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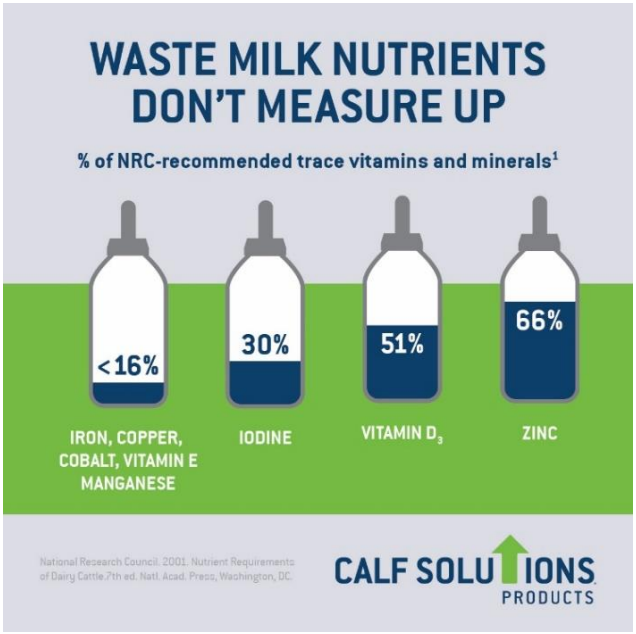
Waste milk nutrient values change, calf nutrition needs don't

Imagine if waste milk came with a product label that listed nutrient values and fat, protein and lactose concentrations. You'd know exactly what dairy calves take in each day without testing equipment. A majority of waste milk doesn't contain all the essential nutrients needed to support dairy calf health and development. But, without a nutrition label or sophisticated testing equipment, it's hard to tell if you're meeting dairy calf nutrition needs. And, what happens when nutrient levels aren't up to par? A variety of dairy calf health issues can follow.



Fortifying the liquid ration with a vitamin and trace mineral pack, at a minimum, helps ensure that dairy calves receive a balanced, consistent ration of essential nutrients each day to support dairy calf health.

Waste milk's nutrient values can change daily, often falling short of dairy calf nutrition requirements. Give your dairy calves the support they need. Here's how fortifiers support calf immune system development, calf starter feed intake, and overall dairy calf health and development.

Where waste milk hits (and misses) the mark for dairy calves

Waste milk typically provides an adequate supply of B-complex vitamins and vitamin A to meet dairy calf nutrition needs. When it comes to macrominerals that are essential for dairy calves, however, waste milk falls short. In fact, waste milk does not meet National Research Council recommendations for iron, manganese, zinc, copper iodine, cobalt, vitamin D, vitamin E and selenium in pre-weaned calf diets,[1] which can lead to selenium deficiency in calves.

These vitamins and minerals are essential for calf growth, immunity, synthesis of hormones that regulate energy metabolism, bone formation and maintenance of cellular membranes. Thanks to waste milk supplementation, dairy farmers have made progress in addressing selenium deficiency in calves, but associated problems like calf weakness continue to appear.[2] Some can be attributed to failing to consistently meet dairy calf nutrition requirements.

Waste milk selenium levels are highly variable depending on where your farm is located. Thin cows fed inadequate nutrition are more likely to produce milk with low selenium levels. Some regions have selenium-deficient soils, resulting in deficient feedstuffs, too. When passed on, selenium deficiency in calves can result in weakness, injury and white muscle disease.

[1] http://www.dairyweb.ca/Resources/USWebDocs/CalfGrowth.pdf
[2] https://www.producer.com/2019/01/mineral-vitamin-deficiencies-can-delay-calf-development/

Macronutrient variability in waste milk can make dairy calf nutrition a guessing game. Fortifying waste milk provides a balanced, consistent ration of selenium and other trace minerals to meet dairy calf nutrition needs every day.

The link between waste milk, calf starter intake and rumen development in dairy calves

As dairy calves grow, waste milk variability can slow calf starter feed intake. How? Nutrient variation, and higher fat content in particular, can deter calf starter intake. Fat, protein and lactose concentrations of pasteurized waste milk vary from 22.3 to 37.6, 23.1 to 40.8, and 30.2 to 38.4%, respectively, research shows. [3]

Farms using a complete waste milk diet are often unhappy with calf starter feed intake. Problems with calf starter intake can compound vitamin and trace mineral variability. A fortifier can be the simplest and most efficient way to consistently deliver dairy calves a balanced ration.

Waste milk should be also be monitored and adjusted based on variable fat, protein and lactose content to help ensure a consistent nutrient ration that supports calf starter intake. Time and labor constraints on dairy farmers and access to on-farm analytical tools often make this impractical.

Adding a fortifier to ensure consistent nutrient body stores helps support the calf's immune system during periods of illness and lower feed intake. And, a healthier calf immune system improves wellness and starter intake, which stimulates rumen development in dairy calves. And growth of the rumen papillae and increasing the rumen surface area to absorb nutrients can allow dairy calves to potentially be weaned earlier.[4]

Promoting dairy calf health, delivering medication

A newborn calf isn't born with complete natural immune defenses. They're built over time with the help of vitamin and trace minerals. However, waste milk has highly variable levels of vitamins and trace minerals. It changes based on a cow's late gestation feed intake and feed and forage quality. Resulting shortcomings in dairy calf nutrition needs can contribute to reduced disease resistance and increased probability of morbidity and mortality.[5]

Aside from providing vitamin A and other key nutrients and trace minerals to build calf immune defenses, fortifiers can also deliver a host of additional beneficial agents to dairy calves through their milk ration. Examples include coccidiostats, ionophores, larvicides, yeast-derived supplements and essential oils.

Coccidiostat for calves supports intestinal health by acting on coccidia parasites, ionophores enhance cattle efficiency by altering ruminal fermentation patterns, and larvicides provide feed-through fly control, helping to prevent associated diseases in calves. So, in addition to supporting calf immune system defenses, fortifiers can go a step further in ensuring healthy, efficient calf development.

Easily deliver a cost-effective, ideal nutrient package to your dairy calves with Calf Solutions® Whole Milk AddVantage®.

[3] https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2672.2005.02569.x
[4] https://extension.psu.edu/rumen-development-dont-wean-calves-without-it
[5] https://www.producer.com/2019/01/mineral-vitamin-deficiencies-can-delay-calf-development/