

Progress Report of R&D Projects

Project Title: Design and Development of 50 kg Capacity Cost Effective Jute Bags Considering Threshold Physical Parameters and Mechanical Properties

Duration: 2 years

Start Date: 5th April, 2016

Principal Investigator: Shri Palash Paul

Activities carried out so far as on 31st May, 2016

Administrative

- a) Project time-line has been shrunk internally (from 24 months to 18 months) with an aim to complete the work well before the time line. Associate Investigators have been assigned for particular activity with stringent schedule
- b) Project Associate has been recruited and will join the project activity from 01.06.2016
- c) Purchase process of Capex items has been initiated

R&D

- a) Five types of sacking bags of different constructions have been prepared
- b) Physical, mechanical and drop test behaviour of the bags have been evaluated at IJIRA laboratories
- c) Based on the breaking strength test results of fabric and constituent yarns, an empirical relation has been established between fabric strength and yarn strength for sacking quality of varied ends/dm from 52 to 76
- d) The minimum cover factor of sacking bag has been evaluated to restrict the seepage of small grain rice

Proposed activities for next three months (June, July and August)

- a) Determination of economic bag dimension considering maximum utilization of reed width of sacking loom - Target date :15 June 2016
- b) Determination of minimum thread densities of bag to ensure threshold breaking strength and no seepage of grain- Target date :30 July 2016
- c) Preparation and performance evaluation of sets of experimental bags at IJIRA laboratory- Target date: 15 August 2016
- d) Finalization of bag construction in consultation with IJMA/Industry–Target date: 31 August 2016

Activities carried out so far as on 20th April, 2016

The studies under the project have been initiated to establish relation between yarn strength and fabric strength of B. Twill jute cloth. Sacking fabrics of various constructions have been prepared for the purpose and mechanical performance study is currently under progress. The processes for procurement of CAPEX items and recruitment of man power under the project have been initiated.