The dual benefits of Kagga cultivation cum aquaculture

Revival of traditional saline tolerant Kagga and shrimp/fish cultivation practice in Aghanashini Estuary to reduce soil salinization

500 beneficiary farmers

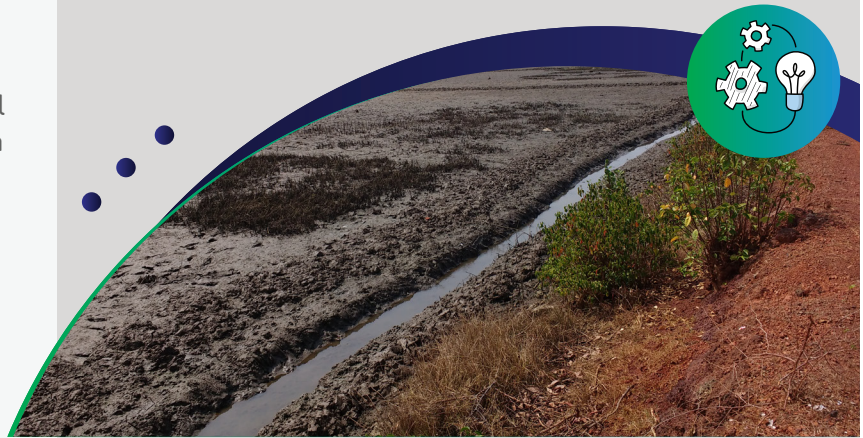
4,490 kg of Kagga paddy was distributed

Context

Coastal agroecosystems have become more vulnerable due to climate change. Farm families in the Aghanashini Estuary region, Uttara Kannada district, Karnataka, are traditional cultivators of paddy that is always submerged in saline water. Unique to this ecosystem is the saline tolerant Kagga paddy that is cultivated in a growth cycle with marine shrimp/fish. However, area under Kagga is diminishing due to changes in land use, hyper-salinity, climate change, non-availability of quality Kagga seeds, low demand, and lack of modern agro-technologies. It is thus imperative to revive and safeguard the traditional Kagga-shrimp/fish cultivation practices in the Aghanashini Estuary region.

Intervention

Though Kagga is cultivated as an ancestor crop, there is a drastic reduction in the area under cultivation. To conserve and revive Kagga paddy cultivation, in collaboration with University of Agricultural Sciences, Dharwad, MSSRF is working on 'Reclamation of coastal saline soils of Karnataka using an integrated approach towards bio-saline agriculture'. Through this intervention, there is a gradual increase in the area and the number of farmers involved in Kagga cultivation. During the first crop survey, we found Kagga is cultivated in small pockets of about 9 acres in Kumta taluk, Aghanashini Estuary region. Due to the continuous effort of MSSRF and UAS – by conducting field days, front line demonstrations, field tours and establishment of community seed banks, etc., every year there has been a gradual increase in Kagga cultivation area. It has increased to 122 acres in 2021, with 374 farmers cultivating the crop. Apart from this, there is a significant increase in the production as well as demand for Kagga paddy seeds from farmers. About 44.90 quintals of seeds procured from farmers were distributed to local farmers. After continued efforts and on-farm demonstration of Kagga-fish/shrimp cultivation (dual culture) to farmers of Aghanashini Estuary region, Ghazini Kagga cultivation is included under the crop survey programme, this is a major outcome of this project.



bio-saline agriculture

Outputs

* Adoption of Kagga cultivation practices in Ghazini land of 20 villages of Kumta block, Uttara Kanada district, increased availability of Kagga seeds and about 4,490 kg of Kagga paddy was distributed to farmers.
* Revival of neglected Kagga cultivation in Ghazani fields to restore the ecosystem with a dual culture system of Kagga-shrimp/fish cycle cropping.
* 500 beneficiary farmers in Aghanashini Estuary villages assured the sustainable maintenance of 122 hectares of Ghazini land.
* Improved farm productivity by the adoption of the most suitable cropping system in saline-affected soils. Enhanced income of Ghazini farm families by cultivation of Kagga-marine shrimp sequence cropping in Aghanashini estuary, Kumta Taluk, Uttara Kannada district, Karnataka.
* Enhanced awareness on the cultivation of Kagga paddy and establishment of community seed banks.
* Community seed production increased through Ghazini model farms in the Aghanashini Estuary.

Outcomes

Availability of pure seeds increased area under Kagga cultivation, increased production and income of the farming communities of the Aghanashini estuary Kumta. Adoption of Kagga-shrimp/fish cultivation (integrated farming), increased paddy shrimp/fish production ensured nutrition security.

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