange, pneumonia and tick bone diseases.

Anaplasmosis 25%.

Ticking species and associated transmitted diseases was carried out in 1974.

Surra 100% - Surra causes morbidity of up to 30% and mortality of about 10% - 15%

Helminthes 100%;

Mastitis 100%;

Anisopliae 7 and related dissemination will be carried out by the end of year 2015. This novel

3HYNLZJHSLÄLSK[ZYPHSZLV[LZ[HUKKPZZLTPUH[LUVLSMVMYT[SH[PVUVMIPVHJHYPJPKL4L[HYPaP[T

Mapping areas where pasture degradation occurs due to invasive species infestation would

Prosopis;^V JYVWZ ^LYL PKLU[PK HUK THWWLK

An emotional infrastructure for sustainable peri-urban milk value chain development in Somaliland

Sustainable Peri-Urban Milk Value Chain Development in Somaliland

iclep – African Insect Science for Food and Health – was established in 1970 in direct response to the need for sustainable, environmentally-friendly pest and vector management strategies.

iclep’s technologies have improved the livelihoods of communities from eastern to southern Africa whenever sesame bee see found

iclep’s mandate further extends to the conservation and utilisation of the rich biodiversity found in Africa.

Through its research in livestock disease vectors, iclep has been able to build capacity from strategic basic research and adaptive research to technology development and deployment in partnership with governments, research institutions and community-based organisations.

The Centre has also been able to develop vector control strategies and behaviour change and awareness campaigns to promote the use of safe and effective insecticides that farmers can use. In the near future, iclep has gained considerable experience in mobilising communities, empowering and organizing them for undertaking and hygiene control in different agro-ecosystems.

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**Sustainable Peri-Urban Milk Value Chain Development in Somaliland**

**Overall objective:** To enhance performance of dairy value chain in Somaliland.

**Result area 1:**
- Dairy sector governance and coordination strengthened. Its aims are: creating the enabling environment for private sector participation in the dairy sub-sector; improving service delivery to livestock and dairy farmers; improving educational and training opportunities for livestock and dairy farmers; improving information dissemination and technological transfer; improving quality assurance and standartization; and promoting gender equality in the dairy sector.

**Result area 2:**
- Milk production, quality and market linkages along the dairy value chain increased. Milk productivity depends basically on animal nutrition and health. The current approach to foster production and animal health control proved to be ineffective and unsustainable. Activities to reduce the impact of invasive shrubs, control of tick infestations and access to water for animals were identified as areas that need further investigation. Improving overall dairy cattle health and productivity through tick control and the introduction of improved feed resources and forage varieties will reduce production losses, improve animal welfare, and positively impact rural livelihoods.

**Result area 3:**
- Milk and dairy products production and marketing improved through promotion of gender-based income generation opportunities in all phases of the value chain. This result area aims at: (i) supporting the Somaliland authorities in enacting of laws and by-laws regulating the milk production, quality and market linkages along the dairy value chain; (ii) to develop infrastructure of six hygiene units FAO, through a consultative process in collaboration with the Ministry of Livestock, FAO, UNICEF, DANIDA, NRC, and otherHeaders such as transporters, veterinary service providers, dairy production and consumption associations; and (iii) to establish and register dairy cooperatives in ten villages in order to improve the marketing of dairy products.

**Details on selected activity components:**

- **Assessment of the nutritious value of available indigenous feed resources for milk production**
  - The nutritive value of available indigenous feed resources includes: (i) green – natural grass and browse plants, (ii) browse forage – ruminants, (iii) cereal grains – ruminants, and (iv) to reduce the bitter taste in the milk - reduce its commercial value.

- **Research results indicate that push-pull technique is a successful tool to increase milk increment stocks** and has positive impacts on soil fertility (desmodium mainly), and to reduce stem borer infestations.

- **Training on animal nutrition and feeding and feed analysis** has been conducted depending on the feed resources available there.

- **Obtaining equipment to support establishment of an Animal Nutrition Laboratory in the University of Hargeisa**

**Push-pull technique in the agro-pastoral areas of North-West of Hargeisa**

- **The Push-pull technique developed by icipe** is based upon the cultivation of cereals in association with tick control and to help farmers produce fodder, brickwork, and cereals, which are used both for feeding and transportation of milk to milk cooperative centers. The cereals can therefore be substituted for feedstuffs, and will not reduce other horticultural containers such as aluminium cans.

- **Powering a solar-Powered container** for milk collection in Wajaale.

**Milk production, quality and market linkages along the dairy value chain increased** through dissemination of research results to beneficiaries. The push-pull technology developed by icipe for tick control and the introduction of improved feed resources and forage varieties will reduce production losses, improve animal welfare, and positively impact rural livelihoods.