

Turn on
the **power**
of coproduct
beef rations



Where **Quality** Comes First

Dodgeville, Wisconsin 53533
Phone: (800) 236-2345
Website: www.QLF.com

Introducing New
CORE MAX™
 liquid feed
 supplements.
The key
 to
 balanced
 coproduct
 beef rations.



More and more beef producers now are using liquid feed supplements. For a lot of good reasons. And Quality Liquid Feeds (QLF) has been a leader in the field for 25 years.

More and more beef producers are considering the use of coproducts. That's why QLF is proud to introduce a new line of liquid supplements to help you realize, for the first time, the full production potential of coproducts in beef rations.

The case for coproducts in beef rations: They're good, close and abundant.

The table below, from the Iowa Beef Center and Iowa State University, shows the range in nutrient values for selected coproducts.

In general, many of the nutrients from corn are concentrated into nutritious, highly palatable livestock feed ingredients.

For beef cattle in the Midwest, wet corn gluten feed and wet distillers grain have particularly high values and can serve as an excellent source of protein, energy and several minerals.

In fact, research shows the energy values of wet coproducts to be even greater than corn. As much as 20% higher. The protein level of coproducts is also quite high, up to 20–30% on a dry basis. And it's high-quality protein.

Nutrient Value of Selected Coproducts

| | WET CORN MILLING | | | | DRY CORN MILLING | | | |
|------------|----------------------|------------------|----------------------|--------------------------------|---------------------------------|-------------------------|-------------------------------|-----------------------|
| | Dry Corn Gluten Feed | Corn Gluten Meal | Wet Corn Gluten Feed | Condensed Steep Water Solubles | Distilled Dried Grains Solubles | Distillers Dried Grains | Condensed Distillers Solubles | Wet Distillers Grains |
| Dry Matter | 90 | 90 | 42–44 | 50 | 90 | 90 | 30 | 30–50 |
| Protein | 20 | 66 | 17–21 | 35 | 27.8–30.4 | 30 | 24–28.5 | 30–32 |
| Fat | 2.8 | 2.2 | 3–4 | 3 | 8.9–10.7 | 8.4 | 9–14.5 | 8.5–12.5 |
| Fiber | 11.1 | 3.3 | 3.5 | — | 6.9–10.1 | 14.4 | 4 | — |
| ADF | 37.6 | 14 | 12–14 | 6–1 | 18–21 | 18 | 2–7 | 14–22 |
| NDF | 12.4 | 5 | 38.48 | 1.5 | 44–46 | 44 | 10–23 | 30–50 |
| TDN | 80 | 86 | 80 | 91 | 85–90 | 77 | 75–120 | 70–110 |
| NEin | 0.96 | 1 | 0.9–0.97 | 1 | 0.99 | 0.89 | 1.05–1.15 | 0.9–1.1 |
| NEg | 0.59 | 0.69 | 0.62–0.67 | .72 | 0.68 | 0.67 | 0.85–0.93 | 0.7–0.8 |
| Ca | 0.055 | 0.08 | 0.03–0.1 | 0.07 | 0.17–0.26 | 0.11 | 0.03–0.17 | 0.02–0.03 |
| P | 1.1 | 0.53 | 0.5–1 | 2 | 0.78–0.83 | 0.41 | 1.3–1.45 | 0.5–0.8 |
| K | 1.6 | 0.22 | 1 | 3 | 0.49–1.08 | 0.18 | 1.75–2.25 | 0.5–1 |
| Mg | 0.5 | 0.088 | 0.3 | 0.9 | 0.2–0.33 | 0.08 | 0.65–0.9 | 0.2–0.3 |
| Na | 0.16 | 0.066 | 0.1 | 0.4–0.5 | 0.3–0.63 | 1 | 0.3–20 | 0.1–0.2 |
| S | 0.33 | 0.72 | 0.4–0.5 | 1.8–2 | 0.37–0.44 | 0.48 | 0.37–0.95 | 0.5–0.7 |
| Fe | 178 | 313 | 80–110 | 127–178 | 258–358 | 222 | 227–600 | 90–180 |
| Cu | 5.5 | 27 | 5–7 | 8 | 10–64 | 49 | 17–83 | 6–7 |
| Zn | 83.3 | 34 | 46–64 | 113–164 | 67–89 | — | 103 | 40–60 |
| Mn | 23.3 | 7.8 | 0.3 | 42–50 | 28–27.6 | — | 34 | 8–16 |

Prepared by Dr. Daniel D. Loy, Professor of Animal Science, Iowa State University and Wendy Miller, Communications Specialist, Iowa Beef Center

Note: Energy levels in above table are on the upper range of expected values. These need confirmation by further research.

Coproducts also can provide excellent feeding value when purchased right. And coproducts are abundant and readily available from ethanol and corn processing plants across the Midwest.



No matter where you feed cattle in the Midwest, there's probably an abundant supply of corn and coproducts near you.

QLF has the **knowledge** you need to make coproduct feeding work in your beef rations.

Quality Liquid Feeds is an industry leader in helping beef producers determine the best way possible to use coproducts from ethanol and corn processing plants. And we're working with coproduct suppliers and Midwestern universities to help develop a proven approach to coproduct ration balancing.

In general, coproducts are high in undegradable intake protein (UIP) and need to be supplemented with specific levels of degradable intake protein (DIP) to promote efficient digestion. We also know that coproducts are low in calcium – an important element in any beef ration. In addition, when coproducts are dried, their energy value is decreased.

For these reasons, and more, it pays to work with QLF – the experts in coproduct feeding.

What we know about coproducts

- Coproduct ration balancing can be tricky business
- Coproduct rations need degradable intake protein (DIP) supplementation
- Coproduct supplements require high levels of calcium
- Wet coproducts have a higher energy value than dried coproducts
- Liquid supplements and coproducts work well together
- Liquid supplements provide uniform and even nutrient distribution



CORE MAX supplements bring out the **full potential** of coproducts.

Our new liquid feed supplements offer varying levels of protein and other nutrients. Use them to balance grow-finish rations using dried or wet distiller grains, with or without solubles.

A laboratory analysis of your local coproduct source lays the groundwork for determining which product is right for you. Your local Land O' Lakes/Farmland Feed Cooperative or Quality Liquid Feeds representative can provide additional management, nutritional and mixing recommendations.

The CORE MAX program offers four unique supplements; all providing appropriate levels of calcium, trace minerals and vitamins to balance coproduct grow-finish diets. Your supplement choice will be based on the final protein percentage desired in your rations.

CORE MAX 40 –

40% Crude Protein

CORE MAX 30 –

30% Crude Protein

CORE MAX 20 –

20% Crude Protein

CORE MAX 10 –

10% Crude Protein

For coproduct ration **expertise** and superior liquid supplements, count on QLF.

Producers have trusted Quality Liquid Feeds for 25 years. And our professional, expert approach is recognized throughout the industry.

CORE MAX liquid supplements for coproduct rations are just the beginning. As we learn more about coproduct feeding, we'll be developing new products and new techniques to help you use these valuable ingredients to their fullest potential.



For additional information, contact your Land O' Lakes/Farmland Feed Cooperative or Quality Liquid Feeds representative today.