

Innovative story

Cotton is a predominant crop grown in Kalahandi district of Orissa. Due to favourable climatic condition and suitable soil texture cotton is widely grown by the farmers of this district. It is one of the major sources of income of the people of this district as it is a cash crop. More or less all the blocks of this district are covered by cotton crop.

Cotton cultivation is a tedious job as it requires more no. of intercultural operation and to do this operation requires more no. of labourers. In cotton cultivation it is mandatory to do the intercultural operation in time; otherwise the crop fails to a great extent. It is very difficult on the part of the farmers to avail the required no. of labourers at the appropriate time of operation due to male migration and at the same time it is much more difficult to pay a heavy price to the labourers at each time.

Due to heavy charges and lack of manpower, an idea of creating some useful and innovative implement which may not only reduce the labour cost but also reduce the no. of labour came into the mind of a cotton grower named **Durga Prasad Pradhan** of Bengalpada village of Kisinga block. He invented a new implement named **Kappa Huda Nangala** which not only solved the problems (heavy charges of labour & more no. of labourers) of cotton growers but also increased the production of cotton upto 30%.

65 years old **Durga Prasad Pradhan**, is a big farmer of having 20 acres of land is now a famous name not only in Kisinga block but in the whole district. He along with his four sons is now engaged in cotton cultivation. He expresses due to heavy labour charges and lack of labour problem the idea came to his mind of inventing some new implement which may solve their long waiting problem.

Traditionally in cotton crop, 10-12 labourers are required for earthing up in a 1 acre of land but with the help of this implement two persons are required for earthing up in 1.5 acre of cotton crop with much less time in compared to the traditional system.

Kappa Huda Nangala is a well designed & cost effective implement which can be easily affordable by the farmers. It is made up of some wooden & iron plates. Previously it had been made up of wooden plates, but due to some kind of operational problem it was modified with iron plates to increase its operational efficiency. The implement is made in 75° angle with the base and the degree varies according to the height of the ploughing machine.

The base of the implement is a thick wooden base and which is narrowed down upside. The bended iron plates are placed vertically with the wooden base & a strong wooden handle is attached at the base of the wooden base to operate the implement. The implement is attached with the plough and two persons are needed to operate it in the field. The implement is made technically keeping in mind the planting distance of the cotton plant so that with the moving of this implement it won't damage the cotton plant.

In cotton crop, weed management and moisture content in the plant is much essential for better production. In traditional system, while earthing up the labourers hardly pay attention to the weed control or moisture content in the plant they just earth up the land by which it results into lower yield of cotton crop. But with this implement both the problems of cotton crop gets solved.

When the implement is attached with the ploughing along with the bullock and is operated in the field the implement starts earthing up the land, its bended vertically placed iron plates helps in lifting the soil and placing it in the both sides of the cotton plant, which results into control over weed and helps in conserving moisture in the plant. This implement is used 21 days after sowing and it is used

Cost of this implement

Wooden base - 150/-
Iron sheet (5kgs) - 500/-
Nut bolt - 150/-
(3 big size &
26 small size)
Labour cost - 700/-
Total - 1500/-

thrice in every 15 days. This implement is so efficient and technically equipped it could able to replace the traditional system of operation.

In cotton cultivation earthing up is the most crucial, tedious and expensive operation, but now with the help of this implement it is become easier and cost effective and with the help of this implement the labour cost is reduced to a maximum extent. Traditionally in earthing up, 10-12 labourers were required for 1 acre of cotton land while with this implement 2 persons are required for 1.5 acres of land. Traditionally for earthing up of cotton crop an amount of 4400/- were spent in terms of labour cost while with this implement an amount of 1900/- is spent for labour cost, in some cases the farmer himself operate this implement as it is very comfortable and time saving. So in earthing up a total of an amount of 2500/- are saved by the farmer.

The technically equipped implement not only saves the labour cost but also increase the production of the cotton. The implement helps not only in controlling the weed but at the same time conserve the moisture of the plant. Traditionally the farmers were able to get 5-6 qtl/acre while with this implement they could able to yield 8-9 qtl /acre. The implement not only lower the cost of production but also helps in increase the production upto 30%.

The advantages of this implement

- ✓ It is cost effective
- ✓ It saves time and labour cost
- ✓ It works efficiently by replacing the traditional system of operation
- ✓ It increase the cotton yield upto 30%

Durga Prasad Pradhan, the proud inventor of this implement has shown a new way to the cotton growers. He has invented this implement 10 years ago and every year he provides at least 10 implements to the nearby locality. He never wanted to commercialize this implement but rather wanted every cotton grower should know the technicality to prepare this implement and use it in their field to reduce labour cost and increase their production. Now not only he but all the people of the locality have known how to prepare this implement and how to use it in the field. He has travelled to many places to teach the farmers how to make use of this implement efficiently.

There is no doubt, if a farmer wants to change his situation no power can stop him to bring change. **Durga Prasad Pradhan**, he is surely a great example, a source of encouragement and inspiration to all the farming community of our country.

In finding out a solution to the problem, he invented an implement out of his own imagination which not only solved the problem of the farmers but also showed a great light to all the cotton growers. **Durga Prasad Pradhan**, expresses he does not wanted reward or recognition but he always wanted that cotton grower should be benefitted from this small implement by which they can raise their standard of living. Now due to old age he could not able to work in the cotton field but he continuously strive to make cost effective implement which can be easily affordable by the farming community.