



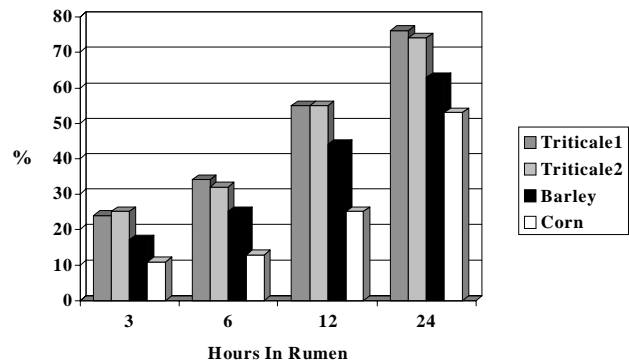
GRAIN DHIA BVD

Grain

Grain prices are relatively good now but could change if Midwest weather goes bad or foreign crisis occurs. With this in mind, triticale can be a feed grain option. A recent test at the UCVMTTC with our fistulated heifer compared apparent rumen digestibility rates between two varieties of triticale (Resource Seeds Inc.), barley and corn. Samples were steam rolled and tested following 3, 6, 12 and 24 hours suspension in rumen collection bags. Bushel weights for whole grains were 60 lbs. for either triticale variety and 48 and 56 for barley and corn, respectively. Bushel weights for rolled grains were 23 and 25 for triticales, 25 for barley and 30 for corn.

Results are given in the following graph and showed a significantly ($P < .01$) faster rate of digestion for both triticale varieties at all collection times compared to either barley or corn, while barley had a faster ($< P .01$) rate than corn. Triticale is a hybrid of wheat and rye, and wheat commonly ferments more rapidly in the rumen than other grains. Barley generally ferments more rapidly than corn, if comparable rolling was done to both. Readily fermentable carbohydrates such as grain starch and sugar can combine with nitrogen in the rumen to form increased amounts of microbial protein, which could reduce need for feeding costly bypass protein. On the other hand, excessively fast fermentation can lead to rumen acidosis if not fed with adequate fiber in the rumen.

Percent Apparent Digestibility



If you have ample long fiber in the ration, then more readily fermented starch can be used, preferably in a TMR and not in slug feeding. A highly digestible starch can cause excess acid in the rumen, but too slow of a fermentation can wind up in the manure. A blend of triticale and corn should work, while a large replacement of the total grain with triticale is not advisable. Working the triticale into the ration should also be done over several days and not all at once. Your nutritionist, veterinarian or farm advisor can help with ration details.

DHIA

The following are excerpts from the California DHIA 1999 Summary Report.

	Lbs. Milk	% Fat	% Protein	Calving Interval	Days Dry	Days Open	Peak Milk Lbs.	% Cull
<u>DHIA</u>								
Holstein	22212	3.61	3.25	13.9 mo.	67	138	94.0	32
Jersey	15446	4.64	3.83	13.3 mo.	66	121	65.6	26
<u>DHIR</u>								
Holstein	23555	3.62	3.24	14.2 mo.	66	147	99.3	33
Jersey	16018	4.65	3.86	13.5 mo.	66	127	68.1	26
<u>3X Only</u>								
Holstein	24340	3.60	3.21	14.1 mo.	66	143	100.5	33
Jersey	17596	4.59	3.82	13.1 mo.	69	118	70.4	27

More on BVD Vaccines

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Have you had a recent visit from your drug salesman and been told that their BVD vaccine is better than others because it stimulates a higher titer or contains Type II virus? Are you confused? A recent article in *Large Animal Practice* (21:1 14-17, 2000) may give you a new perspective on BVD vaccines.

Can modified live BVD vaccines be used in suckling calves without causing illness in their dams? It is possible but not probable that BVD infection might spread from the calves. Replication in the nose of the vaccinated calf is a highly inefficient means of transmitting disease. What little BVD virus that might get transferred will surely not survive in an immunocompetent (i.e. vaccinated) dam.

Do BVD vaccine titers indicate whether the animal is protected or not? Keep in mind that titers are often used by sales people to sell their product or belittle another product. A single dose of an MLV Type 1 vaccine will give protection to even young calves from severe clinical disease even with exposure to Type 2

BVD. Inactivated BVD vaccines when properly administered (following the manufacturer's recommendations) will achieve the same effect. However, it will take longer to develop protective immunity as they required a second or booster dose. All this can happen without the detection of but minimal titers. Why is this possible? Because the vaccines when properly used will allow the animals to react more quickly with its own immune system after BVD challenge rather than preventing infection.

Why do most BVD infections or outbreaks take place? Simple, lack of vaccination. Either no vaccination or failure to follow the manufacturer's recommendations.

Do BVD vaccines protect equally against all the different forms of BVD? No. When properly administered, BVD vaccines do a very good job in preventing serious outbreaks of clinical disease such as diarrhea. However, they may not prevent all problems for the fetus. When exposed, a BVD vaccinated cow will be protected from clinical disease, but a small amount of virus may pass the placenta and infect the fetus. As only a small amount of virus is necessary to harm the fetus, a resorption or abortion may result from even very minimal exposure. Perhaps that is why no

current vaccines claim to give fetal protection. BVD vaccines are about 80% efficacious in protecting the fetus.

No vaccine is 100% effective or totally safe. It is a matter of what risk the dairyman is willing to take. The fact still remains that unprotected animals are at very high risk while vaccinated animals are at low risk from BVD virus. So dairymen should continue to vaccinate for BVD realizing these limitations.

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