

## AMINO ACIDS

Most amino acid prices remain stable showing little changes to the market. Sluggish demand combined with ample supply have enabled current price conditions to continue.

Asian producers remain aggressive looking to secure volume sales in Q2 with domestic manufacturers content with market share although at higher prices.

Indications are supply will continue to exceed demand especially as we head into the weaker summer feed demand period.

Overall expectations are prices will remain stable to weaker through the spring and summer months.

| INGREDIENT | Price Trend: 1 Month | Price Trend: 3 Month | Supply Availability |
|------------|----------------------|----------------------|---------------------|
| LYSINE     | →↓                   | →↓                   | GOOD                |
| THREONINE  | →                    | →                    | GOOD                |
| METHIONINE | ↓                    | ↓                    | GOOD                |
| TRYPTOPHAN | →                    | →                    | GOOD                |
| VALINE     | →↑                   | →↑                   | GOOD                |

## DAIRY POWDERS

Market trends have shown weakness in price with higher supplies available especially for lactose and whey permeate. Lower global feed demand is the primary cause for higher producer supplies. Predictions are price trends are stable to weaker as we approach the spring to summer months.

| INGREDIENT    | Price Trend: 1 Month | Price Trend: 3 Month | Supply Availability |
|---------------|----------------------|----------------------|---------------------|
| WHEY PERMEATE | ↓                    | →                    | GOOD                |
| LACTOSE       | ↓                    | →                    | GOOD                |
| WHEY          | →                    | →                    | GOOD                |

## VITAMINS

Vitamin market conditions continue with little change in overall price or supply conditions. Most major vitamin prices are at historic lower levels as demand remains sluggish.

Buying activity is mixed with some taking longer positions basis minimal risk with others buying as needed in case prices move lower.

Some vitamin suppliers have stopped offering in an effort to stabilize prices. Time will tell if this works.

For the spring to summer demand periods experts predict prices to be stable to weak overall.

| INGREDIENT | Price Trend: 1 Month | Price Trend: 3 Month | Supply Availability |
|------------|----------------------|----------------------|---------------------|
| VITAMIN E  | →                    | →                    | GOOD                |
| VITAMIN A  | →↓                   | →                    | GOOD                |
| CAL PAN    | →↓                   | →↓                   | GOOD                |
| NIACIN     | →↑                   | →                    | GOOD                |
| D3 500     | →                    | →                    | GOOD                |

## MINERALS

Mineral markets for zinc and copper by products are mixed as demand fluctuates almost daily driven by needs from international markets and raw mineral inventory stock levels. Copper sulfate pricing overall continues to be stable as copper metal inventories remain low. For zinc oxide and sulfate, prices are more stable with higher inventories available.

Monocalcium phosphate prices have moved lower from domestic producers for Q2. Drivers to these recent decreases are lower raw material prices combined with lower demand for both feed and fertilizer. Expectations are price trends will continue stable to weaker.

| INGREDIENT            | Price Trend: 1 Month | Price Trend: 3 Month | Supply Availability |
|-----------------------|----------------------|----------------------|---------------------|
| MONOCALCIUM PHOSPHATE | ↓                    | →                    | GOOD                |
| COPPER SULFATE        | →                    | →                    | GOOD                |
| ZINC SULFATE /OXIDE   | →                    | →                    | GOOD                |