

What is this Action Sheet about?

This Action Sheet is about how to plant *Sesbania sesban*, a small African tree which has many uses on the farm for soil improvement, firewood and fodder. Studies have shown that in 1 year a *S. sesban* fallow can increase maize yields from 2 to 4 tonnes/hectare without application of nitrogen fertilizer.



Scientific Name	African Names	English Names
<i>Sesbania sesban</i>	<p><i>Afrikaans:</i> rivierboontjie</p> <p><i>Luganda:</i> mubimba, muzimbandeya</p> <p><i>Zulu:</i> umQambuqweqwe, umsokosoko,</p>	<p>Common sesban</p> <p>Egyptian rattle pod</p> <p>Frother</p> <p>River bean</p> <p>Sesban</p>

What can Sesbania be used for?

Food: The flowers of *Sesbania* can be eaten.

Fodder: Leaves are high quality forage, with lots of nitrogen and phosphorus, good for feeding to goat and cattle. However, if goats are allowed to graze the tree directly, it tends to break and become vulnerable to disease. The leaves are poisonous to young chickens.

Fuel: Grows fast, burns well, can be coppiced.

Fibre: Used for ropes and fishing nets.

Gum: Seeds produce gum.

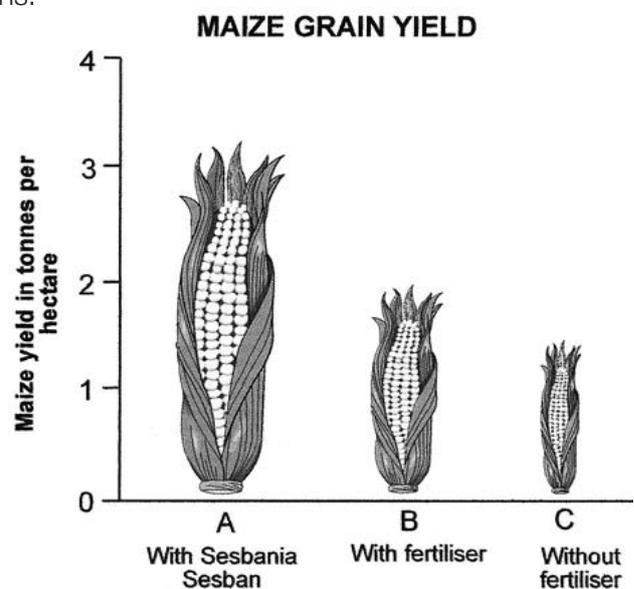
Medicine: Many traditional uses

Shade or shelter: *S. sesban* has been used to shade coffee, tea and cocoa. It has also been used as a windbreak for bananas, citrus and coffee.

Soil improver: *S. sesban* is a nitrogen fixing tree. It can be used for green manure and mulch, or in a short term rotation fallow to improve soil fertility and fight weeds. Experiments in Zambia and Zimbabwe have shown improved yields of maize with *S. sesban* (See diagram).

Intercropping: *S. sesban* is good for alley-cropping because it is easy to establish, grows rapidly, coppices readily and provides mulch of high nutrient content (particularly nitrogen).

Live trellis: Suitable for use as a trellis for peppers.



WHERE DOES IT GROW IN AFRICA?

Countries where Sesbania grows:

Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Congo, Cote d'Ivoire, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Egypt, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome et Principe, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Thailand, Togo, Tonga, Uganda, Zambia, Zimbabwe. *S. sesban* grows all over the subtropics in a wide variety of soils, and is one of the few nitrogen fixing forage trees that can grow in cooler highland regions in the tropics. Unlike many trees, it can withstand water-logging and is ideally suited to seasonally flooded environments. When flooded, it initiates floating, adventitious roots and protects its stems, roots and nodules with spongy tissue. It is common along streams, swamp banks and moist and inundated bottomlands. *S. sesban* can tolerate soil alkalinity and salinity to a considerable degree.

Sesbania grows...

...at altitude of between 100-2300m

...where the average annual temperature is between 18-23°C, and does not go below 10°C. or above 45°C.

...where the average annual rainfall is between 500-2000mm

How do you plant Sesbania?

S. sesban is usually grown from seed. As the seed has a hard, impermeable coat, scarification is recommended. Hot water treatment or soaking in cold or tepid water for 24 hours may also be effective. Most seeds will germinate in about 16 days. Seek local advice on inoculation with rhizobium bacteria (see Action Sheet 36: Planting Nitrogen Fixing Trees), or mix in soil from areas where *Sesbania* grows naturally. Vegetative propagation using stem cuttings is not usually practiced. Seeds can be stored for up to 2 years at room temperature.

What kind of management does Sesbania need?

S. sesban grows very fast and thrives with repeated cuttings and coppicing (cutting and allowing shoots to regrow). It is usually cut 3 or 4 times a year, but is cut up to 8 times a year in some areas. Cutting heights of 50 to 76cm are best for plant survival and productivity. It is a good tree to plant with other slower-growing trees, so that you get an early harvest of *Sesbania* whilst you wait for the other trees to grow.

Where can we get seeds?

Collect them from trees, or find out if they are available from addresses listed in *Action Sheet 56*.

Acknowledgements

This Action Sheet is based on information from the World Agroforestry Centre AGROFORESTREE database, with illustrations by Alexi Francis.

For more information

World Agroforestry Centre - www.worldagroforestry.org