

Size reduction machine for arecanut sheath- Enabling alternative animal fodder generation

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Areca Catechu Linn, commonly known as Arecanut or betel nut is the product of palm and is well known for its consumption as a masticator in India and in the middle and Far East. India has the highest producer area under cultivation of arecanut in the world (365.04 thousand Hectares) mostly grown in southern part and in the north-eastern region of the country. Considering its higher economic profitability, many farmers have replaced it with paddy cultivation, resulting in shortage of paddy straw for its use as animal fodder. The betelnut being used widely in its various forms makes arecanut an important commercial crop, yet the sheath attached to the leaf of arecanut tree is not being used apart from commercial plate making. Recently the arecanut sheath has been investigated by National Institute of Animal Nutrition and Physiology (NIANP), Bangaluru, India for use as a dry fodder for cattle, and an alternative to paddy straw. The available machineries for chaff making have been tried to chop the arecanut sheath into suitable fodder size. However due to physical and biological characteristics of the sheath, none of them were found suitable to get desired size. A machine for size reduction of arecanut sheath has been developed by Central Institute of Agricultural Engineering, Bhopal, to reduce the sheath to suitable size enabling its use as alternative dry fodder for cattle. The machine can chop about 92 kg/h of the arecanut sheath having moisture content in the range of 10-15% db at rotational speed of 700rpm. The dry fodder produced by the machine can be fed to all kinds of farm animals including buffaloes, cows, oxens, sheep and goats.

Biography

B. B. Gaikwad has completed his Masters (2006) and Ph.D (2010) in Agricultural Engineering from prestigious Indian Agricultural Research Institute (IARI), New Delhi. He is Scientist at Central Institute of Agricultural Engineering, Bhopal and has three research papers in reputed International journals, Best M.Tech Thesis Award by Indian Society for Technical education (ISTE) and a patent applied to his credit.

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