Tephrosia is established easily from seed. In fields that are heavily infested with root rats, Tephrosia plants may be planted throughout the field spaced at 3 x 3 meters while growing other crops in the same field. To prevent root rats from entering a field, plant Tephrosia around the field or on-farm boundaries, with the plants spaced one meter apart. After one year, the field should be free of root rats and the Tephrosia shrubs can be removed.

Additionally, Tephrosia is capable of fixing nitrogen from the air for improvement of soil fertility. The shrubs may also be periodically pruned, applying young plant parts to improve the soil in nearby fields. (Severe pruning may, however, kill the plant.)

Furthermore, Tephrosia leaves can be removed regularly to use in insect control. Scientists at Kawanda have found the dried and powdered leaves of Tephrosia to be effective in the control of storage pests; in southern Tanzania, crushed fresh leaves are used in control of maize stalk borer.

Finally, Tephrosia is also known as ‘fish bean’; it is often used to paralyze fish, causing them to float to the surface.

**Note: Foliage and seed of Tephrosia are not suitable for human and livestock consumption.**

**Tephrosia is also a host of root knot nematodes and may cause high infection in susceptible crops such as beans, tobacco and tomatoes. Once mole rats are gone from the field remove the plants leaving only those in the field boundary.**

**Plant crops not affected by root knot nematodes (e.g. maize) after tephrosia fallow.**



# CONTROL ROOT (MOLE) RATS WITH TEPHROSIA (MULUKU)

Root rats (mole rats, *enfuko, nfukuzi, Tachyoryctes splendens*) are a major problem to farmers in Uganda. Root rats feed on the roots and lower stems of many crops, especially sweet potato and cassava, often killing the plant and causing much yield loss. Root rats live in extensive, underground tunnel systems and their presence is not obvious to the inexperienced observer.

Farmers traditionally attempt to control root rats by digging them out, but root rats can move quickly through their complex system of tunnels, and often escape. Traps and snares are also used by farmers, but are only partially effective.

One new promising technology to control root rats is to plant Tephrosia *(Tephrosia vogellii)* as scattered plants in a field or as a barrier around fields. Leaves and roots of Tephrosia contain rotenone, a compound that is toxic to the root rats as well as fish and some insects. Tephrosia is a perennial leguminous shrub indigenous to Uganda; in Lusoga and Luganda, it is known as *muluku*.