



MiISAVOR™ LIQUID

MiISAVOR™ LIQUID  
CONCENTRATE

Pellet processing aid

**KEMIN**<sup>®</sup>  
Compelled by Curiosity™



PELLET PRODUCTION

You understand the value of pelleting feed — animals waste less feed and therefore have better feed conversion. Pelleted feed also offers better starch digestibility due to increased gelatinization. However, you also know that pelleting adds cost and complexity to feed mill operations — increased power demand and die wear, as well as decreased overall mill capacity, are all consequences of pelleting feed.

That’s why Kemin developed the **Kemin MillSAVOR™ Milling Efficiency Program**. Improving pelleting efficiency and profitability requires outstanding products and a comprehensive approach that evaluates every phase of production for maximum return on investment.

KEMIN MillSAVOR™ MILLING EFFICIENCY PROGRAM

A comprehensive approach that evaluates every phase of production for maximum return on investment.

- 1. **MillSAVOR Liquid** is a milling aid that can be applied to finished feed at 1-2 pounds per ton (0.5-1 kg per metric ton), the unique combination of ingredients in MillSAVOR Liquid enhances shelf life, pellet durability index (PDI) and throughput.
- 2. **MillSAVOR Liquid Concentrate** is a low inclusion, highly concentrated formulation with an application rate of 1-2 ounces per ton (32.6-65.2 milliliters per metric ton), to improve PDI and throughput. The combination of decades of experience in feed manufacturing support, product knowledge, and a dedicated application equipment group positions Kemin as the leader in this category.

INCREASED  
PELLET DURABILITY INDEX  
AND THROUGHPUT

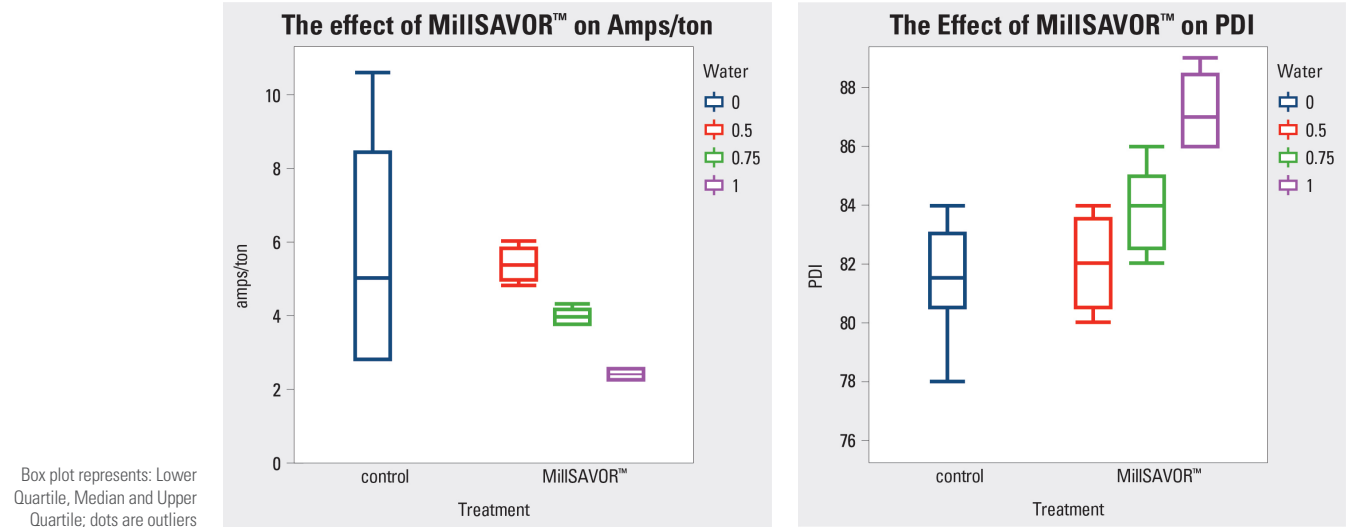
MillSAVOR™ LIQUID CONCENTRATE TRIAL RESULTS

**Trial 1:** Poultry feed was pelleted in a 5-ton, 100-horsepower pellet mill equipped with a 1-3/8 x 5/32" pellet die at the Kansas State University feed mill. The treatments included control (no pelleting aid or water), pelleting aid (5 lb/ton), MillSAVOR Liquid Concentrate plus 0.5% or 1.5% water. Feed samples were collected and analyzed for PDI and fines in addition to milling metrics (data not shown). There was a significant decrease in fines and an increase in PDI with MillSAVOR compared to control and pelleting aid.

Effects of MillSAVOR on pelleting metrics			
Treatments	PDI	PDI*% Pellets	Fines (%)
Control	47±1.4 <sup>b</sup>	70.5±1.03 <sup>bc</sup>	2.8±0.19 <sup>ab</sup>
Pelleting Aid (5lb/ton)	32.9±2 <sup>d</sup>	61.7±1.73 <sup>d</sup>	3.5±0.31 <sup>a</sup>
MillSAVOR™ (1.5% water)	63.8±2 <sup>a</sup>	79±1.06 <sup>a</sup>	2.3±0.14 <sup>b</sup>
MillSAVOR™ (0.5% water)	44.5±2.3 <sup>bc</sup>	68.3±1.66 <sup>c</sup>	2.7±0.11 <sup>b</sup>

Mean ± SE; N=15  
<sup>a,b,c,d</sup> superscripts indicated significant differences between treatments, P-value<0.05

**Trial 2:** Poultry feed was pelleted in a 400-horsepower pellet mill equipped with a 1-3/8 x 11/64” pellet die at a poultry integrator feed mill that manufactures 5500 tons a week. Specified feed formulations were manufactured with and without MillSAVOR Liquid Concentrate plus 0.5 to 1% water for 3 consecutive days. During each run, samples were obtained from control and MillSAVOR treatments from 1 of the 3 lines via sample ports in the mill to evaluate milling and pelleting metrics. MillSAVOR increased PDI compared to control while reducing the amps/ton.



**Trial 3:** Swine feed was pelleted in a 2x 500-horsepower pellet mill equipped with a 3 × 11/64” pellet die at a swine feed mill that manufactures 7000 tons a week. Specified feed formulations were manufactured with and without MillSAVOR Liquid Concentrate plus 0.5 to 1.25% water for 4 consecutive days. During each run, samples were obtained from control and MillSAVOR treatments from lines 1 and 2 via sample ports in the mill to evaluate milling and pelleting metrics. There was a 5 point increase in PDI with higher temperatures than control, with an additional 3 pt improvement when trying to reach maximum throughput. The increase in TPH with MillSAVOR didn’t affect the average amperage with MillSAVOR compared to the control (data not shown).

The effect of MillSAVOR on milling and pelleting metrics on day 4			
Metric	Control	MillSAVOR™ + 0.75% water (high temp.)	MillSAVOR™ + 0.75% water (max throughput)
PDI	71±1.09	76.4±0.95	79.2±0.33
% Pellets	73.2±0.02	77.2±0.02	79±0.02
PDI*%Pellets	51.9±1.8	59±2.1	62.6±2
TPH	42.2±0.57	45.5±0.5	46.3±0.37

TPH = tons per hour  
Mean ± SE; N=5-8

## FROM PRELIMINARY PLANS TO SERVICE AFTER THE SALE

When you choose to use MillsAVOR™ Liquid or MillsAVOR Liquid Concentrate, the Kemin Application Solutions (KAS) team will take care of the entire process from beginning to end. Our experts will visit your location and design a customized system specifically for your feed mill. Once you approve the system, Kemin will return for installation and remain on-site to help your team understand how to operate the equipment. Then, after commissioning the system, our team will perform periodic machine maintenance and train new employees at your request. **And it gets better: online monitoring technology is available for better tracking your system's operation and allow for rapid response to any interruptions.**



**For more information about the Kemin Milling Efficiency Program,  
visit our website at [kemin.com/millsavor](https://kemin.com/millsavor).**

#### References:

1. Effect of MillsAVOR Liquid Concentrate on mill performance and pellet characteristics (TD 23-8837)
2. Effect of MILLSAVOR on milling efficiency and pellet quality - customer trial (TD 23-8990)
3. Effect of MillsAVOR on milling efficiency and pellet quality - customer trial (TD 23-9252)