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## **Sorghum as lignocellulosic biomass for biofuel production**

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**B**io-ethanol from lignocellulosic biomass is one of the important alternatives being considered due to the easy adaptability of this fuel to existing engines and because this is a cleaner fuel with higher octane rating than gasoline. Biomass feedstock has significant potential to contribute biofuel production and to decrease green house gas emission. Cellulose makes a large fraction of the plant dry weight, being typically in the range of 35-50%. Lignocellulosic biomass is considered as the only foreseeable feasible and sustainable resource for renewable fuel; but the lingo-cellulosic ethanol commercialization is largely limited due to the lack of easily digestible substrate or cost effective processing technologies and cost of enzymes. Cellulosic ethanol is a biofuel produced from wood, grasses, or the non-edible parts of plants. It is a type of biofuel produced from lignocelluloses, a structural material which makes most of the biomass of plant. Pretreatment methods are not well established in rice bran, wheat straw. On the other hand special type of sorghum i.e., BMR sorghum can be used in introgression breeding program to develop low lignin cultivars suitable for pretreatment methods. Among all methods available for the pretreatment of lignocelluloses, acidic and alkaline treatments have been proven to have practical advantages. Sorghum feedstock is good cellulosic substrate for bio-ethanol production. Reduced lignin concentration in lingo-cellulosic biomass can increase forage digestibility and saccharification yields of biomass for bioenergy.

### **Biography**

Tanmay V Kotasthane is a young researcher having more than 7 years of experience in the area of feedstock development for biomass and bioenergy. He has published more than 10 research papers in national and international journals. Also he has contributed in the development of two sorghum variety. He completed Doctoral studies from JNTU Hyderabad, India.

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