



Uniscope, Inc.

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Feed Mill Processing • Nutrition

Do you have urea bridging problems?

- **Beef Feedlot**
- **5 to 30% Urea**
- **Potassium Chloride**
- **High Minerals**



If so, call Uniscope for help!

Lubrication • Moisture Repellency • Binding • Anti-Bridging

Bin-Aid® ...

your solution to urea bridging problems!

The bridging problems caused by pelleting urea feeds with 5% to 30% urea can create customer complaints, especially in the warm and humid spring and summer months. By following some general guidelines and using an anti-bridging agent, your bridging and customer service problems can be minimized.

Urea is an ingredient that is moisture and heat sensitive. During pelleting, the steam or moisture in the conditioning chamber liquefies the urea. In addition, as feed passes through the pellet die friction heat will further liquefy the urea. When the temperature of hot pellets increases to 149°F as they exit the pellet die, a "flashing-off" or vapor phase of urea occurs.

As the pellets begin to dry, this urea liquid continues to move to the outside of the pellet. This migrated liquid evaporates leaving behind the urea crystal on the surface of the pellet. The urea on the pellet surface causes the pellets to stick or cake together in bins, trucks, or bags.

Another problem is heat and humidity when processed pellets are stored in holding bins or trucks. The urea continues to attract moisture and this increases stickiness of the pellet causing bridging. The end result is pellets that will not flow from a bin and require excessive manpower to unload. When this happens to customers, they are not very happy.

BIN-AID USAGE TIPS

Bin-Aid, an anti-bridging agent, reduces bridging by forming a film on the pellets and by decreasing the friction heat at the pellet die. **Bin-Aid** is a dry powder added at the mixing stage.

1. Add **Bin-Aid** at a rate of 2 lb per ton in the winter and 3 lb per ton in the summer.
2. When using **Bin-Aid**, maintain the typical mill settings for feed flow and conditioning chamber temperatures.
3. **Bin-Aid** will provide lubrication that will reduce the die friction heat. This decrease will allow the mill to run smoother, using less amperage. Typically a mill operator will increase feed flow and production rate.

Caution: DO NOT increase feed flow or steam levels; take advantage of lower friction heat.

4. Increasing the production rate over normal levels will increase the friction heat at the die and recreate the bridging problems.

Also, as production rates are increased, the pellet level in the cooler will be deeper reducing cooler efficiency. This results in hotter, moister pellets entering the holding bin increasing bridging problems.

With **Bin-Aid**, keep the mill settings the same. Enjoy the benefits of reduced energy costs associated with reduced amperage, and the labor savings of not having to bang on bins or struggle with unloading trucks.

FEEDLOT RATIONS

Feedlot rations contain 5 to 30% urea and typically include potassium chloride, another hygroscopic ingredient. During pelleting, steam in the conditioning chamber and die friction heat liquefy these ingredients and the result is a sticky meal that draws

UNI-BOND IN HIGH UREA PELLETS

Uni-Bond is another excellent product used as an anti-bridging agent in pelleted urea feeds. **Uni-Bond** is a low inclusion binder that also imparts a moisture resistant barrier in the pellet. **Uni-Bond** can be used as a production tool to reduce moisture absorption and improve the flow of urea pellets.

Uni-Bond has additional applications for solving problems with moisture repellency in animal feeds. When certain feed types are

UNISCOPE PROGRAM APPROACH

To minimize the downstream problems associated with high urea levels and hot, humid periods requires a Program Approach.

Uniscope has a checklist of processing tips and managerial tools to significantly reduce

significant mill amperage and produces caked pellets in holding bins. **Bin-Aid**[®] can reduce “hang ups” in the bin and bulk truck reducing labor costs and unhappy customers.

exposed to humidity, rainfall or snowfall they can bridge, become soft, swell and eventually degrade into fines. Some of these feed types include pre mix pellets, wild game feeds, calf creep pellets, high fiber pellets and high fat pellets during the summer. **Uni-Bond** will bind these formulas together and improve the weather protection of the pellet.

headaches associated with high urea pellets.

Contact Uniscope for samples and a list of ways to manage bridging in urea feeds.

Bin-Aid[®] ...takes the HAMMER

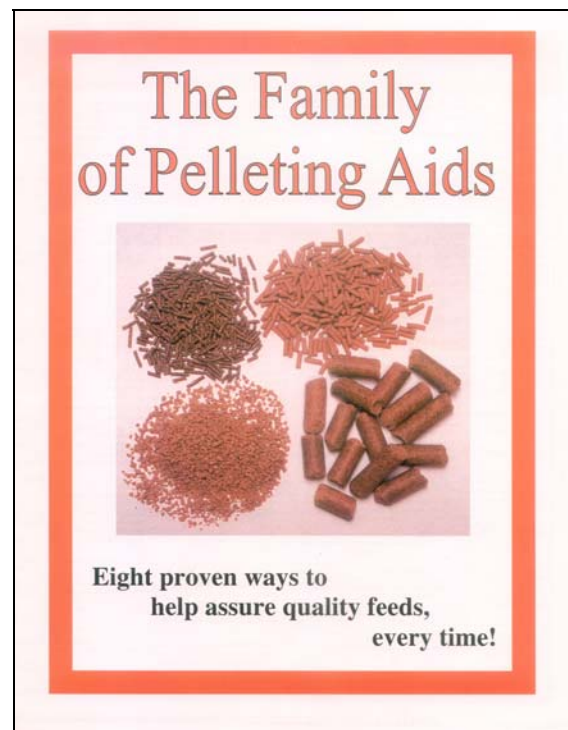
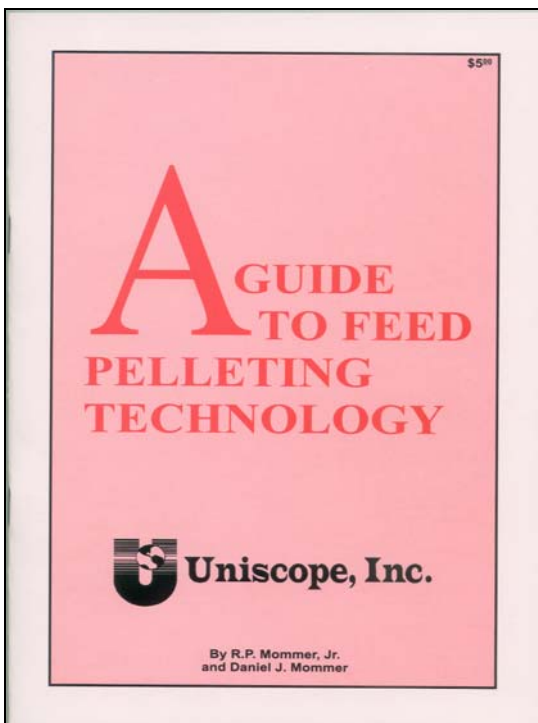


Out of “sticky” urea feeds...

www.uniscope-inc.com

Contact Uniscope to help take the headache out of pelleting feeds...

- **Product Technical Booklets**
- **Samples for Testing**
- **Trouble Shooting Assistance**
- **Product Line Brochure** (binders, lubricants, anti bridging agents and water repellent minerals)



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