



Dairy Newsletter

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Wheat gluten protein milk replacers?

With the high cost of milk proteins today, there is increased interest in alternative protein sources. Soluble wheat gluten is being promoted quite heavily. However, the controlled research data available on wheat gluten does not support it as a good replacement for milk protein. Two older trials with slow growing calves (Terui et al., 1996; Davis and Drackley, 1998) showed a small reduction in calf gain during the first 2 weeks of their trials with small to no reduction in calf gain over the entire milk feeding period. However, three more recent trials with fast growing calves (Akey, 1999, 2005; Provimi, 2005) showed a large reduction in calf gain throughout the trials. These trials looked at various sources, suppliers and inclusion rates of wheat gluten (ranging from 15% to 50% replacement of milk protein). Most milk replacers containing wheat gluten replace 50% of milk protein with wheat protein. The research in fast growing calves show a reduction in gain of more than 25% from 0 to 6 weeks of feeding milk replacer at this level. The reduction in gain during the first 2 weeks on milk is more than 70%! A full report of these data was distributed in 2005 and is still available upon request.

Akey offers two milk replacers with significantly lower cost than our standard all milk protein line. One is an all milk protein product called Valu-Flex and the other is an 85% milk protein, 15% soy concentration protein milk replacer called Infiniti. Both support equal gains of conventional all milk protein milk replacers. Research and product information on these products are available upon request.

Dairy Farming and the World Wide Web

A recent news report by CNN indicated an increasing number of farmers were gathering information to help their operation by using the internet. However, since anyone with a computer can post anything they desire on the internet, it is worth a few words to remind you of things to consider when evaluating different pieces of information.

Peer reviewed materials have been evaluated by at least two other people that have some expertise in the field for their accuracy and scientific merit. Some of the places to look for this type of information are the Journal of Dairy Science (<http://jds.fass.org>), Journal of Animal Science (<http://jas.fass.org>), and Professional Animal Science Journal (<http://www.arpas.org/pas/index.asp>). Publications in trade magazines such as Hoard's Dairyman (<http://www.hoards.com>), Dairy Herd Management

(<http://www.dairyherd.com>) Feedstuffs (<http://www.feedstuffs.com>), and Dairy Today (<http://www.dairytoday.com>) also provide useful information. However, remember that when you read something in them, if it sounds too good to be true, ask questions. Web sites of different universities can also be a very good resource of information. We have found Penn State, Cornell, Univ. of Illinois, and Univ. of Wisconsin to be very helpful at providing information for dairy producers. One final web location that can be useful is SPAC that stands for Searchable Proceedings of Animal Conferences (<http://spac.adsa.org>). SPAC is a subscription service that brings information from 19 different conferences into a central location and allows you to search across them for a particular topic. There is a mailing list available for dairy production (dairy-l). This email list allows members to post a question or reply that gets distributed to approximately 300 other people interested in dairy farming around the world. Responses to questions usually start returning in about 1 or 2 hours or the initial posting. For instructions of how to subscribe to Dairy-l please see the web page of Dr. Mark Varner at Univ. of Maryland (<http://www.wam.umd.edu/~markv/Dairy-L.html>). We caution you against reading blogs for useful information. Almost by definition a blog is one person's opinion. Remember the opening paragraph and that all people's writings bring their personal biases. Blogs can and do stimulate deeper thinking but always look deeper and check the facts for your self. Remember, it is your money on the line if the blogger is wrong!

Alternatives to \$4 Corn

Corn stores are expected to be at or near historical lows for 2007. This is somewhat due to increased use of corn for ethanol production but other factors also play a small role. Regardless of the cause, the relatively tight corn supply will increase the cost of this very valuable input for dairy production. As a result of this cold, hard fact, many of you are looking for alternatives to these high grain prices.

The first thing to consider when trying to lower feed cost is optimizing output from the rumen. Even with escalating fuel and feed cost, forages continue to be our most economical source of energy and protein for ruminants. Rations that are balanced to take advantage of the maximum amount of forage possible will result in lower cost per hundred weight produced. Processing of the feeds that go into your ration can also result in lowered feed cost, however, you must be careful to not go overboard as excessive

processing can result in acidosis. Two tools that are available to assist in evaluating the “adequacy” or “excessiveness” of your processing are the Penn State Particle Separator (PSPS) and Manure Screening. The PSPS can be used to evaluate the ration being offered to determine if there is enough but not excessive effective fiber to maintain proper rumen fermentation. Manure screening is a relatively

quick way to evaluate both starch and long fiber digestibility in the diet. There are also feed ingredient technologies that can be used to help get more return from the feed investment. Enzymes products assist in fermenting carbohydrates and allow the rumen to generate more energy and protein from a given unit of feed.

Dealing with the higher cost of Milk Replacers

The cost of milk replacers has increased substantially in the last several months due to an unprecedented and steep rise in the cost of milk proteins. One option for producers to deal with this cost rise is to wean earlier. Research at Penn State and at the Akey Calf Research Facility demonstrates that most calves can be weaned as early as 4 weeks of age. By weaning earlier, producers could ameliorate the impact of high milk replacer prices or even decrease the total cost of calf raising. The table below shows potential cost savings by early weaning, compared to a base-line milk replacer cost before the increase in prices and a latter weaning program. The starter should be 18% CP and based on corn and soybean meal.

Calf raising cost with various weaning ages and costs of milk replacer

Wean age, days (weeks)	Milk Replacer, /lb ¹	Milk Replacer /calf ²	Starter intake lb ³	Cost of starter /calf ⁴	Labor cost savings ⁵	Total Feed Cost to 8 weeks (-labor)
56 (8)	\$0.80	\$44.80	67.2	\$10.08	\$0	\$54.88 (\$54.88)
56 (8)	\$1.12	\$62.72	67.2	\$10.08	\$0	\$71.80 (\$71.80)
49 (7)	\$1.12	\$54.88	102.2	\$15.33	\$8.75	\$70.21 (\$61.46)
42 (6)	\$1.12	\$47.04	133.7	\$20.06	\$17.50	\$67.10 (\$49.60)
35 (5)	\$1.12	\$39.20	161.7	\$24.26	\$26.25	\$63.46 (\$37.21)
28 (4)	\$1.12	\$31.36	182.7	\$27.05	\$35.00	\$58.41 (\$23.41)

¹Cost of 20-20 milk replacer. ²Feeding rate=1 lb/h/d; ³Starter intake difference/day weaned at week 4,5,6, or 7 vs. week 8; Week 4 - 3.0 lb; Week 5 - 4.0 lb; Week 6 - 4.5 lb; Week 7 - 5.0 lb; ⁴Cost of calf starter=\$300/ton; ⁵Labor savings weaned vs. unweaned calf = 5 min/calf/day @\$15.00/h.

With earlier weaning there is obviously less money spent on milk replacer, but earlier weaned calves will eat more total calf starter. Based on the economic assumptions in this table, total feed costs can be almost equalized with milk replacer costs 40% higher, by weaning at 4 compared to 8 weeks of age. If labor savings are considered, the breakeven weaning age (to achieve the same total cost of calf raising as when milk replacer costs were lower) is between 6-7 weeks. Regardless of milk replacer costs, weaning earlier saves money, especially considering reduced labor costs. It is important to keep in mind that early weaning can more easily be achieved when calves are eating more starter. Research at Akey’s Calf Facility has shown that a properly formulated milk replacer will increase average daily gain and starter intake compared to a lower cost lower quality milk replacer or even whole milk.

Responding to “Deadly Food”

It is no secret that breakdowns in the food supply are being blamed for a lot of US health problems. From trans fats being banned in New York to salmonella contaminated spinach in California to rat poison in pet foods throughout the US, agriculture seems to be blamed by the media. As representatives of animal agriculture you need to present a confident and factual presence with your friends, neighbors, and others that you interact with daily.

matter. While sound science is a good backing, personal values may trump the “best option.” Finally, integration, consolidation, and relationships with global organizations are changing the rules of the game. By engaging in issue management, producers can enhance their reputation and improve their bottom line.

THIS NEWSLETTER IS SENT TO YOU COMPLIMENTS OF:

At the Western Dairy Management conference, Charlie Arnot of CMA consulting talked about the mistrust issue between consumers and animal agriculture. He concluded that trust between the parties is most important. Always present truthful information and admit when you don’t know something. Values of both parties