

POLICY BRIEF

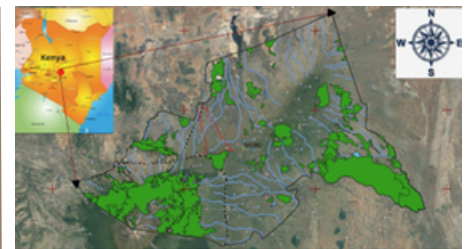
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ADOPTION OF VACHELLIA (SYN. ACACIA) SPECIES AS AGROFORESTRY TREES IN RUIRI-RWARERA WARD MERU COUNTY, KENYA

Agroforestry involves the incorporation of trees and herbaceous plants in the farming system. Recognised by IUCN as a Nature-based Solution under Type 2, it is known to provide environmental, economic and social benefits, which also determine adoption rate.

The practice of agroforestry can be traced back to subsistence farmers in sub-Saharan Africa.

Vachellia/*Acacia* species, which enhance nitrogen fixation, have a long history of use in traditional agroforestry systems in both arid and semi-arid land (ASAL) ecosystems.



Location of Ruiri-Rwarera ward in Meru County

OVERVIEW

Overall Objective:

To assess the adoption of *Vachellia* species as an agroforestry option to improve livelihoods in Ruiri-Rwarera, Meru County, Kenya.

Specific Objectives:

1. To assess the perception of the Ruiri-Rwarera inhabitants of the utilisation of *Vachellia* species.
2. To examine the socio-economic and ecological benefits provided by *Vachellia* species trees in Ruiri-Rwarera.
3. To evaluate the factors contributing to people's willingness to adopt *Vachellia* species as agroforestry trees.

POLICY RECOMMENDATIONS

1. Strengthen farmer trainings and awareness on indigenous agroforestry e.g. *Vachellia* species.
2. Institutional support and seed distribution.
3. Policy shifts towards indigenous and drought-resilient species.
4. Promote commercialization of *Vachellia*- Based Enterprises.
5. Adopt a hybrid approach to breeding of *Vachellia* species for climate-resilient varieties.

KEY FINDINGS

Perception of *Vachellia* species:

1. At least 44% of the target population reported current use of *Vachellia*, with 60% illustrating a familiarity with the species. Only 18% of the target population was aware of the use of the species in the past.

2. Preference for exotic species such as *Macadamia*, *Grevillia*, *Cypress* and *Eucalyptus*.

Socio-economic and ecological benefits:

3. Some of the uses mentioned included determining seasons (traditional early warning systems), livestock feed, medicinal purposes, tea leaves (in the past), fencing, soil fertility, shade, charcoal burning, food (seeds), beekeeping, firewood and bird habitats. The target population has embraced some uses for commercial purposes, e.g. charcoal preparation and livestock feeds.

4. Challenges include slow growth and lack of access to seeds.

5. Overall, the species currently has minimal impact on livelihoods. This could be attributed to a lack of understanding of the importance of the species.

Factors influencing adoption:

6. 72% of the target population was willing to adopt the species if the following are provided:

7. Trainings for farmers on how to integrate the species in crop farming.

8. Institutional support through government extension services. Financial support for the procurement of seedlings.

NOTE

43% of the population was willing to pick more than 10 tree seedlings of the *Vachellia* species to use in their farms so long as factors mentioned were provided.

The Kenya Commercial Tree Improvement Strategy (KCTIS) report of 2021 by the Kenya Forestry Research Institute states that *Vachellia tortilis* has recently been bred with *Melia volkensin* to increase drought tolerance in the dry lands.

CONCLUSION

Farmers and the more educated population recorded a greater usage of *Vachellia*. This implies that the better the population is informed about *Vachellia*, the more positively they perceive the species.

There is a business opportunity in selling livestock and poultry feeds: Some farmers testified to having started selling to other farmers who did not have the species on their farms.

The potential to enhance income generation without disrupting existing incomes from current agricultural activities was one of the leading conditions of the willingness to adopt *Vachellia* species in agroforestry.

Trainings accompanied with institutional capacity by the government through extension services and financial support in acquiring the tree seedlings was important.

REFERENCES

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