



USE OF SORGHUM FOR THE PRODUCTION OF ELECTRICAL ENERGY: THE COPROB EXPERIENCE Massimo Zavanella – COPROB Group



2nd European Sorghum Congress 2018



COPROB – Cooperativa Produttori Bieticoli - is the main sugar producer and the only cooperative sugar company in Italy

- * 7.000 beet growers supplying the raw material, 5.506 are associated
- * 32.500 hectares beet area in Emilia Romagna and Veneto
- * Confirmation of diversification in the field of energy production from renewable agricultural sources: from 2015, after the launch of three biogas plants, a partnership is reached with ENEL Green Power for the supply of biomass materials to the **combustion plant** of Finale Emilia (MO)



BIOMASS POWER PLANT





Location: Finale Emilia (MO) - Italy Biomass Power Plant 12,5 Mwe Realization: 2014 - 2016





WHAT KINDS OF VEGETABLE BIOMASS ARE USED?





COPROB

THE ENERGY PROJECT - THE PRODUCTION CHAIN











it is an annual crop it is a valid agronomic alternative has a limited water requirement presents a high rusticity has a positive energy balance



Farms involved: 150 (80% also grow sugar beet) Surface area: 1.000 Ha Sowing: April to May Harvest: August to October Average production: 17 t/ha dry matter Harvest team: 7 Average distance from the power plant: 25-30 km



STEP ONE: THE HARVEST













STEP THREE: BALERS







STEP 4: LOADING AND TRANSPORT







AGRONOMIC AND VARIETIES FIELD TEST





Coprob since 2010 has started an experimentation activity on the main aspects of the cultivation of biomass sorghum





Fertilizations

Sowing date and seed density Plant growth phases and best harvesting period



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COPROB VARIETIES FIELD TEST

Since 2010, more than 300 hybrids have been tested. The main features that must have are:

- 1. High resistance to lodging
- 2. High biomass production
- 3. Availability of hybrids with different maturation stages (early or late)









THANK YOU FOR YOUR ATTENTION

