



A dream journey from *Cannavis sativa* grower to prestigious ICAR Pandit Deen Dayal Upadhyay Antyodaya Award Winner, 2018

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Introduction: Shri Charan Debarma a Progressive tribal farmer of North Pulinpur ADC Village has adopted the Pond Based Farming System under the Project National Innovations on Climate Resilient Agriculture. North Pulinpur is one of the draught prone tribal inhabited ADC village of the district Khowai under the state Tripura.



There were no perennial streams, rivers, ponds and other irrigation facilities in the village. Prevailing temperature ranges from 16°C to 37°C. Annual rainfall ranges from 2050 to 2550 mm, but almost whole amount goes out to neighbouring lower elevated village. Before initiation of NICRA Shri Charan Debarma was growing only *Kharif* rice. In his remaining land he was growing *Cannavis sativa*, the of flowers (called marijuana) and leaves and preparations derived from resinous extract (e.g., hashish)

are consumed by smoking, vaporising and oral ingestion. Because of this type of use it is banned to grow the crop in India.

Under the National Innovations in Climate Resilient Agriculture (NICRA) Project KVK, Khowai has given training to the farmer about the climate smart agriculture and has constructed a farm pond in his farm, harvested Water from the farm pond provided life saving irrigation for paddy during *Kharif* dry spell as well as during *Rabi* season. A Nano pump was installed nearby to his Farm Pond which was utilized for providing easy irrigation at a rate of 60 lit of water/hour. The Pond is also used for composite fish culture with average yield of 30 q/farmer/year/ha during 2017-18. His *Cannavis sativa* crops were demolished and sweet orange plants were planted in that plot

Adaptation of SRI in paddy as first crop by Mr. Charan Debbarma could minimize the losses due to water shortage in *Kharif* paddy cultivation. Shri Charan Debarma has introduced zero tillage in bitter gourd cultivation with paddy straw as mulch material at North Pulinpur ADC, with critical input support of KVK, Khowai. Similarly, after *Kharif* paddy fallow land is now successfully utilized by introduction of second crops like maize var. HQPM with furrow irrigation method, lentil var. WBL 77 as relatively



Fig. 1 : Cultivation of *Cannavis sativa*



Fig. 2 : Replacement with sweet orange cultivation

drought tolerant variety. Besides these he has also successfully adopted TPS presently known as hybrid potato seed (HPS) technology which was previously unknown to the farmers of North Pulinpur. He is also growing dhaincha as green manure crop after harvesting of winter crops. At present, he is growing three crops in his plot with adoption of climate smart technologies. Shri Charan Debarma is also producing and harvesting vermicompost in his farm, on an average of around 3 quintal vermicompost along with fifteen litre vermiwash/chamber (2m×1m×0.6m×2)/cycle.

Shri Debbarma is also rearing Ducks breed Khaki Cambell which are giving him a high return with production of egg and meat. He is also following pig cum fish farming in his pond based farming system. The pond embankment is utilized for growing fruit trees like drumstick, papaya etc which are giving him an additional income.

Output: With adoption of pond based farming system along with various climate smart technologies the cropping intensity of Mr. Charan Debbarma's farm increased from 100 per cent to 300 per cent and annual income increased from 60000.00 to 150,000.00 within a very short period of time. He is now acting as a motivator for all the small and marginal farmers of the

village as well as farmers of the nearby village of the district.

Key highlights of Mr. Charan Debbarmas contribution:

- First farmer to adopt nano pump technology for supplemental irrigation at north Pulinpur ADC village, the technology is now accepted by eight more farmers of the village
- First farmer to adopt TPS technology at north Pulinpur ADC village
- Involve in the paddy seed production programme and supplied breeder seeds to ICAR Tripura centre.
- First farmer to adopt pond based integrated farming system involving fishery-piggery-duckery-horti, the technology is now widespread to entire village
- Innovator of zero tillage bitter gourd cultivation technology, the technology is now widespread to 30 ha area of the village.

Outcome: Based on the inspirational work of Shri Charan Debbarma, he has been awarded with prestigious ICAR Pandit Deen Dayal Upadhyay Antyodaya Award Winner, 2018. He I also awarded with Smart Farmer award by ICAR CRIDA, Hyderabad and Best Farmer of the year award, 2018 by KVK, Khowai (Tripura).



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