

Don't Bench Her. Drench Her.

With **POWERPAK**[™]
Drench Mix

The Winning
Formula to Get Her
Back in the Game.



PowerPak is the perfect solution to give your power hitters instant and residual energy to quickly return to peak production.

And that's a home run for the health of your herd... and your profitability.

Fluid Therapy. Essential for Success.

Effective management of metabolic disorders is critical to herd health.

Milk fever, retained placenta, metritis, ketosis, mastitis, lameness, rumen indigestion, and displaced abomasum (DA) are costly health concerns for today's dairies.^{1,2}

These illnesses reduce dry matter intake (DMI) and deplete nutrients needed for healthy milk production²

A mere 24 hours off feed results in changes to rumen pH:²

- Causes good bacteria to die off
- Makes it difficult to get cows back on feed

Drenching provides essential rehydration and nutritional supplementation.

One of the most beneficial ways to increase treatment success rates²

For sick cow treatment...

Helps improve the chances of a full recovery and quicker return to productivity

For transition management...

Helps prevent fresh cow transition problems and enhances milk production in early lactation

"Large-volume drenches should be a key component of a therapeutic protocol for any cow with depressed appetite, high fever, or other symptoms, as well as an important part of a fresh cow protocol."

—Dr. John Currin
Extension Dairy Veterinarian
Virginia Cooperative Extension
Virginia Tech | Virginia State University



POWERPAK Drench Mix

The Drench with the Difference

PowerPak is specially formulated to provide the right ingredients at the most effective levels.^{2,3}

The perfect solution for cows during sickness, at calving, and at times of reduced intake:^{2,3}

- Helps raise blood calcium and magnesium levels
- Minimizes body fat mobilization
- Restores lost electrolytes
- Stimulates rumen microbial growth
- Helps maintain liver health

The only drench that includes optimized amounts of three key ingredients:¹

- **Calcium** provides energy to support the demands of lactation¹
- **Alfalfa** supplies a nutritious source of soluble protein to support rumen bacteria growth
- **Hilyses®** provides a consistent supply of mannan oligosaccharides (MOS) and other metabolites

PowerPak contains a complete mixture of the dry ingredients that ensure your heavy hitters get both instant and residual energy to return to peak production.^{2,3}



Also available from AAS—Calcium Boost Drench Mix.

Calcium Boost provides energy supplementation and promotes higher blood calcium levels:

- Supplements cows at risk for metabolic disorders related to low calcium
- Contains alfalfa meal, calcium propionate, potassium chloride, sodium chloride, magnesium sulfate, niacinimide, yeast culture, yeast extract, hydrolyzed yeast, and Enterococcus facium fermentation product

High-Quality Ingredients. Close Attention to Quality Standards.

With PowerPak™, you can be sure of a consistent product delivered with every dose.

Alfalfa meal	A key component unique to PowerPak Drench Mix: <ul style="list-style-type: none">• Supplies a nutritious source of soluble protein to support rumen bacteria growth.• Provides beneficial high protein content and high proportion of soluble protein and rumen-degradable protein (RDP).
Calcium propionate	Provided at the optimized levels shown to help increase the success rate in treating dairy cows: <ul style="list-style-type: none">• Supplies both propionate, for energy, and calcium, for the demands of lactation.• Calcium propionate is less injurious to the cow's mouth and esophagus than calcium chloride.
Hilyses®	A hydrolyzed yeast culture is now included to provide a consistent supply of mannan oligosaccharides (MOS) and other metabolites to support stressed animals.
Calcium salts of fatty acids	Included for additional energy: <ul style="list-style-type: none">• Important when appetite is depressed and for both calving and milk synthesis.• Research demonstrates a possible synergistic effect with dietary fat and glucose precursors.
Dried whey	Provided as a readily available food for rumen microbes.
Potassium and sodium	Provided in optimal amounts to restore electrolytes lost at calving.
Magnesium	Included to replenish marginal plasma magnesium levels at calving that can contribute to hypocalcaemia.
Direct-fed microbials	Provided by several strains of <i>Enterococcus faecium</i> .
Niacin	Added at 12 grams per dose to help reduce the rate of fat mobilization, decrease the concentration of ketones in the blood, and increase blood glucose levels.



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References: 1. Kopcha M. Oral fluid therapy for adult dairy cattle. Michigan Dairy Review. April 2008. Available at: <https://msu.edu/~mdr/vol13no2/kopcha.html>. Accessed: 7/6/17. 2. Currin J. Fluid therapy for sick cows: To pump or not to pump. Virginia Tech. Dairy Pipeline. October 2007. Available at: <http://www.sites.ext.vt.edu/newsletter-archiv/dairy/2007-10/FluidTherapy.html>. Accessed: 7/19/17. 3. Hutjens M. Drenching fresh cows. University of Illinois. Illinois Livestock Trail, April 2002. Available at: <http://livestocktrail.illinois.edu/dairy/paperDisplay.cfm?ContentID=636>. Accessed: 7/6/17. © 2017 Advanced AgriSolutions, LLC