

Ginger bush organic pesticides



1. Summary

Plant materials have substantially been used in the management of pests in agriculture as an alternative to synthetic chemicals which are detrimental to man and environmental health. Some of these effects include; insect pest resistance and pest resurgence, secondary pest outbreak, pollution of surface and underground waters, toxicity to beneficial insects and their nonbiodegradable nature among others. *Tetradenia riparia* (Hochst.) Codd, commonly known as Ginger bush, a member of the Lamiaceae family, known as "false myrrh", is an important medicinal plant used in the native medicine in Rwanda (Africa) to treat a wide range of diseases, such as malaria, angina, yaws, helminths, gastroenteritis, dental abscesses and other disorders (Gazim et al., 2010). Some studies have reported antimicrobial activity of extracts obtained from *T. riparia* (Ndamane et al., 2013; Njau et al., 2014).

In the Northern part of Rwanda, Ginger bush organic pesticide is made from indigenous plants species, based on local technology and materials. 25 g of the product is diluted in to 1l of water for



Fig. 1: Photo of a matured plant of Ginger bush (*Tetradenia riparia*)

2. Benefits.

- Cheaply sourced locally
- No development of pest resistance and resurgence
- Non-toxic to man and beneficial insects
- highly biodegradable and ecofriendly

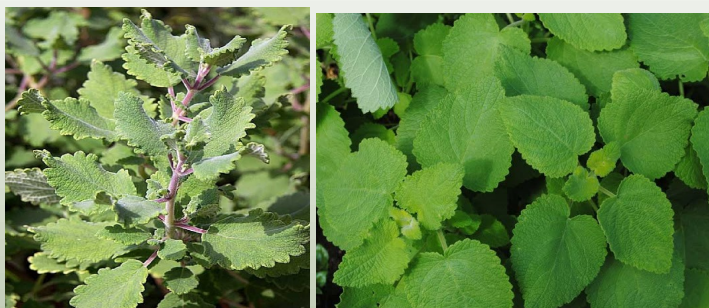


Fig.2. Plant of *Tetradenia riparia* and its fresh leaves



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3. Process/Materials

- Collect the fresh leaves of Sambucus , Iboza Irparia , Angel's trumpets ,collected
- Pound the collected leaves in mortar
- Collect the extracts in a bucket or basin or a wide bowl
- Mix the extracts with ash and animal urine
- Store the final product in cool place for 2 days
- Spray on crops after dilution of the final product obtained (25g in 1L of water)



Sambucus Mexicana



Tetradenia riparia



Angel's trumpet



4. References

1. Gazim et al., 2010:Seasonal variation, chemical composition, and analgesic and antimicrobial activities of the essential oil from leaves of Tetradenia riparia VL - 76 DO - 10.1055/s-0030-1264755.JO - Planta Medica - PLANTA MED
2. Ndamane et al.(2013. Antibacterial effectiveness of extracts of Tetradenia riparia, traditionally used in the Eastern Cape to treat diseases of the respiratory system. VL - 7 DO - 10.5897/JMPRI2.1307 JO - Journal of medicinal plant research.