

# **Woodfuel and tree regeneration among the small scale farmers in Makuyu division, Murang'a district**

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## **Abstract:**

The study addressed itself to the woodfuel situation and tree regeneration among the small-scale farmers of Mukuyu division. A total of 180 farmers were selected and interviewed. Data were also collected from the Forest Extension Officer. The data gathered were analysed using descriptive statistics and interpreted as frequency and percentage distributions. It was established that trees were mainly planted in croplands, along farm boundaries and in homesteads. The important sources of seedlings were wildlings, from neighbours and the Forest Department nursery. Tree planting was collectively done by all family members who also cut the trees freely. The major constraints on tree planting were shortage of seedling, their high prices, inadequate extension services drying and to a small extent, the small land sizes. The primary domestic cooking fuels were firewood and crop residues. Paraffin was used for lighting and rarely for cooking. Farmlands were the principal sources of fuelwood. Charcoal was usually bought while there was low commercialization of firewood. Charcoal burning was rare. The average firewood and charcoal consumption was 14.62 kg and 2.40 kg per day per household respectively. Firewood was frequently collected by women and children. Most households were within a kilometre to the source of firewood and spent, on average, an hour or less daily on firewood gathering. Depletion of or less daily on firewood stocks was common, indicating imminent firewood shortages. Depletion of tree resources was attributed to agricultural expansion, increased demand for wood products, charcoal burning, inefficient end-use of woodfuel and lack of replanting. It was conclude that although fuelwood shortage was not acute, the various symptoms now appearing are indicative of an impending scarcity situation. Solutions to counter the declining woody biomass resources on a sustainable basis hinge on tree planting and management on the farms using appropriate agroforestry systems and on efficient use of available wood. The following recommendations were made: - Introduction of appropriate agroforestry systems. - Increased awareness on tree planting. - Increased seedlings supply. - Production and promotion of efficient woodfuel stoves. - Establishment of an energy and agroforestry centre.