Farm System Diagram – Isangati, Tanzania

This farm system diagram outline follows the methods described in Beets (1990).

**Physical and Bio Factors**
- **Climate:** Avg. rainfall is 1,000-2,700mm. Temperate climate.
- **Avg. temps:** Jan-May: 12-21°C; Jun-Aug: 12-19°C; Sept-Dec: 12-21°C. Large rain season is Mar-May and small rain season Nov-Jan.
- **Soil:** Fertile, of volcanic origin; often mollic andisols.
- **Topo:** 2,000m, steep slopes prevent mechanization and require erosion control work. High elevation = high rainfall.

**Socio-Cult and Socio-Econ**
- **Tenure:** Children get land handed down to them from their parents once they are old enough or get married.
- **Land Use:** Agriculture, Forestry, Aquaculture (2 man-made ponds), Apiculture.
- **Migration:** Young people moving to urban areas.

**External Political and Institutional Factors**
- **Heller International:** Conduct seminars dealing with proper livestock management practices, beekeeping, and home gardens. Over 30 villagers have received modern breeds of cattle through the program and 5 modern beehives.

**Diagram**
- **Family Composition:** Father, mother, 3 boys, and 3 girls.
- **Family Labor- On Farm:** Weeding, planting, harvesting, spraying, carrying manure to farm.
- **Capital:** Axes, hoes, machetes.
- **Tenant:** Children get land handed down to them from their parents once they are old enough or get married.
- **Land Use:** Agriculture, Forestry, Aquaculture (2 man-made ponds), Apiculture.
- **Migration:** Young people moving to urban areas.
- **Attitude/Goals:** Co-operation.
- **Government Services:** Agriculture Development Project (ADP); Supply fertilizer.
- **Education:** Little knowledge of exotic tree species or agroforestry practices. In-depth knowledge of planting crops.
- **Credit Facilities:** There is a village group consisting of almost 30 people which is set up for people to borrow money. People outside of the group cannot.

**Crop Residues:** Damaged vegetables
- **Fodder-Grasses, banana plants, leaves, crop waste**

**Livestock**
- **Avg. Number of Animals**
  - Chickens: 5
  - Cattle: 2
  - Goats: 2
  - Pigs: 1
- **Use:** Eggs, milk, meat.

**Crop Residues:** Damaged vegetables
- **Fodder-Grasses, banana plants, leaves, crop waste**

**Market Prices Demand**
- **Men get money from meat, timber, selling livestock and trade jobs (hawking, shoe repair, building).**
- **Women:** Cook, wash clothes, gather fuelwood, fetch water, take care of children, process agricultural products.

**Household**
- **Family Labor- Off Farm:** Men: Tend to livestock, and handle business negotiations (sales of crops/timber).
- **Women:** Cook, wash clothes, gather fuelwood, fetch water, take care of children, process agricultural products.

**Communal Grazing:** Kids graze their family’s livestock on the local soccer field. Some cattle are tethered or shepherded during the day.

**Fuel-wood supply:** Woman either walks 3k to the nearby forest reserve and illegally gather fuelwood or collect from family woodlot.

**Pest Dynamics**
- **Crop Residues:** Damaged vegetables
- **Fodder-Grasses, banana plants, leaves, crop waste**

**Market**
- **Market surplus maize, beans, leafy greens, milk and cooked food to sell during market day.**
- **Men:** Get money from meat, timber, selling livestock and trade jobs (hawking, shoe repair, building).
- **Women:** Cook, wash clothes, gather fuelwood, fetch water, take care of children, process agricultural products.

**Education**
- **Little knowledge of exotic tree species or agroforestry practices. In-depth knowledge of planting crops.**

**Credit Facilities**
- **There is a village group consisting of almost 30 people which is set up for people to borrow money. People outside of the group cannot.**

**Government Services**
- **Agriculture Development Project (ADP): Supply fertilizer.**

**External Political and Institutional Factors**
- **Heller International:** Conduct seminars dealing with proper livestock management practices, beekeeping, and home gardens. Over 30 villagers have received modern breeds of cattle through the program and 5 modern beehives.