

Homestead & Farm Notes

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MAY 2012

EVENTS TO REMEMBER

April 19th (reminder)	Tri-County Beef Update: Beef Cattle Genetics Workshop at Bradford County Extension Senior Center, 2266 N Temple Avenue, Starke. Call (904) 966-6224 to pre-register.
May 5th	Master Gardener Plant Sale: Columbia County Extension Office from 9:00AM to Noon. 164 SW Mary Ethel Lane, Lake City.
May 9th	Controlling Invasive Plants: Alachua County Extension Office from 6:00PM to 7:30PM. Identify and control invasive plants with friendly techniques. No cost for the program at 2800 NE 39 th Avenue, Gainesville.
May 17th	Beef & Small Ruminant Production: Alachua County Extension Office from 6:00PM to 8:00PM. 2800 NE 39 th Avenue, Gainesville. Information on different enterprises for beef and cattle and what it takes to raise goats and sheep. \$10.00 fee, call (352) 955-2402 to pre-register.
May 19th	Master Gardener Annual Plant Sale: Alachua County Extension Office From 8:00AM to Noon. 2800 NE 39 th Avenue, Gainesville.

In This Issue:

- Beef Cattle Management Calendar
- Vegetables to plant
- Flowering Bulbs to plant
- Annual flowers to plant
- Lawn Care
- Stocking Fish Ponds without Aeration
- Fish that are Problems in Ponds
- Wildlife Happenings
- Protein Requirements in Beef Cattle Rations, Publication by Basil Bactawar

BEEF CALENDAR FOR MAY:

- ✓ Spring is stressful to cows with calves, be sure that you keep mineral and salt feeders filled.
- ✓ Check dust bags or apply ear tags to control biting flies.
- ✓ Check for external parasites and treat if necessary.
- ✓ Check for Spittlebugs and treat hayfields if necessary. Cattle market information and trends are changing, now is time to "fine-tune" how you're going to market weaned calves.

VEGETABLES TO PLANT:

Heat loving crops such as lima beans, eggplant, okra, southern peas, green beans, squash and sweet potatoes can be planted now.

BULBS TO PLANT:

Achimenes, allium, alstroemeria, Aztec lily, begonia, blood lily, caladium, gladiolus, kaffir, lily, moraea (African lily), spider lily, tiger flower, walking iris and watsomia.

ANNUAL FLOWERS TO SOW:

Plant tough, heat-tolerate plants like: Calliopsis, celosia, coleus, crossandra, exacum gaillardia, gazania, hollyhock, impatiens, kalanchoe, marigold, nicotiana, ornamental pepper, pentas, periwinkle, portulaca, salvia, vinca and zinnia.

- Fertilize annual flowers monthly with a complete fertilizer to feed the heavy bloom crops as they are set by superior cultivars, especially the hybrids now available.
- Pinch and remove spent flowers so energy doesn't go into seed production; forcing plants to grow more blooms. This is really important with our genetically improved annuals which have been bred for and selected for heavy bloom production.

Mole Crickets: Can become a problem in lawns and pasture grass. Look for soft areas where they have tunneled. Insecticidal baits applied in late afternoon before sun-down and following in a good rain or irrigation seem to work the best.

Irrigate: Your lawn at the rate of 2 inches of water.

KEEP LAWN MOWER BLADES SHARP!

Dull blades stress lawn grasses more. Cut grass will recover quicker from a sharp cut. By mowing at the right height, you can help your lawn tolerate drought and diseases better. Grass type and mower height recommendations follow:

- ✓ St. Augustine = 2.5 - 4.0 inches
- ✓ Bahia grass = 3 - 4 inches
- ✓ Bermuda grass = 0.5 - 1.5 inches
- ✓ Centipedes = 1.5 - 2.0 inches

STOCKING FISH PONDS WITHOUT AERATION:

The following recommendations are for new ponds without aeration and without supplemental feeding. It has been my experience that pond owners tend to over-stock, over-feed, and under-harvest their fish ponds. The following recommendations are for a low-maintenance, low-risk of fish loss pond.

- ❖ In ponds that are smaller than half acre in surface area, or remain muddy throughout the year, **channel catfish** should be stocked alone (not mixed with other fish species).
- ❖ Recommended channel catfish stocking rate is 100 per surface acre of pond, whether stocked alone (in ponds less than a half acre of surface) or in combination with bluegill and bass (in ponds more than a half acre of surface).
- ❖ In ponds that will have a combination of bluegill and bass, the bluegill should be stocked first. Recommended bluegill fingerling numbers are 500 per surface acre of pond. Once bluegill fingerlings grow and reproduce, bass fingerlings can be stocked at the rate of 100 per surface acre of pond.
- ❖ In a bluegill and bass pond, red-eared sunfish (shell crackers) can be stocked, but because of their low reproduction rate should only be stocked in combination with bluegill. Recommended fingerling stocking numbers are 150 shell crackers + 350 bluegill per surface acre of pond.

FISH THAT ARE PROBLEMS IN PONDS:

- ❖ Black crappie and white crappie (specks, speckled perch) compete with bass for food, over-populate the pond and become stunted.
- ❖ Common carp and wild catfish (bullheads) stir up the pond bottom and make the water muddy. Bullheads over-populate the pond and become stunted.
- ❖ Green Sunfish and Georgia Giants are prohibited fish in Florida waters. They overpopulate ponds, become stunted, prey on young bass and crappie, and out-compete native fish for food; in addition they breed with other species of bream.

WARM-SEASON WILDLIFE FOOD PLOT PLANTING OPTIONS:

- Sowing warm-season wildlife plots in May can extend supplemental food supplies into late fall.
- Now is time to establish your dove, quail, turkey and deer plots using normal agricultural practices.
- Wildlife prefers these sites, if you mow alternate strips in the late summer so they can forage the area prior to the hunting season. A rule of thumb is to plant 1% of your wildlife habitat to food plots; many of us don't plant enough to supplement the natural food source as our deer herd approaches or exceeds our natural carrying capacity.

THE FOLLOWING OPTIONS FOR MAY PLANTING MIGHT BE HELPFUL:

- **Aeschynomene** does better on wet soils; plant at the rate of 6 to 8 pounds de-hulled seed per acre.
- **Alyceclover** does better on drier soils, but nematodes damage the root system, so don't plant in a vegetable field. Seed rates 12 to 15 pounds per acre.
- **Florida Beggarweed** does better on drier soils. Plant at the rate of 8 to 10 pounds per acre.
- **Chufa** (yellow nutsedge) is a favored food of wild turkeys and hogs. Plant in rows with a planter at the rate of 24 to 36 pounds per acre.
- **Florida Carpon Desmodium** should be planted at rate of 3 to 5 pounds per acre with a cultipacker.
- **Hairy Indigo** should be planted at the rate of 6 to 8 pounds per acre. A cultipacker or grain drill should give better results.
- **Browntop Millet and Japanese Millet** should be planted at the rate of 5 to 10 pounds per acre. Grain drill is preferred, but I've seen adequate stands established broadcast with a carrier such as fertilizer.
- **Pearl Millet** should be planted at the rate of 24 to 30 pounds per acre if broadcast. If using a grain drill you can cut seed rate down to 8 to 10 pounds per acre.
- **Grain Sorghum** should be planted at the rate of 10 to 15 pounds per acre if broadcast or 6 to 8 pounds if drilled.
- **Soybean** can be broadcast at the rate of 60 to 90 pounds per acre; if drilled go down to 40 to 65 pounds seed per acre.
- **Sunflower** is best drilled with seed rates of 6 to 8 pounds per acre.
- **Velvet Bean** if you can find seed (scarce) has broadcast rates of 30 to 45 pounds per acre; drill rates are 8 pounds seed per acre.

WILDLIFE HAPPENINGS:

- ❖ Least terns and snowy plovers nest on beaches and flat rooftops.
- ❖ The last of the cedar waxwings and goldfinches head for their northern breeding grounds.
- ❖ Painted buntings nest through summer in Northeast Florida.
- ❖ Brown pelican and white ibis young are now visible in nests.
- ❖ Crocodile nesting begins in Southwest Florida.
- ❖ Courtship ritual of adult alligators begins, noted by the loud and resounding bellows and water slapping continues through June.
- ❖ Loggerhead and green sea turtles begin night time nesting on sandy beaches.
- ❖ Soft-shell and alligator snapping turtles complete egg-laying.
- ❖ Gray bats congregate at maternity caves now through mid-July.
- ❖ Bluegill begins to bed during full moon.



Protein Requirements in Beef Cattle Rations

By

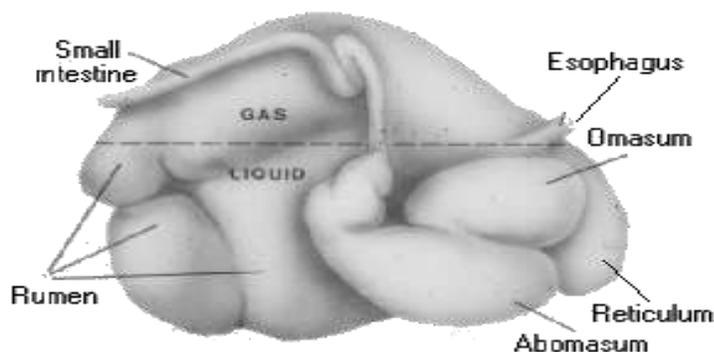
Basil Bactawar, MSc., County Extension Director & Agent, Union Country, University of Florida, IFAS and Matt Hersom, Ph.D., PAS, Associate Professor, Extension Beef Cattle Specialist, University of Florida , Dept. of Animal Sciences

Feed is a major cost in a beef operation, and protein is a good portion of that feed cost. To reduce cost, it is important to have some knowledge of the feed ingredients and how they are utilized by the digestive system of beef cattle or ruminants. Feed cost can be reduced by formulating and feeding rations that meet the nutrient requirements of beef animals at the various stages of growth and production. The aim of this article is to provide some basic information on degraded and undegraded intake protein and their implications in formulating feeds for cattle.

The stomach of a typical cow consists of four compartments namely the rumen, reticulum, omasum and abomasum. They are closely linked together and function as a single unit as can be seen in the photo below. The abomasum or true stomach leads into the small intestine. In general, feeds consist of carbohydrate, fats, protein, water, vitamins and minerals. Amino acids are the building blocks of protein. The major end products of digestion in the rumen are ammonia derived from amino acids and fatty acids derived from the fermentation of carbohydrate. Fatty acids are absorbed by the body to produce about 50-70 percent of the daily energy requirement for the animal. In addition, they are constituents of milk fat.

Photo of the ruminant stomachs, as seen from the right side

Picture displayed with permission from Dr. Richard Bowen, Colorado State University



Degraded Intake protein

The rumen is the largest compartment which contains billions of bacteria, protozoa, molds and yeasts collectively referred to as microbes. When feed enters the rumen through the esophagus, the soluble protein portion is easily digested by microbes to ammonia. This soluble portion is called degraded intake protein (DIP). In addition, feedstuffs such as silage and urea contain non protein nitrogen (NPN) which is converted to ammonia in the rumen. Microbes use the ammonia to form their own protein in the presence of energy. As rumen digestion progresses the microbes flow into the small intestine where they are digested and absorbed. There is a natural limit to the amount of microbes produced in the rumen and consequently, this restricts the amount of microbial protein entering the small intestine. There is also a limit to the amount of ammonia they can use. Overfeeding degradable protein sources such as grains results in excess ammonia production in the rumen. This excess ammonia is absorbed by the rumen wall or is lost through urine. This may represent a loss of money.

Undegraded Intake Protein

When feed enters the rumen, there is a portion of the protein that is not easily digested in the rumen. It will escape fermentation or degradation in the rumen and reach the small intestine with its amino acids intact. This is called undegraded intake protein (UIP) or bypass protein. It is then digested in the small intestine and the amino acids are absorbed via the gut wall into the blood stream. Sources of bypass or undegraded protein are distiller's grains, brewer's grains, and corn gluten meal to mention a few. These feed ingredients are less degradable in the rumen because of the process of heating and particle size change. Furthermore, the exposure of feed to microbial digestion such as in the production of ethanol can increase the level of bypass protein in the byproduct like distiller's grains. These processes render the feed ingredients more resistant to digestion by microbes in the rumen.

Implications for Formulating Feeds

It can be seen from the discussion above, two categories of protein reach the small intestine of the animal. One is microbial protein and the other is bypass protein. It is important to understand this because during certain stages of production, cattle need more protein than what is supplied by microbial protein synthesis. If we want to increase the amount of protein reaching the small intestine for growth and production, we need to supply a source of high by pass protein. A balance of rumen soluble protein (DIP) and bypass protein (UIP) is needed for optimum performance in beef cattle. Rations with high levels of bypass protein may not provide enough nitrogen to rumen microbes for optimal microbial growth and feed digestion. Rations with high levels of soluble protein and /or NPN may not supply enough protein to the small intestine. Animal Nutritionists usually balance rations to contain about 30-40% available bypass protein and 60-70 % rumen soluble protein. The use of bypass protein in a feeding program should be based on the farm resources and cost advantage.

2012 Tri-County Beef Update

Beef Cattle Genetics Workshop



Contact the Bradford County Extension Office at (904) 966-6224 to register.

WHEN:

Thursday, April 19, 2012

WHERE:

Bradford County Senior Center

HOW MUCH:

Registration is \$5.00.

REGISTRATION DEADLINE:

April 16, 2012

5:45 Registration

6:00 Welcome, Introductions and Meal
(Sponsored)

Forage Quality

Tim Wilson (Bradford County Extension)

Nutrition

Basil Bactawar (Union County Extension)

Agriculture Damage Assessment

Mike Davis (Baker County Extension)

Beef Cattle Genetics

Dr. Todd Thrift, (Professor, University of Florida, Animal and Dairy Science)

Questions, Answers & Evaluations

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