

## **Fruits of value addition – A case study with Turmeric**

Turmeric is extensively cultivated by tribal farmers in Visakhapatnam agency area. *Kasturi* and *Roma* are the common varieties grown in VIKASA project area. Turmeric is generally grown organically. Seed preserved in traditional practice by keeping the seed material in a heap and cover with soil in a room at a corner. Percentage of “*Curcumin*” in turmeric cultivated in project area ranges between 4 to 5, which is second highest in India. It is harvested biannually.

Traditionally turmeric is boiled in water directly and sun dried and later rubbed with gunny bags for polishing. Boiling turmeric directly in water reduces the “*Curcumin*”, content which in fact decides the quality and price of the turmeric. Quality of water also affects quality of turmeric. This process consumes more fire wood, time and energy of community and quality is inferior.

### ***Introduction of Turmeric Steam boiler and Polisher***



**Demonstration of Stem boiling of Turmeric**



**Turmeric polisher**

Turmeric is steam boiled in size vessels followed by sun dried. Later the dried turmeric is polished in a Turmeric polisher. In this method, not only the boiling takes place evenly and in a shorter period of time, saving fuel, and person days involved in the processing but also the improves the quality of the output. The polished turmeric retains curcumin content, looks bright and fetches better price in the market.

Besides Additional rate, Consumption of fire wood, no. of person days required in boiling turmeric, quantity of water required for boiling of turmeric and no. of person days required for polishing are enormously reduced, as a whole processing cost comes down to 1/4<sup>th</sup> besides improved quality of turmeric. This small intervention improves farmer income from 30% to 40% . In the year 2016-17, Farmers of Jakaraguda, Badimela, Musirigondiguda, Musirilanka, Thundrumguda, Gangavalsa, Logili and Kollaput villages in Dumbriguda mandal got Rs. 15 to Rs. 20 per Kg above the prevailing market rate.

Sri. Lokoi Balaram of Jakaraguda village cultivated turmeric in 0.40 acre and processed turmeric in steam boiler and polished in polisher supported by VIKASA got dry turmeric yield of 450 Kg, he sold dry turmeric at Rs. 90 per Kg against the existing prevailing market rate of Rs. 70/- (29% above the market price) on the same day and got additional income of Rs. 9, 000.



S.No	Item	Conventional method Per ton of raw turmeric	In Steam boiler / polisher per one ton of raw turmeric	Saving in person days Per ton
1	Fire wood consumption	1000 Kg	200 Kg (50 Kg for first batch then after 25 Kg per each batch of 150 Kg)	800 Kg
	In person days	10 person days	2 person days	8
2	No. Of person days - for boiling	4 hours per 50 kg – 20*4 = 80 hours = 10 person days	3 hours 30 min (half an hour per each batch of 150 Kg) – 1 person day	9
3	No. Of person - to fetch water	5 person days	1 person day	4
4	No of person days - polishing	10 person days	5 hours for 2 persons – 2 person days	8
	<b>Total</b>	<b>35</b>	<b>6</b>	<b>29</b>
<b>Total saving on 1 ton of turmeric processing = 29 * 200 = Rs. 5, 800</b>				

<b>Processing through steam boiling and polisher – benefit per acre</b>	
1. On processing – 3.75 Mt of raw turmeric / acre @ Rs. 5,800 per Mt	= Rs. 21,750
2. Hike in the price due to better quality – 1.125 Mt @ Rs. 15000 Mt	= Rs.16,875
<b>Total benefit per acre</b>	<b>=Rs. 38,625</b>

**Financial benefit due to saving on processing and hike in rate and reduced drudgery attracting farmers to grow turmeric in more extent.**