



## Sustainable Management of Rice Production Systems through the Introduction of Improved Technologies (SMART) in Vietnam

BRIA aimed to raise the sustainable production and quality of Vietnamese rice by implementing public-private partnership (PPP) models in the three provinces of Hau Giang, Kien Giang and Dong Thap. The PPP models strengthened the cooperation among farmers and farmer cooperatives, rice traders, and local authorities and the Departments of Agriculture and Rural Development (DARDs). Under this approach, farmers and farmer cooperatives operated large rice-field production to provide adequate and quality products to meet rice traders' requirements. Rice traders supported the rice cultivation by buying all quality rice products from the large fields under a contractual commitment with farmer cooperatives. Other stakeholders were input suppliers and technical officers. DARDs and local authorities ensured the models were aligned with provincial priorities, coordinated and supervised the cooperation among stakeholders, and provided technical support for farmers. BRIA coordinated the cooperation among all the stakeholders, provided training on "smart rice cultivation" and technical support for farmers, as well as developed the capacity of farmer cooperatives.

Trained rice farmers in the three provinces successfully apply recommended smart rice cultivation systems

BRIA farmers received four training modules designed to address the growth & development stages of rice plants. Field diaries and guidance on note taking were provided for farmers during training. In each module, 3–6 groups of 35–50 farmers were trained. Training courses were organised at farmers' houses or local community centres and conducted by trainers made up of local technical staff members and farmer group leaders trained to become trainers by experts from Can Tho University and the Southern Regional Plant Protection Centre. There are a total of 30 master trainers and 36 co-facilitators.

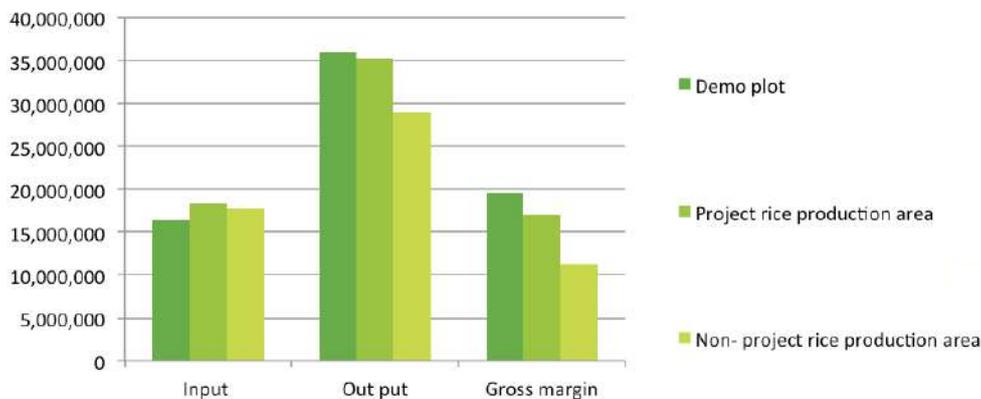
In this crop season, BRIA has also provided IPM technology in the training, updated farmers on the rice market as well as checked farmers' diary records to control pesticide and fertiliser use in order to achieve the target of meeting higher rice quality standards in BRIA sites. Rice market information-sharing benefits cooperatives in forecasting rice prices and in negotiations with rice traders. IPM application has been integrated with the '1 must, 6 reductions' rice cultivation technique to improve the overall BRIA training and to control pesticides in BRIA project sites.

So far, 1,500 farmers have undergone technical training from the project, or 78.5% of the total number of the targeted farmers. Of these, 12.8% are women. Farmers received 3 training models during the rice growth stages and the last training in the winter- spring crop season (the fourth training) was provided at the end of January and February 2017. To promote monitoring of farmer adoption of trained techniques and field diary keeping, technicians and lead farmers were updated on monitoring techniques.



Developed concepts for smart rice cultivation systems show 20% gross margin increase through enhanced productivity and/or reduced application of agricultural inputs

For previous crop seasons, BRIA has collected data on gross margins for monitoring. An average gross margin increase of 40% was observed in fields under the BRIA PPP models compared with fields outside the models in Dong Thap, Hau Giang and Kien Giang, as follows:



New project farmers in this crop season in Tam Nong district, Dong Thap, indicated that they estimate the input costs for the two rice growth stages will reduce by 25% compared to those for the last crop. A new BRIA farmer even asked his relatives to adopt the same SMART application to save costs.

## Suitable and appropriate rice standards for quality markets have been developed and officially approved

In December 2016, BRIA organised a workshop to introduce the SRPS (Sustainable Rice Platform Standard) to key Vietnamese partners from government and private sectors, farmers, researchers and NGOs. A survey for fact finding of the current rice quality control system in Viet Nam as well as an analysis of the existing rice cultivation standards with the possibility of adopting SRP certification was implemented by IPSARD (the Institute of Policy and Strategy for Agriculture and Rural Development).

## At least 270 tons of high quality rice were produced in each of the three provinces

BRIA collected 70 paddy samples to test chemical residues in the winter-spring crop season, 2016-2017 under a contract signed with a testing company, namely Intertek. This activity was to check BRIA rice production quality and the test results provided proof of the BRIA rice quality as part of the solution to promote market linkages for farmers.

### Pesticides Web Version - EU MRLs (updated on 20/04/2017) Pesticide residues and maximum residue levels (mg/kg) (\* ) Indicates lower limit of analytical determination

#### MRLs (ppm)

Ord.	Pesticide Test	EU (Allowed Level)	Hau Giang	Dong Thap	Kien Giang
1	Acetamiprid (R)	0.01*	0.0000	0.0000	0.0013
2	Azoxystrobin	5	0.0000	0.0015	0.0068
3	Chlorpyrifos (F)	0.05*	0.0000	0.0000	0.0014
4	Diazinon (F)	0.01*	0.0000	0.0000	0.0000
5	Difenoconazole	3	0.0000	0.0016	0.0027
6	Fenitrothion	0.05*	0.0000	0.0000	0.0000
7	Flusilazole (F) (R)	0.01*	0.0000	0.0000	0.0000
8	Hexaconazole	0.01*	0.0000	0.0021	0.0023
9	Isoprothiolane	5	0.0000	0.0320	0.1000
10	Pirimiphos-methyl (F)	0.5	0.0000	0.0000	0.0000
11	Propiconazole (sum of isomers) (F)	1.5	0.0000	0.0088	0.0038
12	Tebuconazole (R)	1	0.0000	0.0000	0.0120
13	Tricyclazole	1	0.0000	0.0058	0.0300



Concepts for the successful implementation of public-private-partnership projects have been developed and submitted to the Ministry of Agriculture and Rural Development (MARD).

In December 2016, BRIA obtained technical support from the German Cooperative and Raiffeisen Confederation (DGRV) in developing feasible cooperative capacity-building support models for BRIA in Dong Thap. Six cooperatives in Dong Thap were assessed with 45 participating representatives from the Department of Agriculture and Rural Development, Agricultural Extension Centre, Plant Protection Sub Department, Rural Development Sub Department, Provincial Cooperative Alliance of Dong Thap, Finance – planning division of District People Committee, rice companies and management board members of coops. A similar assessment was carried out in Hau Giang and Kien Giang in March.

Moreover, provincial partners in Hau Giang and Dong Thap organised separate workshops to facilitate matchmaking for farmers, cooperatives and companies. Ninety-two representatives were invited to the workshops of which 55 were from Hau Giang and 37 from Dong Thap. They represented the Department of Agriculture and Rural Development (DARD), the Agricultural Extension Centre, the Plant Protection Sub Department, the Rural Development Sub Department, the Provincial Cooperative Alliance, rice traders and agricultural input companies and management board members of coops in the respective provinces. Other potential rice traders, companies in other provinces such as Tien Giang, Can Tho and Ho Chi Minh City were also invited to the workshops. In the workshop in Hau Giang, DARD expressed high appreciation for this initiative. This was a good opportunity for workshop participants to meet and share their needs for further collaboration. Some new rice traders have contacted cooperatives to buy rice produced in their new expanding areas in the next season. During the workshop in Dong Thap, South Seed Company approached Binh Hiep B Cooperative and others to discuss the possibility to establish a partnership in rice seed production and provision. In Kien Giang, partners organised a similar workshop in March.

