Ghana 3, Mauritania 2, Gabon 1, Uganda 2, Guinee Bissau 1, Madagascar 1, Ethiopia 12, Niger 1, Mali 3, Togo 1.

Results at the test sites
Reduction in threshing and winnowing time and in hard physical work; reduction in total harvest and post-harvest losses; greater ability to do rice double-cropping; employment and profitable enterprise for local blacksmiths and thresher owners.

Success factors
The small ASI thresher is a gender-friendly tool and can be used by both male and female.

Cost-benefit analysis
ASI owners can expect an internal rate of return of 65% and a high cost-benefit ratio (1.73) over the economic life of ASI.

Recommended zones
All zones with irrigated rice production.

List value chains suited for the technology application
Paddy rice, wheat, cowpeas, sorghum and millet. Cultivation, local agro-industry (artisans and threshing service providers).

AfricaRice

AfricaRice is a CGIAR Research Center – part of a global research partnership for a food-secure future. It is also an intergovernmental association of African member countries. For more information visit: www.AfricaRice.org

ASI Thresher

August

2018

TAAT
Technologies for African Agricultural Transformation

AfricaRice

Brief description
Manual threshing causes post-harvest losses of up to 35%. The ASI thresher mechanically separates the rice grains from the panicle without damaging the grains. ASI is suited to conditions of manual harvesting. It has high threshing capacity, low fuel costs, and can be manufactured locally. It reduces labor requirements, particularly for women, speeds up post-harvest processes, produces a higher quality product with less grain damage and increases the marketability of local rice.

ASI uses a diesel engine of 12-14 hp with an oil bath air filter. Its fuel consumption is low (2 liters per hour) in comparison to other similar threshers. For a high output level, four laborers and two operators are needed. The threshing capacity of ASI is 6-7 t of paddy rice per day. With a grain-straw separation rate of 99%, ASI does not require additional labor for sifting and winnowing. The winnowed grains can be bagged directly from the machine.

Artisans and farmers have in several African countries been trained in the manufacturing and operation of ASI.

Developed by
Africa Rice Center (AfricaRice) and its partners

Location where the technology was proven
ASI (under different local names) has been disseminated in 24 countries.

Number of partners involved in technology introduction/ promotion
The number of partners involved in the introduction, training and outscaling of the technology are 132.

Together with these partners, over 150 units of the ASI thresher have been built between 2015-2017. Until now, 108 artisans have been trained in 15 countries (Nigeria 39, Cameroon 12, Gambia 12, Benin 18