

IFEAT

SOCIO-ECONOMIC REPORT ON LEMONGRASS

IFEAT is once again pleased to bring you a new series of socio-economic reports on naturals. The first in the new series focuses on lemongrass written and researched by Executive Committee Member Geemon Korah and the Mane Kancor team.

LEMONGRASS

Cymbopogon flexuosus
Family: Poaceae

INTRODUCTION

Lemongrass, also known as Cochin grass, or Malabar grass, is a tall, perennial grass that is native to India and tropical regions of Asia and Africa. It is well known and utilised for its distinct lemon flavour and citrusy aroma.

Lemongrass, in its fresh or dried grass form, is commonly used in Asian cooking and as an ingredient in herbal teas. It has an edge over the lemon flavour since it is not acidic in nature. The characteristic smell of lemongrass oil finds its use in the scenting of soaps and detergents. However, the major use of the oil is as a source of citral, which goes in perfumery, cosmetics, beverages, and as a starting material for the manufacture of ionones, which produce vitamin A. However, the use of lemongrass as a source of

derivatives has declined considerably over recent decades as a result of competition from other sources.

The citral-rich (around 68-75 per cent) oil also has germicidal and medicinal properties and is used in insect repellents and aromatherapy. The spent grass is a source of good cattle feed and can be converted into good silage. Spent grass is also useful for the manufacture of cardboard and paper.

There are two commercially popular lemongrass species - *Cymbopogon flexuosus* and *Cymbopogon citratus*. The oils obtained from these two species were known respectively as East Indian lemongrass and West Indian lemongrass. There are clear technical differences between them, but this is less important than it once was. For this socio-economic report we are going to concentrate on the former, as this species is preferred, both from an industrial as this species is preferred, both from an industrial and an agricultural perspective.

India contributes to about 80-85 per cent of the total world production of lemongrass. In India, it is cultivated along Western Ghats (Kerala, Maharashtra), Andhra Pradesh, Karnataka, Uttar Pradesh, and Orissa, beside the foothills of Arunachal Pradesh and Sikkim. It is also found in countries like Guatemala, China, Bangladesh and in regions of Africa, etc.

GROWTH AND HARVEST

The crop grows well in both tropical and subtropical climates. However, ideal conditions for growing lemongrass are a warm and humid climate with sufficient sunshine and 250-330 cm rainfall per annum, evenly distributed over the year. It can also be grown in semi-arid regions receiving low to moderate rainfall.

Lemongrass requires minimal care and maintenance and can be grown

as a rain-fed crop. In fact, the crop is suitable for marginal and wastelands, and for growing along the bunds as live mulch.

The crop is best propagated through seeds raised in nurseries - about 2.5 kgs of fresh seed produces enough seedlings for one hectare (ha) of land. It can also be grown by splitting the clumps into slips - 40-50,000 slips are required for one ha.

Lemongrass can be harvested 90 days after planting, and subsequently at 50-75 day intervals. Depending upon the soil and climatic conditions, the crop can be retained in the field for five to six years, with scope for at least three to four cuttings per annum. The average yield per ha is 35-50 MT of grass in four cycles.

PRODUCTION AND PROCESSING CHARACTERISTICS

Lemongrass oil is obtained from the steam distillation of leaves and the flowering tops of the grass. The grass is allowed to wilt for 16-24 hours before distillation as this reduces the moisture content by 30 per cent and improves oil yield. It takes about four hours for complete recovery of the oil, and the recovery of oil from the grass ranges from 0.6-0.8 per cent. Later, the insoluble particles present



FARMERS FROM THE TRIBAL COMMUNITY

in the oil are removed by a simple filtration method, by keeping it overnight or for four to five hours.

India produces nearly 800 MT of lemongrass oil per year to meet world demand, out of which Andhra Pradesh produces around 200 MT, Odisha produces around 400 MT, and the rest of India produces around 200 MT. About 350-450 MT of lemongrass oil is exported all over the world and the remaining 350 MT of oil is used domestically in India.

Indian lemongrass is accepted as the finest lemongrass oil in world trade. In India, various agricultural research bodies have developed improved strains of the *Cymbopogon flexuosus* species - some of the popular varieties are OD-19, CKP-25, Cauvery, Krishna, R.L.L 16, Pragati, Praman, GRL, - 1 etc.

SOCIAL AND ECONOMIC CHARACTERISTICS

More than 3,000 ha is under lemongrass cultivation in India, and around 275,000 people, including their dependents, are involved in the farming and trading of



A LEMONGRASS FIELD which is ready for harvest



FARM DISTILLATION PROCESS

processed oil.

Out of this, 85-90 per cent, i.e. around 240,000 are farmers, farm labourers and dependents. The remaining 10-15 per cent are involved in farm distillation and allied activities in the growing regions.

Most of the major lemongrass growing regions constitute farmers belonging to the tribal community.

Extraction of lemongrass oil and its sale is one of the best suitable programmes for providing livelihood support to the tribals:

- a) Unutilised wasteland can be used for lemongrass cultivation, which is a rain-fed crop requiring much less irrigation and maintenance.
- b) Farmers can make an additional income by selling lemongrass slips, which are used as planting material for new plantations.

Previously, farmers in the lemongrass growing regions used to cultivate vegetables, millets, and cotton as their main crop, with an income of about USD 500 per ha per year. At that time, it was difficult to maintain and meet even basic farming and agricultural needs. Once lemongrass cultivation was introduced to them, they started earning a better profit - about USD 3,500 per ha per year. The lifestyle of farmers improved from low to middle class and they were able to support children's schooling and ensure savings.

CONCLUSIONS

Lemongrass is a widely used, easy to grow crop, which assures income to farmers, with less risk and less investment. It not only ensures continuous income throughout the year but also helps to cover open spaces in any plantation. With improved market access, farmer cultivation of lemongrass is increasing.

Thus, increasing the area under lemongrass cultivation has multiple benefits:

- a) To change unproductive land to productive.
- b) To introduce new and improved cultivars.

- c) To popularise non-traditional cash crops that improve the socio-economic status of poor farmers, and provide assured income in the long term.
- d) To facilitate interaction of farmers and buyers for better market access.

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