

35 INCREDIBLE BENEFITS OF RICINODENDRON HEUDELOTII (NJANGSA)

Njangsa (*Ricinodendron heudelotii*), a tropical tree that grows in the forest of West and Central Africa, produces fruits that are manually shelled to collect oil seeds and dried. A compositional analysis of njangsa revealed a unique nutrient presence of long chain omega-3 fatty acids not usually associated with plant materials. The seed had 31.4% crude protein and 44.7% lipid. Of this lipid, about 73% was composed of polyunsaturated fatty acids (PUFA), almost entirely of eicosapentaenoic acid, with about 18% oleic acid. Preliminary studies were conducted to determine if njangsa seed meal would alter the lipid and other metabolite levels in the pig and/or improve pork quality traits. Twelve crossbred gilts and barrows were fed corn-soybean diets containing 14% crude protein. Treatment group was supplemented with 2% njangsa oil seed meal. Growth and carcass traits showed similar carcass characteristics ($P > 0.05$). Backfat measurement was reduced ($P < 0.05$), while kidney weight was elevated ($P < 0.01$) in treated animals. Pork sensory evaluations were not different between the experimental groups. Oil rich supply of long chain PUFA from sources other than seafood may provide a more sustainable source.



Ricinodendron heudelotii



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There is no doubt that we are blessed and surrounded by countless plants and trees that offer countless benefits to us. However, the call to action is for us all to regularly

acknowledge these amazing plants so as to completely gain all the benefits they offer to us. One of such plants that is of great importance but yet under-utilized is the Ricinodendron.

Ricinodendron is a plant that belongs to the family of Euphorbiaceae with only one main specie known as Ricinodendron heudelotii (Njangsa). Ricinodendron heudelotii is a fast-growing tree that is originally from Africa, precisely Liberia, Tanzania, Senegal, Angola, Mozambique and Sudan.

This plant is highly cherished due to its flavoured seeds popularly known as njansang. Njansang is usually dried, ground and used as a local spice for flavouring and thickening food. Apart from being used a local spice, the njansang oily seed tree is also used for several medicinal purposes.

Different countries have different names for njangsa for example, it is known as akpi in Cote d'Ivoire, okhuen in Nigeria, munguella in Angola, bofeko in Zaire, kishongo in Uganda, wama in Ghana and essessang in Cameroon. Njansang is also known as essang, djansang, akpi seeds or ezezang.

Ricinodendron heudelotii tree can grow between 20 to 50 m height with straight trunk that has a diameter of approximately 2.7 m. It bears a grey-coloured smooth bark that turns red if cut. Njangsa flowers are yellowish-white in colour and blossom between April and May. The flowers measure approximately 5 mm long with some long terminal loose branching cluster of flowers (panicles) that measure between 15 to 40 cm. Njangsa fruits are two to three lobed and contain two cells where the seeds lie.

The young leaves are pale green in colour while the mature leaves are dark green in colour. Njangsa seeds are rounded in appearance and can be black or red-brown in colour. Both the roots, trunk, stem, bark, seeds, leaves and the latex of the njangsa tree are useful for medicinal purposes. However, researchers agree that the bark is the most effective and commonly used part of this tree.

How to Extract the Njangsa Seeds

Extracting the njangsa seeds from the fruits can be quite demanding. The big green kidney-shaped fruits are normally gathered into piles under the tree. The fruits are left for up to four weeks to decompose so that the fleshy parts can easily peeled off.

The nuts are then extracted from the rotten fruits after which they are boiled for a long time. Once the nuts are a bit softened, they can then be cracked for the inner kernels to be dried. The dried njangsa kernels can be kept for years and used as desired.

35 Incredible Benefits of *Ricinodendron heudelotii* (Njangsa)

Culinary Purposes

Njangsa fruits are not edible but the seeds can be ground and used as condiment for preparing njangsa soup, njangsa stew, **fish** and **meat** dishes. It can also be used as as a thickening agent. Ground njangsa spice is distinguished by its peppery taste. The seeds can be roasted and made into njangsa paste used for making njangsa sauce or akpi sauce, which is similar to **peanut sauce**. Njangsa seeds can be used for making njangsa oil, which can be used as a margarine or cooking oil.

Laxative

The roots or root-bark of the njangsa tree can be mixed with salt and bush pepper, which is used as a laxative. Laxative helps to stimulate the evacuation of faecal wastes from the bowels. Also the latex and leaves of this tree can be used as a strong purgative.

Oedema Treatment

The bark can be decocted and used for treating oedema. The decoction can be applied as

lotion or used for bathing to relieve swelling of the lower legs and ankles. Njangsa bark can be ground, warmed and then used for treating elephantiasis.

Anaemia Treatment

The bark can be decocted and used for treating anaemia. Anaemia is a health condition characterised by the deficiency of red cells or haemoglobin in the blood. To tackle anaemia, njangsa tree bark can be boiled with Eremomastax.

Treatment of Blennorrhoea

Studies reveal that the njangsa tree bark can be decocted and used for treating blennorrhoea. Blennorrhoea is a medical condition characterised by excessive discharge of watery mucus from either the urethra or vagina.

Diarrhoea Treatment

The bark or a combination of the root and bark of njangsa can be infused and used for treating diarrhoea. This infusion can also be used for relieving or preventing dysentery.

Strengthens Premature Babies

Some countries use a bark decoction of the njangsa tree as a lotion and bathing tonic for strengthening premature babies and children affected by rickets.

Cough Treatment

Njangsa tree bark extracts can be used for preparing herbal medicines for treating coughs, catarrh and cold.

Antidote

Ricinodendron heudelotii tree bark extracts can serve as an antidote for neutralizing poisons. This is because the extracts contain lupeol.

Treatment of Rheumatism

The bark decoction of the njangsa tree can be used for treating rheumatism.

Healing Properties

The stem and bark of the njangsa tree can be decocted and used for washing, treating and healing wounds/sores.

Infertility Treatment

Njangsa tree bark can be used for preparing herbal medicine for treating infertility.

Treatment of Sexual Problems

Njangsa tree bark can be decocted and used for tackling sexual problems, menstruation pain and childbirth pain.

Destruction of Worms

Njangsa tree bark-liquor can be used for destroying and expelling worms that could prevent women from conceiving. The latex and leaves can be used for extracting guinea-worm.

Stimulates Appetite

Njangsa seeds can be used for preparing soups to stimulate appetite.

Treatment of Gonorrhoea

The bark can be used for preparing herbal medicine for treating gonorrhoea.

Prevents Miscarriage

Bark infusion of the njangsa tree can be used by pregnant women to prevent miscarriage.

Babies Fever Treatment

The njangsa seeds can be ground and combined with palm kernel oil to form a lotion that can be rubbed on baby's soft spot affected by fever.

Relieves Labour Pain

The bark can be infused and used by pregnant women to relieve labour pains. The bark can be decocted and taken by new mothers to relieve stomachache after childbirth.

Treatment of Venereal Diseases

The bark and root of Ricinodendron tree can be decocted and used for treating venereal diseases.

Aphrodisiac Properties

Njangsa roots are aphrodisiac in nature thus can be taken to stimulate sexual desires.

Offers Shade

Njangsa tree offers shade to crops in the farmlands. The tree also provides shade for humans and livestock.

Acts as Natural Manure

Njangsa can be used as a natural manure to improve the soil because the roots are populated by mycorrhizae. Mycorrhizae is a fungus that grows in relationship with a plant

roots in a symbiotic or pathogenic way. Both the bark, leaves, stems, woods and fruits of the njangsa tree can serve as a natural fertilizer.

Serves as Plant Stakes

It can be cut and used as stakes for supporting other plants.

Hunting Purposes

Fallen njangsa fruits are attractive to animals thus hunters use the tree to guide animals to their game.

Construction Purposes

The light white wood of *Ricinodendron heudelotii* can be used as plywood for building and constructing things. The wood can be used for making toys, cutleries etc. The wood can also be used for electrical insulation. The wood can be carved into plates, spoons, bowls, ladles, pestles, mortars, platters and stools.

Local Musical Instruments

The njangsa seeds can be used as rattles for generating musical sounds.

Local Game

The seeds, which are normally referred to as okwe are used by villagers for playing local games.

Palm wine Fermentation

Njangsa tree bark can be dried and used for fermenting palm wine.

Firewood Purposes

The wood can be felled, allowed to dry then used as firewood for cooking food.

Oil Production

The husks and seeds can be processed into oil.

Soap Production

Oil processed from dried kernel and wood ash from the burnt njangsa tree is suitable for making soap.

Salt Alternative

The wood ash of the njangsa tree can be used as a cooking salt.

Dye Production

The wood ash can be used for making indigo dye.

Varnish Production

The wood ash from a burnt njangsa tree and an oil from the dried kernels can be used for varnish production.