

# More effective cattle feed ahead

**D**INNISSEN Process Technology based in Sevenum, Netherlands, announced that it is developing a new method that makes it possible to appreciably improve the effectiveness of cattle feed.

The method is based on the possibility of protecting liquid as well as powdered vitamins, enzymes, prebiotics and probiotics against oxidation. It offers new opportunities for cattle farmers and feed manufacturers.

Micro ingredients such as vitamins, enzymes, prebiotics and probiotics play a crucial role in concentrated feeds and diet feeds for cattle. These substances, in particular, play a major role in determining the health and production capacity of the animals involved.

However, vitamins, enzymes, prebiotics and probiotics that are added to feed pellets in only minute amounts are very fragile. Contact with oxygen causes certain nutritional compounds to become oxidized and lose much of their effectiveness. This can easily happen during transport and storage of the pellets.

Dinnissen is working with a supplier of additives to develop a new production method for cattle feeds that helps retain the effectiveness of vitamins, enzymes, prebiotics and probiotics as much as possible, the announcement said.

The technique is simple: The nutritional substances in each pellet are surrounded by an airtight package, ensuring that they do not come into contact with oxygen. The special structure of the feed pellet for cattle ensures that

## Key Points

- Method protects micro ingredients against oxidation.
- Nutritional substances released only after pellets reach cow's fourth stomach.

the nutritional substances are released only after the pellets reach the fourth stomach of the cow, which is where these compounds are absorbed by the blood.

Additional advantages of the new production method are that these substances are dosed precisely and then mixed homogeneously throughout the feed product, the announcement said.

## New applications

In developing the new production method for cattle feeds, Dinnissen was able to use existing technology that it had applied earlier for the production of baby foods and premium diet foods for pets.

This included the Pegasus Mixer, which makes it possible to spray vitamins, enzymes, prebiotics and probiotics in predefined and accurate quantities onto the surface of cattle feeds and, in addition, to optimize process conditions such as temperature, residence time and rotational speed.

The mixer also makes it possible to mix very small quantities of micro ingredients homogeneously. After being sprayed onto the pellets, the tiny quantities of micro ingredients are transported deep inside the pellet with the help of the Pegasus Vacuum Coater,



Photo: Dinnissen Process Technology

**BETTER WAY:** Dinnissen Process Technology uses its Pegasus Mixer to spray vitamins, enzymes, prebiotics and probiotics onto the surface of cattle feeds. The micro ingredients are then transported deep inside the pellet, protecting them from falling off and from contact with oxygen.

thereby protecting them from falling off and from contact with oxygen.

The company uses same vacuum technology to supply each separate feed pellet with an airtight protective layer, which hermetically seals off the vitamins, minerals, prebiotics and probiotics from all contact with the outside air.

## Airtight packaging

Dinnissen has high hopes for this new technology, according to the announcement.

Henri Michiels, company director, said the mixer and vacuum coater were both developed "for flexibility of use and to enable us to deal with a broad range of is-

suces that arise when solid as well as liquid substances, such as oils and fats, have to be mixed with powders, pellets and granulates."

He added, "We expect to be able to improve the effectiveness of cattle feeds with this new technology, thereby enabling cattle farmers to realize improved results. This new method creates opportunities in the feed sector to develop improved feed products and to reduce the use of aggressive acids. The latter are now often used to improve the shelf life of vitamins, enzymes and prebiotics and probiotics."

More information is available at [www.dinnissen.nl](http://www.dinnissen.nl).

# Active ID system proves versatile

By TIM LUNDEEN

**MISSING** a range cow? Need to know where your cattle are grazing? Want to print barcode labels for blood samples? Need a weather-proof, durable, wireless handheld computer for use while working cattle?

Fort Supply Technologies in Kaysville, Utah, has developed the Archer Field PC and FaST EID systems to wirelessly capture electronic identification (ID) data as well as print labels and integrate global positioning system (GPS) data to solve such situations.

Terrill Weston, field technical support for Fort Supply, demonstrated the system (pictured) for *Feedstuffs* at the recent joint annual meeting of the American Society for Animal Science and Indian Dairy Science Assn. in Indianapolis, Ind.

Since Fort Supply's system works with active tags — those that have batteries — with an antenna attachment or tower, ranchers could locate cows in rugged range environments or generate an inventory list of cattle in a pen, he said.

With the tower system and GPS, range scientists can

monitor grazing patterns of tagged animals without needing to physically monitor the herd.

The wireless printer option allows barcode labels to be printed on the spot for when blood or DNA samples are collected.

With the use of electronic ID tags that contain thermal chips, temperature data can be monitored for signs of heat and/or cold stress.

With the large animal monitoring and notification system option, towers can be placed along sensitive zones such as along riparian areas or highways, and a rancher can receive a text message when a tagged animal approaches the zone. Actions can then be taken to remove the animal or herd from the sensitive area, Weston said.

More information on Fort Supply Technologies and its animal tracking solutions is available at [www.fort-supply.com](http://www.fort-supply.com).



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