TECHNICAL SHEET

Introduction to rice

Rice is a cereal of the Poaceae family and is grown in tropical, subtropical and warm temperate regions. It is rich in starch and is cultivated on land that is flooded. Rice (Oryza sp) plays a major role in the diet of rural and urban households in Africa and is a strategic and priority product for food security in developing countries (Seck et al, 2013 cited by Kouassi, 2019). According to the FAO1 (2016) cited by Kouassi (2019), rice is the most common cereal in the world after wheat, accounting for 20% of cereal consumption. It is consumed by more than half of the world's population with nearly 50 million consumers in Africa (Kouassi, 2019). There are several varieties of rice (Brown rice or brown rice, parboiled rice, white rice, long grain rice, short grain rice, etc.) in the world (Adégbola et al, 2014). Rice is of Asian origin but is now distributed on all five continents (Adégbola et al, 2014).
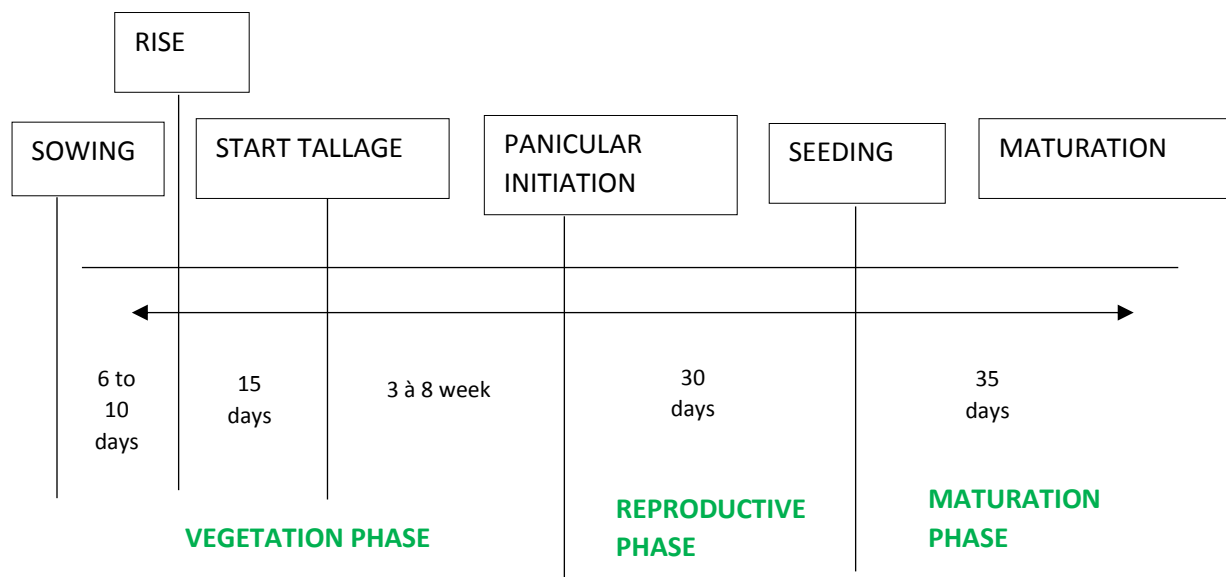
Rice cycle

Figure 1 : Rice cycle (source : Kouassi, 2019)

Production of rice in Ghana

Erratic rainfall pattern resulting from climate change limits productivity of rice fields because about 80% of rice fields in Northern Ghana are rainfed. Terminal drought is considered a major yield limiting factor in the region. CSIR-Banse rice; an early maturing variety (80-85 days), with adequate disease resistance and acceptable grain quality will help farmers escape the frequent terminal drought resulting from climate variability and late planting.

C93 could also serve as a flood recession variety to help make use of residual moisture along the Volta river banks after flooding.

In addition, the rice industry in Ghana is booming. According to Owusu Afriyie Akoto (pictured), Minister of Food and Agriculture of Ghana, the grain harvest is expected to rise to 1.1 million tons. in 2021, 15.7% higher than last season (Agence Ecofin, 2021).

Targets of the technology

Rainfed lowland ecologies where the rainfall pattern is erratic. Suitable for direct seeding.

Area of application of the technology

Rainfed lowland ecologies where the rainfall pattern is erratic. Suitable for direct seeding.

Level of technology development or deployment

Fully developed technology being commercialized

Photo of the technology

Figure 2 : CSIR-Banse rice, a climate-smart hybrid rice variety

Bibliographic references

ADEGBOLA, Y.P. ; AHOYO ADJOVI, N. R. ; ALLAGBE C. M. (2014) : Etude relative à la filière riz : Elaboration d'un document référentiel ; Deuxième partie ; 69p.

TONDEL, F. ; d'ALESSANDRO, C. HATHIE, I. BLANCHER, C. (2020) : Commerce du riz et développement de la filière riz en Afrique de l'Ouest : une approche pour des politiques publiques plus cohérentes ; 127p.

KOUASSI (2019) : Analyse des déterminants du choix et de l'adoption de variétés améliorées de riz. Cas des zones de Gagnoa et de Korhogo en Côte d'Ivoire ; Mémoire de fin de cycle, 104p.

website consulted

https://fr.wikipedia.org/wiki/Riz ; 22/06/2021 à 15h15

http://www.fao.org/fileadmin/user_upload/spid/docs/Senegal/APRAO_Senegal_FicheTechniqueRizicuIture.pdf ; 22/06/2021 at 15h19

https://www.researchgate.net/publication/331876919_DOCUMENT_TECHNIQUE_D'INFORMATION_03 ; 22/06/2021 at 15h20

https://agritrop.cirad.fr/595285/1/06012020_M%C3%A9moire%20B%C3%A9kanty%20Kouassi%20Ange%20Chimene.pdf ; 22/06/2021 at 15h21

https://www.agenceecofin.com/riz/2604-87589-le-ghana-vise-une-recolte-rizicole-de-1-1-million-de-tonnes-en-2021 ; 23/06/2021 at 14h47

Other references :

Council for Scientific and Industrial Research (CSIR)
CSIR-Digital Agricultural Innovation Hub - CSIR DAIH (https://www.csirgh.com)
Developer of technology : Dr. Samuel Oppong Abebrese ; Email: sam555oppa@yahoo.com ;
Phone: +233 248126338