

## **Sorghum in the 21st Century - Oral presentations Breeding Programs achievements and technology delivery**

Dutch bred Dusormil sorghums HD100 and HD7, were found suitable for harvest with a dual purpose harvester unlocking a multipurpose crop and its applications.

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In the Netherlands in 2022, two Dutch bred sorghums were tested by Farm Balance Cooperative and project partners. This was executed as part of an EU project for regenerative agriculture in the province Noord-Brabant: Multipurpose Crops for Soil, Farmer and Construction. Supply chain development for food and construction materials with sorghum. The Sorghums were tested for harvestability with a dual purpose harvester and found well suited. The grain was threshed and the straw was cut in pieces of 20 and 60 cm. HD7 grain was used for buffalo's feed while the HD100 was dried and milled. The flour was highly attractive for food products. The leaves were stripped and consumed by buffalo's leaving cleaned stems. The stems were dried and pre-processed in a hammer mill. The pre-processed fibers and cellulose were tested as insulation material, fiber board and bio composite. The stubble and roots enriched soil structure and organic matter. The Farm Balance Cooperative obtained proof of concept shows that Sorghum can be utilized as a multipurpose crop with a low nitrogen input and a high biomass output. Embracing both environmental as economical aspects for soil, farmer and Construction Stored Carbon (CSC). The project team worked with professionals and officials to develop this new use of sorghum in the Netherlands and possibly throughout Europe.

*References: 1. Holland Houtland. Bedrijvengids Biobased Bouwen, 2021. 2. De urgente belofte van biobased bouwen, Arcadis Design & Consultancy, 2022. 3. Klimaatwinst in de Nederlandse akkerbouw, Sanne Bruns, 2023*