



4S4R aroRice Model for Production, Marketing and Export of Odisha Aromatic Rice

[Project under RKVY, Department of Agriculture and Farmers Empowerment, Govt. Of Odisha]

by

Supriya Priyadarsani, Sutapa Sarkar, Asit Pradhan, Totan Adak, Mridul Chakraborty, Biswajit Mondal, G.A.K. Kumar

Systematic information on the exact area under aromatic rice in Odisha is a missing link for developing its market and export. There are more than 100 varieties of traditional aromatic rice with pleasant aroma are grown in various parts of the state but they are grown in small pockets and do not find a formal market. It is estimated that about one percent of the total rice area i.e. 40-50 thousand hectares is put under aromatic rice cultivation with a production level of 30-35 thousand tons of aromatic rice annually in the state (Puhan *et al.*, 2018).

Due to the inherent low yield potential and affinity to lodging, only big and affluent farmers afford to grow these varieties for their personal consumption and a very small fraction comes to the market. This calls for a systematic effort to exploit the potential of Odisha aromatic rice for marketing and export. With 132% upsurge in the export of non-Basmati rice during 2020-21 (as reported by APEDA) India captured new markets for rice export in South East Asian and Middle East countries. The up-surge demand for short grained aromatic rice from African countries, Malaysia is opening new promising opportunities for non-basmati aromatic rice in the global market. This calls for a systematic effort to exploit the potential of Odisha aromatic rice for marketing and export.



Systematic effort has been initiated at ICAR-CRRI, for the collection, conservation, evaluation, and genetic improvement of these much-valued short grained aromatic rice varieties of the state and linking them to appropriate market so that farmers can fetch more prices

Aim: Create ecosystem for large scale production, marketing and export of indigenous aromatic rice through Farmers Producer Companies (FPCs).

Target Districts: Kalahandi, Koraput, Kandhamal and Mayurbhanj

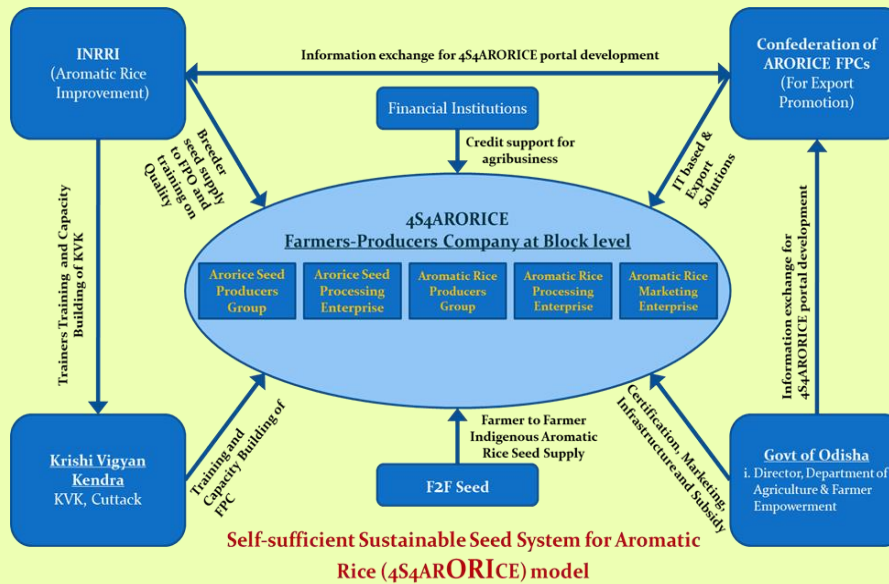
Objectives:

- ❖ Identify, collect, improve, characterize and set standards for indigenous aromatic rice of Odisha to meet export requirements.
- ❖ Impart trainers training on FPC formation to KVKs / STATE GOVT. / NGOs staff and block level agriculture officers.
- ❖ Register one Confederation and 8 FPCs consisting of producers group, processing unit and marketing unit at block level of selected districts.

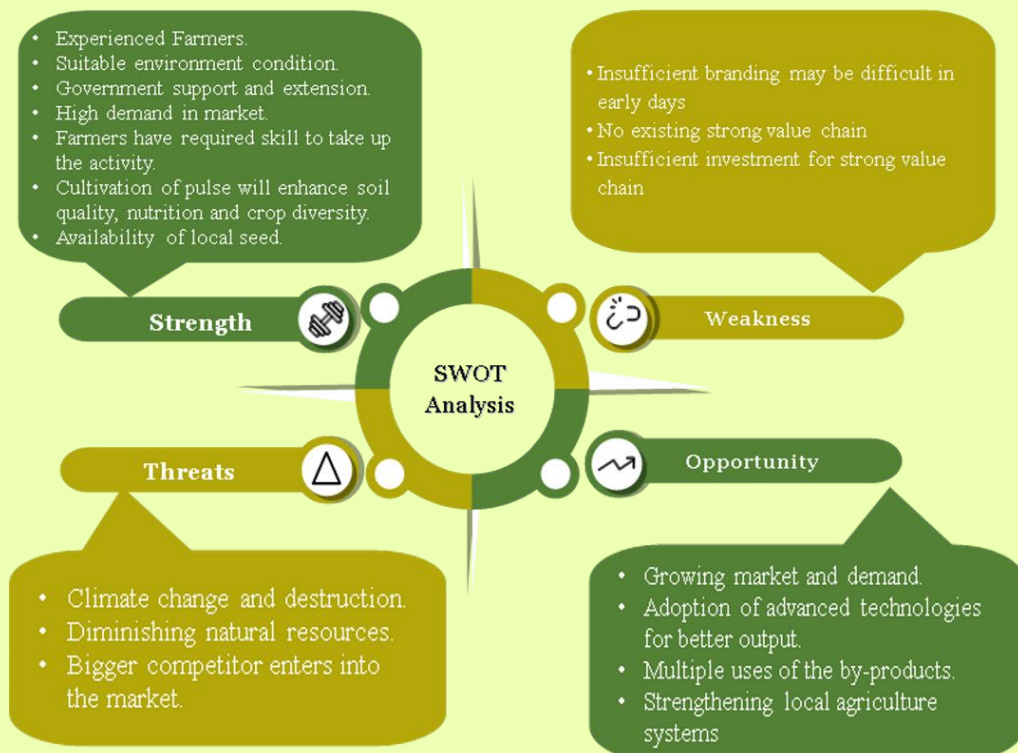
- ❖ Explore possibilities of export and develop Business Plan for aromatic rice seed production, processing, paddy production, milling, value addition, marketing and export by FPCs and develop branding of arORice.



- 25, 000 tonnes rice consignment from Odisha
- Undertake production of superior quality aromatic rice in 16, 000 acres in the state
- 2500 quintal seed produced to meet the production requirement



SWOT analysis of the model



Accomplishments in pilot scale:

- ❖ Six indigenous aromatic landraces have been identified to have export potential which are *Kalajeera, Pimpudibasa, Dushara, Govindbhog, Dubraj, Chinikamini*
- ❖ CR4448-1 (IET-31904), CR4448-2 (IET-31896) Pure line selections from *Gobindabhog* to be evaluated under state trials
- ❖ Quality analysis has been performed for all the five collected indigenous aromatic landraces in addition to the other aromatic varieties notified for the state. *Pimpudibasa* (Mayurbhanj), *Chandanchud* (Kendrapada), *Visnubhog* (Mayurbhanj), *Hatidanta* (Koraput), *Haldi Gundi* (Koraput), *Haldichudi* (Kendrapada), *Kankudimanjhi* (Mayurbhanj), *Gangabhog* (Mayurbhanj, Kendrapada), *Sitabhog* (Kendrapada), *Sunakhadika* (Kalahandi, Koraput)].
- ❖ Imparted trainers training on FPC formation to KVKs / STATE GOVT. / NGOs staff and block level agriculture officers.
- ❖ Aromatic rice cultivation was taken up in 65.2 Acres area in the four districts under the project leading to the production of 240.76 quintals of aromatic paddy during *kharif-2025*.
- ❖ 13.35 quintals of breeders' seed for nine aromatic varieties of ICAR-CRRI, Cuttack, was provided to the FPOs for production of foundation seeds in order to comply with the uniform quality requirement of the product. And make pure seed available for farmers.
- ❖ Four FPOs established in 4 districts Kandhamal, Kalahandi, Koraput and Mayurbhanj:

Sl. No.	FPO Name	District	Area of operation
1	Mangluraja Arorice 4S4R Farmer Producer Company Limited	Kalahandi	Kamthana, Bhabanipatna, Kalahandi
2	Raikia Block Arorice 4S4R Farmer Producer Company Limited	Kandhamal	Raikia, Kandhamal
3	Mayurbhanj Arorice 4S4R Farmer Producer Company Limited	Mayurbhanj	Borio, Jashipur, Mayurbhanj
4	Koraput Arorice 4S4R Farmer Producer Company Limited	Koraput	Dhanapur, Jeypore, Koraput

- ❖ The FPOs have grown from an initial group of founding members to over 2155 active farmer members
- ❖ 2.3t of processed non-basmati aromatic rice seeds of CRRI varieties were distributed by the Deputy CM Shri Kanak Vardhan Singh Deo, to the farmers through ARORICE 4S4R FPO in Koraput during the 77th Republic Day for Rabi cultivation. Construction of four godowns for the installation of mini seed processing unit and rice milling units across the four districts has commenced.
- ❖ Process for registration of arORIce trademark was initiated.
- ❖ For the first time in Koraput district, seed production of aromatic variety has taken place in Rabi season which was a challenge earlier.

Future Plan of action

- ❖ Establishment of Arorice 4S4R confederation for better marketing by FPOs
- ❖ Purification of indigenous aromatic landraces and release as varieties to meet the requirement for pure seed and consumer requirement to meet uniform quality.
- ❖ GI tagging of local aromatic rice varieties in collaboration with DA&FW, Govt. of Odisha
- ❖ Cultivation of aromatic rice in 16000 Acres and production of 25000TQuintal during Kharif 2026
- ❖ Capacity building training program on seed production, processing, milling and value addition to be conducted.

❖ Establish aromatic rice seed processing, aromatic rice milling and marketing enterprises.



arORIce Team

Dr. G.A.K. Kumar
Director,
ICAR-CRRI, Cuttack,
Principal Investigator

Dr. Biswajit Mondal
Principal Scientist & Head
Social Science Division
ICAR-CRRI, Cuttack

Dr. Totan Adak
Senior Scientist
Crop Protection Division
ICAR-CRRI, Cuttack

Dr. Mridul Chakraborti
Senior Scientist
Crop Improvement Division
ICAR-CRRI, Cuttack

Dr. Sutapa Sarkar
Scientist
Crop Improvement Division
ICAR-CRRI, Cuttack

Dr. Supriya Priyadarsani
Scientist
Crop Production Division

Mr. Asit Kumar Pradhan
Scientist
Social Science Division

CRRI Technology Bulletin No. 262
February, 2026



ICAR- Central Rice Research Institute
Cuttack, Odisha – 753006
Phone: 0671-2367768 (EPABX); Fax: 0671-2367663
Email: director.nrri@icar.gov.in
URL: <http://www.icar-nrri.in>

© All right reserved by ICAR-CRRI, Cuttack.



@RiceICAR



@RiceICAR



@RiceICAR