



### Extruder Output of High Sugar Pellets

Purpose: Test the effects of processing aids on machine output and product quality.

Equipment: Extru-Tech E-525  
Screw Speed: 300 RPM

[Link to Extru-Tech, Inc.](#)

Processing Aids: **Nu-RICE<sup>®</sup>** and GMS

Formulation: Sugar 50%  
Starch 50%  
Moisture 12%

Use Rates / Output

Sample	Use Rate	Output	Texture
Control	0	600 kg/hr	Sticky, difficult to process, loss in shape.
GMS	0.5%	800 kg/hr	Reduced stickiness, improved shape, increased output.
<b>Nu-RICE</b>	0.5%	850 kg/hr	Reduced stickiness, improved shape, maximum increase in output.

Observations: The production of high sugar pellets requires a processing aid to make a product that is of acceptable quality. The surface appearance, the stickiness and definition of shape was improved by using a processing aid. The **Nu-RICE<sup>®</sup>** increased output significantly over no processing aid and increased output over the GMS.

Conclusion: A processing aid is required to make this high sugar pellet with this formulation. The **Nu-RICE<sup>®</sup>** is the best choice based on this trial, because of stickiness, shape and output.

Cost Savings: The **Nu-RICE<sup>®</sup>** allowed the manufacturer to produce 25 1/2 hours of output in a 24 hour day. At \$400 / hour on production costs, **Nu-RICE<sup>®</sup>** created a savings of \$25 per hour, from increased output alone, plus the improvement in quality. The savings pays for the cost of the ingredient.

**Increase output by 6% with Nu-RICE<sup>®</sup>**