

Group 4

AGRICULTURAL CROP RECOMMENDATION

Problem statement.

Rwanda as one of the African countries usually relies in agriculture for food security, economic growth, climate variability and sustainability. However many farmers struggle while choosing the right crops due to varying climate conditions like rainfall, temperature, soil type and altitude. The development of an expert system will help farmers make informed decisions, improving productivity and ensuring sustainable farming practices

Key stakeholders

- Farmers
- Government Agencies
- Agricultural Extension officers
- Researchers and Agronomists
- NGOs and Development Organizations

IF-THEN Rules.

1. Temperature rules

- IF(temperature is between 20°C and 30°C) THEN recommend maize
- IF(temperature is between 15°C and 25°C) THEN recommend potatoes
- IF(temperature >30°C) THEN recommend sorghum

2. Rainfall rules

- IF(rainfall is between 600mm and 1200mm) THEN recommend beans
- IF(rainfall >1200mm) THEN recommend rice
- IF(rainfall <600) THEN recommend millet

3. Soil Types rules

- IF(soil type is loamy) THEN recommend vegetables
- IF(soil type is clayey) THEN recommend wheat
- IF(soil type is sandy THEN recommend cassava

4. Altitude rules

- IF(altitude >2000m) THEN recommend pyrethrum
- IF(altitude is between 1000m and 2000m) THEN recommend coffee
- IF(altitude <1000m) THEN recommend bananas

INITIAL DECISION TREE



