

## **LEMONGRASS OIL (CKP-25)/ KRISHNA/ OD-19**

*(Cymbopogon Flexuosus)*

Lemongrass is the crop whose cultivation scope on India is on the highest side & expected production is 40,000 MT/ Year as per the Essential Oil- Vision 2007.

There are two commercially cultivated species of Lemongrass as follows :-

- a) CKP-25 : Developed by Regional Research Laboratory (Jammu). It is ideal for Middle & North India.
- b) Krishna : Developed by CIMAP (Bangalore Center)

There are huge possible figures for its increased cultivation which are as follows:-

1. New strains have enabled to get more oils.
2. Consumption of Citral has increased drastically. Citral is a raw material for synthesis of VITAMIN "A", which is discussed in Vision-2007.
3. The exhausted material left after distillation of Lemongrass oil from the grass is very good as Cattle feed which is well discussed in ARCTANDER. In India, there are highest number of Cattle's so Lemongrass grass becomes ideal crop for India as its exhausted Bio-mass can be completely utilized.
4. Lemongrass crop is ideal crop for lands which are facing problem of Soil erosion. Its strong, deep root system, up to four metres depth in the soil holds sloping land can be expected to last at least 50 years.  
It can also be cultivated in poor laterite soils, alkaline soils, jhum, steep slopes, degraded forests, non-forest mining and industrial wastelands. Its cultivation also helps in upgradation of wastelands by preventing soil erosion resulting due to deforestation and jhum practices.  
[Soil erosion is a major constraint to the sustainability of sloping-land vegetable systems. **Lemongrass** reduce soil loss compared with the farmer's traditional practice of up-and-down cultivation on sloping lands. REF :- **Soil Science Society of America Journal 63:1366-1376 (1999) © 1999 Soil Science Society of America** ]
5. Last few years of practical success of Lemon Grass as intercrops with horticulture crops like Lychee etc, medicinal plant crops like Amla, Social Forestry crops like Eucalyptus, Poplar Arjuna Casuarina has raised income per acre as Lemon Grass as Secondary crops along with these main crops whose acreage because of high demand is very high.
6. Lemon Grass can be also planted next to national & state highway railway tracks as well near rivers. This will not only prevent soil erosion but will be helpful in Eco-Tourism & also provide income to nearby tribals if they are allowed to distill oil from cut Grass .

Price visualised in vision 2007 at 3\$/Kg can be only possible if a) every part of crops & distillation is utilized i.e. distillate water & spent bio-mass for producing value added products like room Freshness, Floor Cleaners, Mosquito repellent, shampoos etc as these products require distilled water which is more than Rs 10 per liter. With 50 liters of water generated per Kg of oil if utilized properly on local level, it can generate more revenue than oil sales.

Successful production of bio manure from spent bio mass is done by many farmers now. However hand made paper from same can be started with very low investment. Technology with training on making paper from Agriculture waste is provided by KVIC through their Training Centre at Sanganer near Jaipur. With upcoming Demand for such paper due preference of consumer for Bio-degradable packaging such use can generate income which can be even more than income from oil as 20MT/Acre of fresh bio-mass can give as much as 2 to 4 Tonnes/acre of such paper.

During survey of Tea-Gardens, it was found that due to lot of drainage system, Lemongrass is ideal for soil erosion & regenerates the soil. The current situation is that the Tea Gardeners feel that it is the most suitable crop to regenerate the soil. Most of the Tea-Gardens have been developed during British time before independence. After independence, these Tea-gardens were taken over by the Indian's. Tea-bushes have long life (around 100 years). Due to over matured bushes, the yield of Tea is declining. To increase the production Pesticides & fertilizers were used continuously & increasingly. This has over-saturated the soil with the pesticides & at the same time, the production is not improved & is decreasing further.

In the era of WTO, there is more & more emphasis for natural food products so demand for Organic tea is increasing day by day & there is less scope for such Tea, which contains non-permitted % of Pesticides & market value is very less. The rate will be very soon Rs.50.00 per Kilo only.

At this stage, for the Tea-gardens & Tea Estate owners survival, diversification from normal Tea to Organic Tea is must & many have already started uprooting the Tea bushes & planted Aromatic crops of Cymbopogon species like Lemongrass Oil. It is found that this crop will regenerate & rehabilitate the soil in 3-4 years & at the same time will reduce its pesticide content by re-utilizing it. By this, the Gardeners will get these valuable grasses, which will yield the Oil & the spent material can be used for Cattle feed & other purpose & also their soil will be benefited. Cultivation of Cymbopogon species in the field of Tea Gardens is most suitable alternative.