

Application Availability and Processing of Sangri (*Prosopis Cineraria*)

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Introduction

Sangri is fruit of arid plant *Prosopis cineraria* (Fabaceae) which is known as Khejri in India or the golden tree of Indian deserts. Sangri, botanically known as *Prosopis cineraria*, grows in dry, arid desert regions. Sangri are the bean-like pods of the khejri tree, which is a member of the pea family. All parts of the khejri tree, from the bark to flowers and leaves, are edible. Sangri pods, also known as “desert beans”, are used as a vegetable, and are particularly prized for their unique taste and nutritional benefits. The dried pods are consumed as a vegetable and leaves as traditional medicine to cure a wide range of diseases in the state of Rajasthan, India. In the United Arab Emirates it is called as Ghaf; in Indian states for example in Punjab is known as Jand; in Sindh it is known as Kandi, in Karnataka it is known as Banni, in Tamilnadu it is known



Fig.1 Khejri Tree and sangri pods

as Vanni; and in Gujarat it is known as Sami and Sumri. In Sanskrit it is known as shami Sankhphala, Keshahantri, Sivaphala, Mangalya, and Papanasini. Khejri is a small

moderate sized evergreen thorny tree, with slender branches armed with conical thorns and with light bluish-green foliage. Although they belong to the same family as beans and lentils, they are usually distinguished as a separate group because of the ways in which they are prepared.

The different types of sangria are all spherical, a feature that also sets them apart from beans and lentils. Dried sangria are produced by harvesting the pods when they are fully mature and then drying them¹. Once they are dried and the skins removed, they may split naturally. The trees not only boost the growth and productivity of companion plants, but also provide fuel, fodder, food, small timber, medicines, gum and tannin. Its foliage is a nutritive fodder for animals and the wood is of good quality for domestic fuel purposes. Unlopped trees produce green, immature pods (sangri) used as a vegetable (fresh and also dried), and ripe pods (khokha) are used for fresh consumption and for the preparation of flour. Khejri trees occupy a special place in the life of desert dwellers, especially those of rural communities. People often protect khejri trees, as religiously it is considered sacred.

Sangri pods grow on the khejri tree, which is a thorny evergreen that grows to around 5 meters in height. The slender pods are green when unripe, and turn a chocolate brown upon maturing. Each pod measures from 8 centimeters to 25 centimeters in length. The pods contain as many as 25 oval-shaped seeds embedded in a sweet, dry, yellow pulp. Sangri pods offer an earthy, nutty flavor that has spice-like notes of cinnamon and mocha.

Ethnic Info:

The khejri tree is featured in Indian literature, and is used in the Ayurvedic medicine of India. The bark of the tree is used to help cure various ailments from dysentery to bronchitis. The pods are used as an astringent to help bring the body back into a balanced state. Sangri are an essential part of the regional cuisine of Rajasthan. They are used in Ker Sangri, a traditional dish that is served in homes, in high-end restaurants and at weddings. Sangri pods are cooked in spices and oil along with Ker, a caper-like desert fruit, to produce an earthy, rustic dish that is tangy, sour and spicy all at once.

Geography:

Sangri is found in the desert regions of India, Afghanistan, Iran, Pakistan and Africa. It is mainly found in the Thar Desert of Rajasthan in India, where it is said to have originated. Because Sangri grows abundantly where other plants cannot, even flourishing on sand dunes,

it is a plant product that is highly prized in the dry, arid regions where it is found. Sangri is used by nomadic people of the desert, as well as by villagers. Sangri was supposedly first used as a food source when famine-struck villagers of Rajasthan had nothing to eat. In the Rajputana famine of 1868 to 1869 in India the people of Rajasthan depended on everything from the bark of the khejri tree, to the carbohydrate and protein-rich Sangri pods, for sustenance.

Nutritional and Medicinal Importance

Sangria pods are very nutritious and contain enormous medicinal properties. The dry pods are comprised of 40-58% carbohydrates, 8-20% protein, 24-28% crude fibre, 3.2-4.1% fat, 5.4% ash content, 0.33% calcium and 0.44% phosphorus. Moreover, sangri contains the high quality amino acid composition. The iron content of dry pods amounts reasonable high (208-639 ppm), while copper (13-16 ppm), manganese (22 ppm) and zinc content (13-16 ppm) are also appreciable for human consumption. The khejri tree is called as kalpru since the different plant parts have been utilized for medicinal purpose in one form or another. As the root part is used as anti-dysenteric and the smoke of leaves is used to cure eye infections. Fresh leaves of the plant are crushed to make a paste and used to treat blister, boils and mouth ulcer in case of animals. Bark of the tree has proven useful to get rid of asthma, bronchitis, dysentery, leukoderma, leprosy, rheumatism, muscle tremors and piles. This tree is also adorned with the abortifacient and laxative properties. Stem bark may be used for treating respiratory and gastrointestinal ailments. Blooming flower of the tree are blended with sugar and consumed to prevent miscarriage. Whereas twig and flowers parts work as anti-diabetic agent. This tree is bucket of nutraceutical component. It is rich in carbohydrate and proteins which are negligible amount in commercial fruits. It is also has great properties like Energy, vitamin c, calcium and phosphorus. It is our belief that arid zone fruits and vegetables frequent intake in your meal lower the risk of cardiac and cancer disease as well as it gives you best nutrient value.

Applications

Sangri pairs well with spicy, pungent flavors like onions, mustard seeds, cumin seeds and red chilli. They are also used in curries, pickles and chutneys. A simple preparation of Sangri is to fry the pods in oil and serve them with salt and red chillies. In order to store

Sangri, the fresh pods are dried. They must be soaked for a minimum of three hours before they are drained and cooked.

Processing of Sangri

Khejari trees can be seen everywhere in most of the western region of Rajasthan. People pluck the sangria from trees during the season and follow the conventional drying process by drying the sangria in sunlight and store at home for the latter consumption. Some private organizations have also established the collection centre in villages to collect raw sangri. Subsequently, these organizations process these sangri to produce dried product and pack them in suitable packaging and market this product all over India. Such companies are making money by realizing the sale of dried sangri at excellent cost. While farmers of Rajasthan by constituting self-help groups can produce such dried sangria product and market them in off-season, which can help them to accrue higher income generation. The adequate techniques of drying, pickle making and powder making should be established. The process has been summarized in following flow chart:

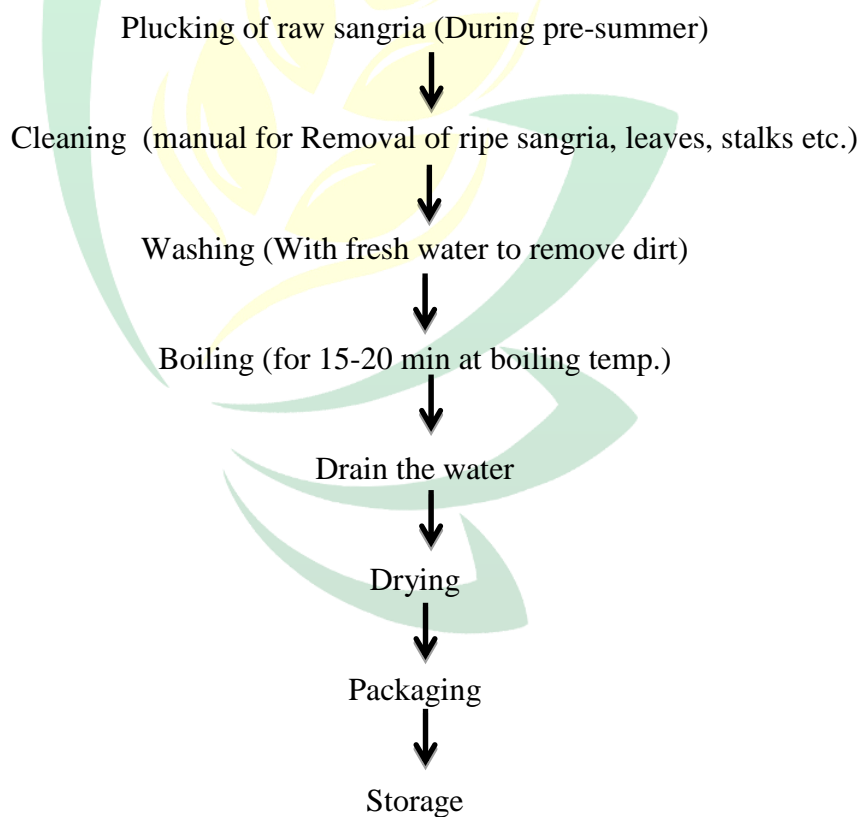


Fig. 2 Processing of sangri pods

Conclusions:

In spite of high nutrition value and unique test this crop is steel underutilized and needs attention for making it popular all over the globe. This article aims to provide a new direction to the underutilized ancient and traditional source of nutrition as well as enhance income of rural people who are dependent on this desert produces. By selling processed products of sangri or processed or dried sangri more revenue can be generated.

