

TECHNICAL SHEET

Sorghum cultivation in the valley (*Sorghum bicolor*) : IRAT 204 Variety

Presentation of the sorghum

A monocotyledonous plant species of the Poaceae family, sorghum is an annual herbaceous plant of about 3 meters high. It is native to Africa and is cultivated for its grains also called sorghum. African sorghum varieties are characterized by a large size, which makes them susceptible to lodging, with spaced leaves that do not favor the development of cryptogamic diseases (Diawaara, 2003). A particularity of African sorghum is their high sensitivity to photoperiod (Diawaara, 2003). Thus, the length of their cycle varies with the sowing date (Diawaara, 2003). The same sorghum variety can have a cycle of 90 to 170 days depending on the sowing date (VAKSMANN et al., 1996 cited by Diawaara, 2003).

Sorghum (which, incidentally, is one of the only important agricultural species to have its origins in the African continent) ranks 5th among the world's food grains in terms of annual production quantities, coming after maize, rice, wheat, and barley (Van Damme, 2013). But the thing is, sorghum is in many intertropical regions and especially in Africa, a primary crop in family farming in semi-arid and sub-humid areas where it plays a role as a subsistence food crop (Van Damme, 2013). Its hardiness, moderate water requirements, and drought resistance of the local varieties used are essential qualities for farmers with modest technical and financial means (Van Damme, 2013). Its uses for human food are diverse (flours, semolinas, porridges...but also 'beer' and other (non)alcoholic drinks) (Van Damme, 2013). Indeed, sorghum is the basis for popular fermented drinks, such as dolo or tô, in some tropical countries (Van Damme, 2013). Alternative food uses are diversifying: use in baking, rolled products, new flour and drinks, etc. (Van Damme, 2013). Considered a gluten-free grain, sorghum also has nutritional benefits for those with intolerance to these proteins (Van Damme, 2013).

According to Chantereau and *al.* (2013), there are several types of sorghum: the bicolor species, wild sorghum, forage sorghum, etc.

Sorghum plant

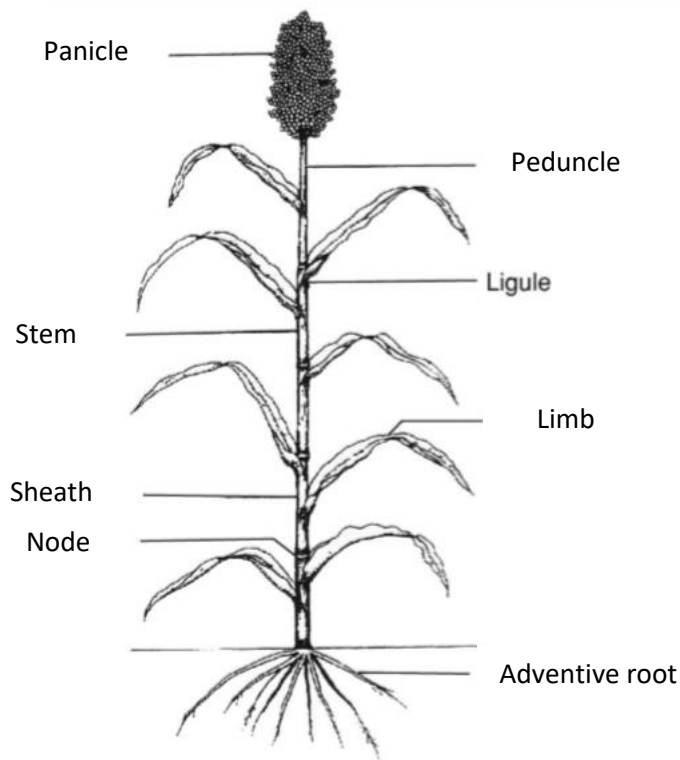


Figure 1 : diagram of a sorghum plant (source : Chantereau and *al.*, 2013)

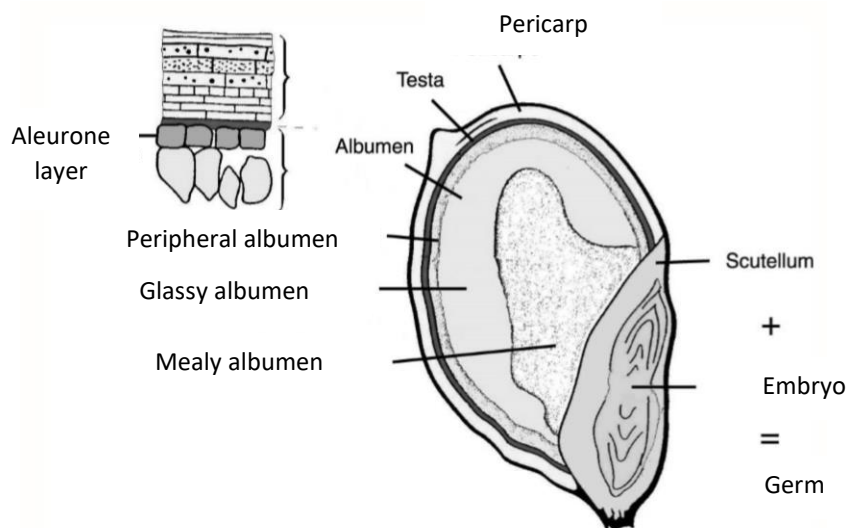


Figure 2 : schematic section of a sorghum seed (source : Miche, 1980 cited by Chantereau and *al.*, 2013)

Different stages of development of sorghum

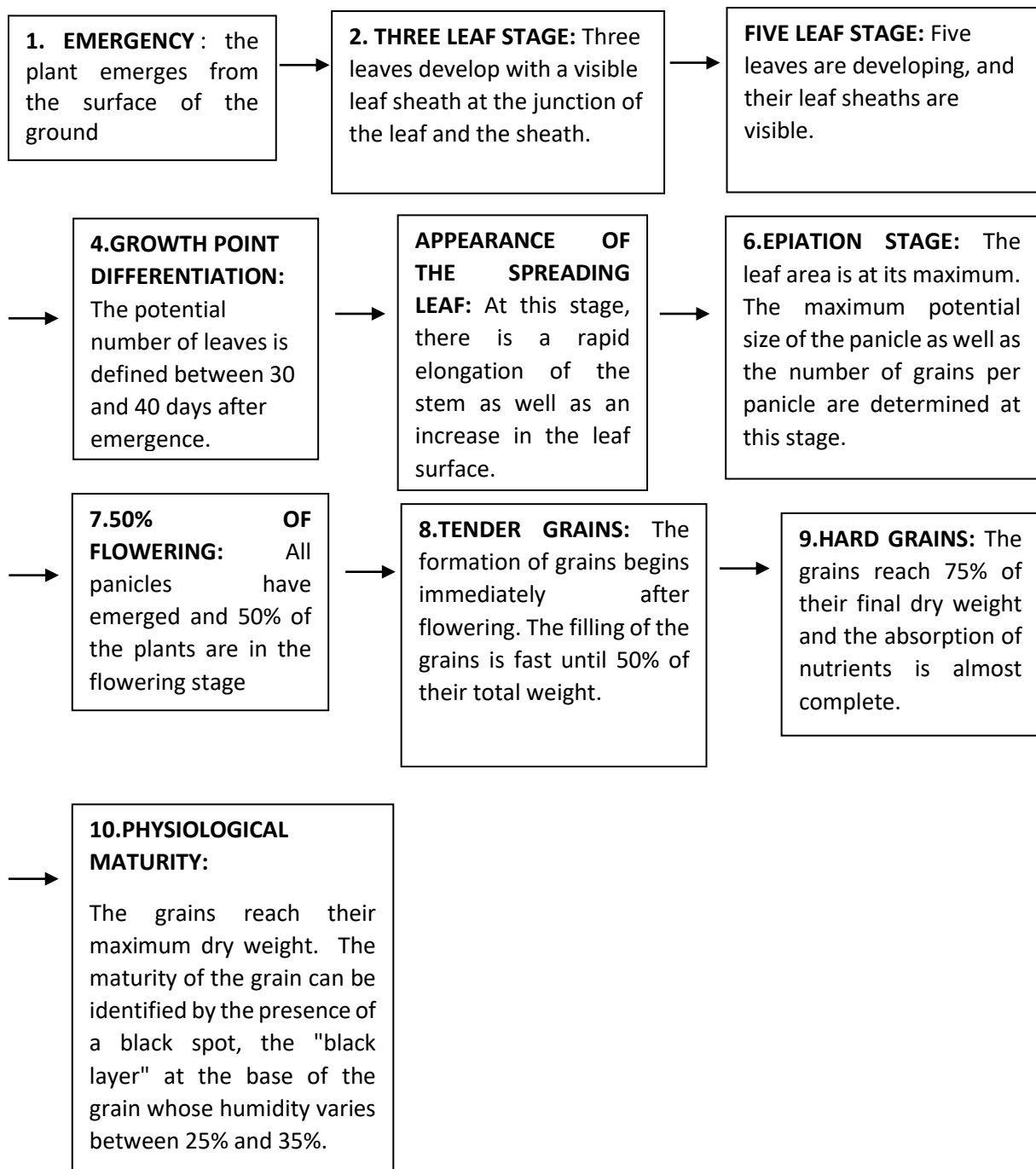


Figure 3 : life cycle of sorghum (source : Kansas State University Agricultural Experiment Station and Cooperative Extension Service, 2016)

Characteristics of the technology

- Area of application: cultivation of Sorghum bicolour IRAT 204 in the Preferred Growing Area (rainfall in mm-350 to 500 mm)
- Sowing-maturity cycle: early 70-80 days

- Grain yield (in T/ha) 2 Tons on average
- Hulling yield 80%.
- Enemy resistance - Resistant to grain mould, Striga and lodging.
- Susceptible to elongated anthrax, midge, bedbugs and sooty band
- Weight of 1,000 grains (g) 30 grams
- Plant size (m) -130-150 cm
- Compact Panicles
- Elliptical and compact shape
- Length (cm) 16-27
- Width (cm) 7-13
- Grain Colour creamy white
- Tolerance -Drought tolerant
- Fertilizer Requirement - Demanding in fertilizers
- Good forage quality - Good forage quality
- Translated with www.DeepL.com/Translator (free version)

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Other references

Regional Center of Excellency on Dry Cerals and Associated Crops ; HOST INSTITUTION: CENTRE D'ETUDES RÉGIONAL POUR L'AMÉLIORATION DE L'ADAPTATION À LA SECHERESSE (CERAAS) ; Host country: Senegal; Coordinator: Ndjido KANE; Email: ndjido.Kane@isra.sn; ndjido.Kane@isra.sn; Telephone: +221 777232019 / +221 339514693