

A FARMER INNOVATION



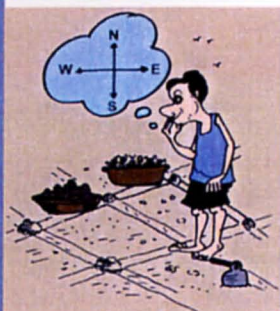
Despite resorting to high yielding varieties and application of fertilizers and chemicals, the farmers get at the most 15 qt. of finger millet (ragi) grain yield per acre. But the farmers from around Haveri District, Karnataka, India, practice a unique method of cultivating ragi called as GULI VIDHANA - pit system. By following this method they harvest around 18 -20 qt. of ragi per acre. This phenomenal result has made the farmers not to resort to hybrid ones. GULI VIDHANA is simple and is similar to **SRI** popularly known as Madagascar method of cultivation. GULI VIDHANA can be adopted in any other place. The experienced farmers from Haveri district have designed and developed simple steps that can be adopted by any one who desires to follow GULI VIDHANA of ragi cultivation.

Land Preparation & Manure

- ❖ Plough the land twice till it reaches fine tilth
- ❖ Pass the harrow twice to level the land and remove the weeds
- ❖ If the land is still having clods pass the *KORADU* (wooden plank) twice. This step helps in seed bed preparation
- ❖ 15 days before transplanting incorporate manure to the soil at the rate of 15 - 20 cart load (7-8 tonnes) per acre. And before transplantation, apply handful of manure or vermicompost into the pits. This step will increase the plant growth and enhances the yield



Transplantation



The steps for transplantation of ragi saplings

- ❖ Plough land twice in both east to west and north to south directions to form the pits
- ❖ The distance between two rows must be 1½ feet
- ❖ At the intersection, pits are formed. Apply handful of manure into the pits
- ❖ In each pit, transplant two saplings of 20 -25 days old
- ❖ Care must be taken not to plant more than 30 days old saplings

Inter-cultivation - Yade Kunte & Koradu

The success of Guli method lies in inter cultivation methods

- ❖ Pass *YADEKUNTE* (an intercultivation implement) after a week of transplantation in both east-west & north-south directions. *YADEKUNTE* removes the weeds and ploughs back into the soil.
- ❖ Pass *KORADU* 3-4 times after 25 days of transplantation. This operation encourages the tillers growth and controls the pests at early stages.
- ❖ *KORADU* operation bends the base of the young seedlings which further promotes the side shoots to develop profusely
- ❖ Passing *YadeKunte* 5-7 times and 3-4 times *KORADU* is compulsory. *YadeKunte* removes the weed and pushes the soil towards roots (earthing up).

VIDHANA

ON FOR BUMPER CROP

Mixed cropping

- ❖ Sow the seeds like horse gram, cowpea and sorghum, as mixed crops after 15 days of transplantation of ragi saplings.
- ❖ If seeds for inter crop are sown simultaneously at the time of transplantation, inter crops ratio should be 6:1. In this case, *YADEKUNTE* & *KORADU* must be ploughed in only one direction.
- ❖ During October and November, horse gram can be sown as inter crop

Varieties

The traditional varieties are the most suited for this method. The hybrid and improved varieties are not suited for this method.

The salient features of traditional varieties like *UNDE* ragi and *YEDAGU* ragi are:

- ❖ The plant height ranges from 3 to 3.5 feet
- ❖ The maximum number of tillers will be up to 25-30
- ❖ It matures in 20 to 130 days.
- ❖ The shape of earheads is fisty.

Yield

According to experienced farmers, the grain yield will be anywhere between 18 to 20 quintals and fodder yield will be 8 to 10 cart loads per acre. The maximum yield recorded was 25 quintals per acre during good agriculture season.

Special Features of GULI VIDHANA

- ❖ The distance between row to row and plant to plant must be 1.5 ft., which facilitates root zones to spread
- ❖ The competition between two plants for sunlight, moisture and nutrients is minimum
- ❖ This distance between plants facilitates them to receive sunlight uniformly and enhances the photosynthesis activity
- ❖ Ploughing by *KORADU* helps to increase the number of tillers per plant. As a result the yield performance will be high

The *KORADU* plays a major role in *GULI VIDHANA*. And it is used for breaking clods and levelling the land. At seedling stage, it is passed to increase the number of tillers and to control the pests. It is a wooden implement measuring 5½ ft. length and 1ft. diameter. It is hollow at the bottom. Palm tree is used for making *KORADU*.

