








IMPROVED PROCESSING TECHNOLOGY OF LONG GRAIN AROMATIC RICE

 <p style="text-align: center;">Introduction</p>	<p>Automatic rice mill equipped with rubber roll huller in Bangladesh processes only locally available short grain (3-4mm) aromatic rice as unparboiled condition. The milling yield (MY) of those varieties is low (45-50%) due to use of traditional processing technology. BIRRI developed export quality long grain aromatic rice is BIRRI dhan50 (first HYV as aromatic long grain), which showed higher yield than Pakistani and Indian Basmati varieties. Moreover, this export quality rice also known as Banglamati may meet the demand of international market. Bangladesh can earn substantial amount of foreign currency by exporting quality rice. Farm Machinery and Postharvest Technology division of BIRRI developed suitable processing technology of BIRRI dhan50 as unparboiled condition.</p>
<p>Why improved processing of long grain aromatic rice?</p> 	<ul style="list-style-type: none"> • To ensure appropriate drying of long grain rice (BIRRI dhan50) • To reduce breakage and increase milling yield (MY). • To achieve exportable grade rice and • To find out versatile use of BIRRI dhan50 as processed food. 
<p>What is the long grain aromatic rice processing technology?</p>  <p style="text-align: center;">L = 11.4, Extra long slender BIRRI dhan50</p>	<ul style="list-style-type: none"> • It is a low-cost sun drying process of long grain aromatic paddy followed by milling in rubber roll huller of automatic rice mill. • Four to five days of mill yard drying in sun give maximum MY. 
<p>How to process long grain aromatic rice?</p>  <p style="text-align: center;">Brown/ husked rice</p>	<ul style="list-style-type: none"> • Maintain drying temperature at 33-42⁰C • Dry paddy everyday for 3-4 hrs and followed by 20 hrs staking for tempering. • Stir the paddy every 25-30 minutes interval for uniform drying. • Repeat the process for 4-5 days to obtain the maximum removal of white belly in the rice (manually hulled paddy) • Optimum crushing strength (CS) and moisture content (MC) are 7.0 Kgf and 9-10% (db), respectively during milling.
<p>What are the results of improved processing?</p>  <p style="text-align: center;">Milled / polished rice</p>	<ul style="list-style-type: none"> • Milling yield of BIRRI dhan50 is about 60%, which is 5% higher than the existing practice. • Sieving and grading rice as grade -I (90% head rice), grade-II (85% head rice), grade – III (75% head rice) and grade – IV (68% head rice) • Packing graded rice in polythene lined gunny bag for marketing. • Packing big and small broken rice separately for food consumption.

	  <p>BRI dhan50 (Bran)</p>  <p>$L = 9.5 \text{ mm}$, $B = 2 \text{ mm}$ after cooking</p>
<p>Versatile use of BRI dhan50 (Banglamati)</p>  <p>Cooking time: 13 min in rice cooker</p>	<ul style="list-style-type: none"> • BRI dhan50 can be well cooked / processed as plain rice, polau/ biriani rice. Processed food looks good in appearance as well as good in taste. • Broken rice can be processed as suzi for baby feed and bran can be used to produce bran oil.  <p>Cooking time: 13 min in rice cooker</p>  <p>Cooking time: 21 min</p>

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