

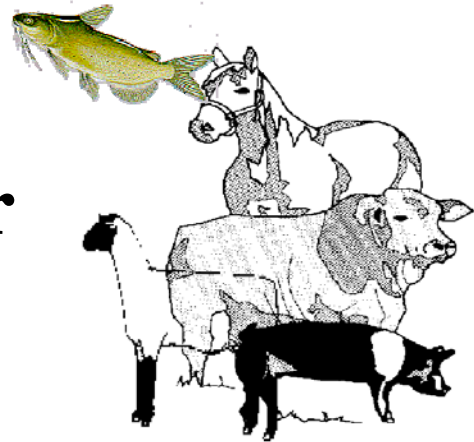
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Animal and Dairy Science Department
Rhodes Center for Animal and Dairy Science

Livestock Newsletter

November/December 2005

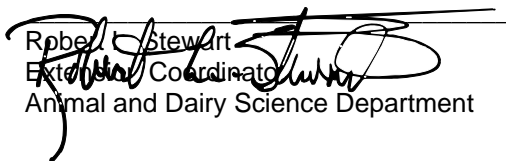
<http://www.ces.uga.edu/Agriculture/asdsm/beef-home.html>



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Robert Stewart
Extension Coordinator
Animal and Dairy Science Department



LIVESTOCK NEWSLETTER

November/December

AS-1

Feeding Colostrum May Improve Milk Production

Dr. John Bernard
Dairy Research and Extension

The importance of feeding colostrum for keeping calves healthy has been well documented. Because calves are born without any immunity to disease, they are dependant on colostrum consumption for the immuglobulins to provide antibodies against disease until they can produce their own. A study recently published by researchers from the University of Arizona indicated that colostrum consumption may also affect mammary development and milk production.

The study was conducted with Brown Swiss calves on a dairy in Wisconsin. Calves were fed either 0.53 or 1.0-gallon of good quality colostrum within one hour of birth. The quality of the colostrum was measured with a colostrometer to ensure its quality. Pooled colostrum was fed in equal amounts for the second, third, and fourth feedings. Calves were fed 0.53 gallon whole milk twice daily until weaning at 7 to 8 weeks of age.

The results of the trial summarized in Table 1. Calves fed 1.0 gallon of colostrum had fewer health disorders resulting in lower veterinary cost which is consistent with previous research related to colostrum feeding. Because calves have fewer health disorders and possibly because of positive effects on nutrient absorption, calves fed 1.0 gallon of colostrum had a higher estimated average daily gain (ADG). The rate is higher than that normally recommended, but it did not appear to alter mammary development because 305 d ME lactation records for both first and second lactation were approximately two to three thousand pounds higher for calves fed 1.0 gallon of colostrum compared with those fed only 0.53 gallon of colostrum at birth. The number of animals fed only 0.53 gallon of colostrum that were culled before completing the second lactation was almost twice that of the group fed 1.0 gallon of colostrum at birth.

Although these data represent the results of only one trial, they do suggest that good colostrum management not only reduces health disorders in calves, but may improve nutrient digestion and metabolism in the young calf allowing it to grow more efficiently. There is research to support this observation and suggest that positive nutrient balance affects endocrine function related to mammary development. These improvements may also promote other positive changes that support improved milk production and improve the odds of the animal staying in the herd longer. The bottom line is that providing a gallon of good quality colostrum to the calf as soon as possible after birth is important for getting calves off to a good start in life and may also help support improved milk production when grow.

See Table 1.

Table 1. Performance of calves fed either 0.53 or 1.0-gallon of colostrum immediately after birth.

	0.53 gallon	1.0-gallon
Number of Calves	37	31
Health Disorders	8	5
Vet Cost, \$/calf	\$24.51	\$14.77
Estimated ADG, lb/d	1.76	2.27
Age at conception, month	13.97	13.54
305 d ME		
First Lactation	19,736	21,841
Second Lactation	21,257	24,899
Culled, %	24.3	12.9

Source: Faber et al., 2005. Prof. Anim. Sci. 24:420-425.

Using salt as an intake limiter

Johnny Rossi

Salt is a popular, safe and inexpensive feed ingredient used to limit the intake of grain supplements to cattle. Producers often cite a lack of labor to feed cattle every day as the reason to utilize salt as an intake limiter. Cattle can consume large amounts of salt with little risk of toxicity. However, it is essential that plenty of clean water is available as the water needs increase by 50 to 75% when fed salt limited diets. Analyzing the hay for nutrient content is the first step in designing a supplement program. The analyses can be used to identifying what nutrients are limiting and how much of each nutrient is required to supply adequate protein and energy to the cow herd. Contact your local county extension agent to obtain information on sampling and testing forages for nutrient content.

Cattle will generally consume 0.1% of their body weight in salt per day. However, salt intakes will vary significantly among animals. Cattle will increase their salt intake over time as they become more tolerant to increased salt intake. Due to variations, salt may need to be adjusted often during the feeding period. However, the 0.1% body weight intake level is a good starting point. Feeding salt limited supplements requires some trial and error on the part of the producer.

Plain white salt should be used as the limiter. Some trace mineralized salt to meet requirements (0.1 to 0.15 lbs per day) can be used to supply trace minerals, but a toxicity can occur if trace mineralized is the only salt source. Pelletting the feed can reduce the effectiveness of salt as a limiter and higher levels may be need with pelleted supplements. The feed ingredients should be cracked or ground to prevent the salt from separating from the feed.

When starting cattle on a salt limiting supplement it may be necessary to feed high levels of salt initially to prevent over consumption. Cattle will be unlikely to over consume when feeding salt levels as high as 35% or greater unless they have not been fed any supplemental salt just prior to beginning the supplement program. In addition, it may be necessary to hand feed the supplement for a short period of time to get cattle accustomed to eating grain supplements.

To determine the needed salt level to control intake of the concentrate at the desired level a few simple calculations are needed.

1) Multiply the weight of the animal by 0.001 to determine how much salt the animal will consume in

one day. For example a 1200 lb cow will eat about 1.2 lbs of salt per day ($1200 \times 0.001 = 1.2$).
2) Then determine the percent salt needed in the feed ration using the following formula:
Percent salt in supplement = $[\text{pounds of salt} / (\text{pounds of concentrate desired} + \text{pounds of salt})] \times 100$. For the cow to consume 4 pounds of concentrate per day, the ration would need to contain 23% salt.

Step 1: $(4 + 1.2 = 5.2)$

Step 2: $(1.2/5.2) \times 100 = 23\%$

Using salt to limit intake of concentrate supplements can be used to reduce labor costs and provide adequate nutrients to the animal. Check the feeders often to make sure feed is available and to monitor consumption. Salt levels may need frequent adjusting as cattle can tolerate more salt as the feeding period progresses and salt intake may change as pasture or hay quality changes. Also, it is very important that cattle have plenty of fresh water at all times. This is critical in cold weather when water sources can either freeze over or pipes can freeze and shut the water supply off to the water tanks.

Small Horse Farm Manure Management (Composting)

Gary Heusner

Owning horses for enjoyment or business is a major commitment and obligation. Horse owners realize that horses require routine maintenance such as feeding, foot care, vaccinations, deworming, and an environment that will provide for optimum physical and mental health. Many horse owners who maintain a small number of horses, however, do not have a sound manure management plan. Horse manure is composed of feces, urine and any bedding material removed with the feces and urine. Typically manure is managed in four ways; (1) It is applied to a field, (2) it is stockpiled for future handling, (3) it is removed from the site by waste handling companies, nurseries and or landscapers or (4) composted. Many small horse farms find it difficult to manage manure by the first three methods because they do not have enough land and do not have enough volume for routine removal and do not want to pay for waste handling companies to remove. Composting is an excellent method of waste management for several reasons. Composting (1) reduces the volume of manure by 40 to 70%, (2) reduces odor, (3) kills intestinal parasite larvae and pathogens, (4) destroys weed seeds, (5) reduces fly population by eliminating breeding grounds, (6) stabilizes manure nutrients in organic form, (7) is less likely to contaminate water by runoff and (8) the final product is an excellent soil amendment for lawns, pastures, gardens and or soil for riding areas. Oklahoma State University (Composting System for Small Horse Farms F-1729, Hamilton) has devised a simple method of composting called a "continuous composting system". The design of the compost bin is shown at the end of this article (figure 8-9). Horse manure is relatively easy to compost because of the typical moisture content of feces, urine, and bedding (wood shavings) removed from a stall which is 40-50%. Horse manure will normally take four to six months to compost, however, a well managed compost will take only two months. The factors affecting composting include (1) bedding particle size (should be 1/8 to 2 inches), (2) moisture content should be 40 to 60%, (3) the pile should have adequate exposure to oxygen as aerobic microbes are the main decomposers, (4) the correct carbon-to-nitrogen ratio needs to be maintained. The preferred carbon-to-nitrogen range is 25-30:1.

Fortunately typical horse manure using wood shavings averages 30:1 carbon-to-nitrogen ratio. A compost goes through three phases:

1.A short warm-up phase where the temperature reaches 105° F in a couple of days to a month.

2.A hot composting phase in which temperatures reach 110 to 150°. This is the phase in which aerobic bacteria create the temperatures and degradation and will last two to four months.

3.A cool curing phase in which temperatures drop below 105° F and will last a couple of months. During this phase the compost is acted upon by fungi, worms and other animals.

The “continuous compost bin” is easy to construct. Table 1 lists the materials and number of bins to build based on the number of stalls in which horses are kept. The T-posts are driven to form 6X6 foot area to a height of four feet. A 50 foot roll of 4' tall fencing with openings 3"X4" or smaller is divided into 25 foot pieces. The two 25' pieces are attached to the inside of the posts, leaving one end of the bin open. Once the bin is constructed the loads of stall cleanings or strippings are placed against the enclosed end of the bin, mixed and water added to maintain a 40-60% moisture content. Each time material is added, take a pitchfork and pull out the first six feet of the pile and dump the new load of stall waste on the compost. Add water as needed and throw the moist mixture back up against the pile. Eventually, the end of the bin will be reached; close the opening and open up the opposite end and remove cured compost until the hot portion of the pile is reached.

Composting is an environmentally sound practice of handling horse manure as well as providing a finished product that will provide an excellent soil amendment.

Table 1. Size and number of bins needed based on number of horses in stalls.

Number of Stalls	Number of Bins	Length of Bins (ft)	Number of Posts	Number and Length of Fencing rolls
1 to 3	1	18	8	1 X 50'
3 to 5	1	30	12	1 X 75'
6	2	18	16	2 X 50'
7 or 8	2	30	24	2 X 75'
9	3	18	24	3 X 50'
10 or 11	3	30	36	3 X 75'

You are Invited to attend the annual Dairy Road Show. The 2006 includes a new stop in Tifton, Georgia on March 7, 2006 at the UGA Tifton Campus Conference Center. The program on practical ideas and methods you can take home and use at your dairy operation. Topics and speakers for the program are:

- 10:00 Welcome
- 10:05 Nutritional management of the transition period to optimize fertility in dairy Cattle
Dr. Pedro Melendez
- 10:50 How to reduce mastitis and somatic cell counts in your dairy herd.
Mr. Brent Broaddus
- 11:30 New features in PCDART to schedule protocols.
Dr. Dan Webb and Mr. Ray West
- 12:00 Lunch, sponsored by Pfizer Animal Health
- 12:50 Developing quality dairy replacement heifers.
Dr. John Bernard
- 1:35 Monitoring health and looking for sick cows.
Dr. Carlos Risco
- 2:20 Ranking Dairy cows for future profitability and culling decisions.
Dr. Albert de Vries
- 2:50 Managing risks associated with cow movements.
Dr. Brandley Mills
- 3:10 Adjourn

Registration received on or before February 20, 2006 is \$10 per person or \$20 per person at the door. Registration covers organization of the program, refreshments, and includes one copy of the proceedings.

If you would like to pre-register please mail a check to Brett Broaddus made payable to:

The University of Florida
UF/IFAS Dairy Extension
5339 County Road 579
Seffner, FL 33584-3334

Please include your Name, Address, City, State, Zip, Phone, Farm/Organization, \$10x person.



Market New Branch
P O Box 86
Thomasville, GA 31799
Tel 912-226-1641

Market News

GEORGIA LIVESTOCK



Agricultural Building
Atlanta, Georgia 30334

WEEK ENDING: 12-06-05 The Cooperative Extension Service would like to thank Terry Harris for submitting this information.
 GEORGIA CATTLE: RECEIPTS: 12600 LAST WK 11200 YEAR AGO 10900

<u>FEEDERS</u>	<u>STEERS</u>	<u>MED & LARGE 1</u>	<u>HEIFERS</u>
	132.00-170.00	300/350 LBS	119.00-145.00
	123.00-154.00	350/400	115.00-135.00
	118.00-136.00	400/450	107.00-132.00
	112.00-134.00	450/500	105.00-130.00
	108.00-127.00	500/550	97.00-127.00
	105.00-120.00	550/600	97.00-114.00
	100.00-116.00	600/650	90.00-112.00
	100.00-112.00	650/700	92.00-111.00

<u>SLAUGHTER COWS</u> % LEAN		
75-80% 850-1200 LBS		42.50-52.00
80-85% 850-1200 LBS		43.50-56.00
80-86% OVER 1200 LBS		41.00-60.00
85-90% 800-1200 LBS		42.00-53.00

5 Area Daily Wtd Average - Texas/Oklahoma; Kansas; Nebraska; Colorado; and Iowa/So Minnesota Feedlots:

Steers...Select/Choice 65-80% Weighted Average Price Range 95
 Heifers..Select/Choice 65-80% Weighted Average Price Range 95

By-Product Drop Value (Steer)...Hide and Offal Value _/cwt.

Box Beef Cut-Out Value Choice 1-3 550/750 LBS. 159.75
 Select 1-3 550/700 LBS. 146.87

Georgia Hogs: GA-FL-AL Direct Area Receipts 4600 Trends Mostly 2.00 Higher

US 1-2 220/260 LBS. 46.00-48.00 Sows 300/500 LBS. _____ 500-UP _____

FEEDER PIGS	GEORGIA	TENNESSEE		GEORGIA	TENNESSEE
US 1-2 35/40 LBS.			55-60		
40/45			60/65		
45/50			65/70		
50/55			70/80		

IOWA-SOUTHERN MINNESOTA DIRECT HOGS: RECEIPTS _____ TRENDS 1.32 Lower
 BARROWS & GILTS 49-51% LEAN 185 LB CARCASSES RANGE 51.75-60.93 WTD AVG. 59.31