



TO INVESTIGATE THE POWER OF PINE LEAVES



Mariam Ally Ibrahimu and Danford Mberwa Brighton
Nshamba Secondary School

Introduction

The Aim of our project is To convince farmers to use local method for preserving beans instead of agro chemicals.

Juniper is plant with needle like leaves,when matured the leaves are awl-shaped, spreading and arranged in pairs or in whorls of three. Juniper plants grow in well drained, sunny location and some grow in full shade areas. It belong in kingdom- plantae, phylum -coniferophyta , class -pinopsida, order – cupressales . Family –cupressacea, genus –juniperus, species cupressales . The scientific name of junipers is *Juniperus communis* (<https://www.britannica.com>plants>).

In our project we have used juniper leaves located in nshamba village in muleba district in Kagera region with latitude 1o 50' 22.99''S and longitude 31o 39 '15.98''E

Juniper is plant with needle like leaves, when matured the leaves are awl-shaped, spreading and arranged in pairs or in whorls of three. The leaves of juniper plants has unique odour that kills and prevent pests.

Juniper plants grow in well drained, sunny location and some grow in full shade areas .It belong in kingdom- plantae ,phylum -coniferophyta , class -pinopsida, order – cupressales . family –cupressacea, genus –juniperus, species cupressales .The scientific name of junipers is *Juniperus communis*.

Juniper tree grew reaching lowered the sky like a prayer soon. It bares cones and when opened the wind blew the light little seeds far and wide hence seed dispersal to different areas.

(<https://www.britannica.com>plants>).

Method

In our project we have used different materials including;

- i)Beans
- ii)Clay soil
- iii)Water
- iv)Flesh Junipers
- v)Dried juniper leaves.

Procedures

In our project we followed the following procedures.

- 1.We first visited few farmers who was using this method for collecting some information
- 2.We started our investigation by following the following steps

- i) The healthy and well dried beans were found.
- ii)The healthy and well dried beans were Divided into two portions; portion A and B
 - iii) Beans in portion A was treated by mixing with clay soil, water followed by drying on the sun until well dried and lastly mixing with fresh juniper leaves

Results

OBSERVATION

After two month (8 weeks) we observed the following;

- i)Beans in portion A (portion where beans were mixed with clay soil and juniper leaves) was still healthy / not destructed with pests as observed in the picture below
- ii) Beans in portion B started to decay and there was occurrence of pests
- iii) Beans in both portions (A and B) were all observed to be destructed and there was occurrence of pests when dried juniper leaves were used as observed below

Conclusion

In our project we have observed that flesh juniper leaves and clay soil are best in preserving beans after harvest, this is because of the odour dispersed from the fresh juniper leaves .The odour of flesh juniper leaves is the one responsible for killing and preventing the outgrowth of pests in beans. This is because when we used dried juniper leaves the outgrowth of pests in beans was still observed.

Recommendation

As young scientist we advice farmers to use this method to preserve beans after harvest as it has no any healthy effects to human body , it is cheap and easy to apply as the materials are easily available to local environment.

Acknowledgments

Our great thanks to all farmers who gave us cooperation in data collection.

Our great thanks to;

Agricultural officer of Nshamba ward

References

(<https://www.britannica.com>plants>).

(<https://www.pestcidereform.org>p>)

TIE(2021);Biology for secondary school book three:Dar es salaam

