

Silo Gas

Silo gas can be fatal. It is formed by the natural fermentation of chopped silage shortly after it is placed in the silo. Nitrogen dioxide is produced in conventional silos. It can cause severe irritation to the nose, throat and lungs. This highly toxic gas is characterized by a strong bleach-like odor and low lying yellow, red or dark brown fumes. A partially filled silo increases the chance of silo gas poisoning because the gas will concentrate near the forage surface. When

finished filling, run your blower 15-20 minutes before entering the silo and run it the entire time you are in the silo. Let someone know when you go up a silo. If you feel light headed get out of the silo and seek help. Tell the doctor you have been exposed to silo gas fume so that they can look up treatment procedures.



HEAT STRESS – NOW IS THE TIME TO PREPARE FOR IT!

Heat stress comes as a reaction to heat and humidity. The combination of heat and humidity can be fatal. In dairy and beef cattle the first sign of heat stress is reduced feed intake, particularly intake of high fiber feeds because fiber digestion increases internal body heat. In sheep and goats one of the first symptoms of heat stress is that the animals become immobile. Often they pant and have difficulty breathing. This is a reaction to fluid filling up their lungs as they try to expel the heat within their bodies. In horses feed intake diminishes and profuse sweating occurs.

Horses under heat stress will show a strong craving for salt. In poultry, birds minimize movement and crave water. Feed intake drops, egg production declines, older layer flocks may begin to molt, and, in extreme cases, birds lay on their breast with their neck and tongue extended. In all species heat stress has a long term impact on

fertility. Males may become sterile for two to three months after severe heat stress. This can be a real problem in dairy herds using bulls.

Once you see the above symptoms it is too late to do all you can to relieve heat stress. At this point the stress has already taken its toll on production and reproduction. Dr. Paul

Chandler, a well known and respected nutritionist from Tennessee, has documented that heat stress is cumulative. Much of the reason for this is how the hormone system works in stressed animals. Each animal

has a unique hormonal self-defense mechanism within its body to combat heat stress. After the first, second, and even third incidence of heat stress an animal's hormonal systems allows it to bounce back. But after many repeated stresses this system begins to break down. Death can occur in some cases. What you do **NOW** to reduce heat stress will help

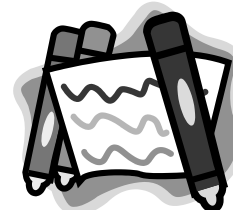


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Coloring Contest for different age groups.

Details on page 2.



BROWN'S
FEEDS

Lyme disease

Lyme disease and other tick borne diseases, are a major concern for dog owners. It is a growing epidemic for the in dogs and humans living in our area.

A tick's life cycle starts by an adult tick bite which infects deer, dogs or raccoons. The adult tick lays their eggs in the autumn, then the eggs hatch into larva. The larva feeds on small mammals (mice) in the summer. Then the larva leaves the host and molts to a nymph in the spring. The nymph can feed on dogs or other mammals and transfer the infection. The nymph leaves the host and molts to an adult tick. The cycle is then repeated

Dogs can show symptoms two to six months after exposure to the virus. The common symptoms of Lyme disease are fever, swelling of the joints, pain, arthritis, lethargy, and loss of appetite. Swollen joints will occur closet to the

tick bite.

Inspect your dogs for ticks and remove them carefully. Do not squeeze the body of the tick to remove, for it may inject Lyme disease into the dog. Dogs cannot transfer the disease to humans. Vaccinations are available for Lyme disease.

Other tick born diseases, such as Anaplasmosis and Ehrlichiosis, are spread the same way. There are no vaccinations available for either disease. Both diseases have similar symptoms as Lyme disease.



Attention Parents and Kids



A Kid's Coloring contest for all young artists.

Age 4-6

Age 7-9

Age 10- 12



A \$25 gift card will be given to first place in each age bracket. A \$15 gift card will also be given out for second place in each age bracket.

**Please give your entry to your Area Director
Contest ends June 30, 2011.**

Ask your Area Director for Extra coloring pages.



Mill Construction Update



With spring upon us and summer fast approaching, construction for the new mill is well under way!



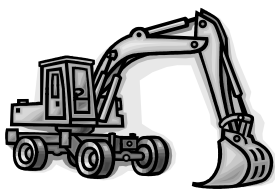
Building for the 21st Century

F. M. Brown's Sons, Inc., has been manufacturing feed in Berks County, Pennsylvania since 1871.

Embracing the latest technology, our new *state of the art* feed manufacturing facility will increase efficiency, decrease manufacturing costs, and provide the highest quality feed available. Ingredient handling, grinding, mixing, pelleting, and bagging feeds will improve when the new mill opens. This investment will allow us to better serve our customers.

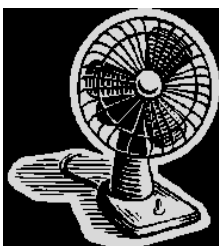
Under the management of the 4th generation of the Brown's Family, the new mill is scheduled to be open in early 2012.

Visit our website at www.fmbrown.com to learn about the services and products



F. M. Brown's Sons, Inc. can provide. Don't

forget to look for updates on the New Feed Mill where you can see current photos of our construction site.



Heat Stress

(continued from page 1)

prevent fatalities later:

- Provide shade – all animals need to escape direct sunlight.
- Avoid hot metal roofs – insulate them now or add vents.
- Apply cold water to the roof in extreme heat. Evaporation of this water reduces heat under the roof.
- Provide cool clean water – Animals will drink more during heat stress and cool water reduces body heat.
- Provide air movement if animals are kept indoors – the amount of air moved varies with species and housing.
- Clean fans louvers and motors to ensure maximum air movement.
- Be sure ventilation systems, involving automatic curtains, work correctly; as well as, thermostats and humidistats are accurate.
- Air moving through a barn must exit a barn – be sure all exit areas are unobstructed.
- Ensure that fans are adequately sized for the structure and number of animals.
- Run fans now to reduce cumulative effects of heat stress later.
- Feeding during heat stress can be challenging. Animals expend energy to respire and therefore need to consume energy in hot weather.
- Acidosis can be a problem in all species of animals during heat stress due to panting or low fiber intake.
- Provide bicarb in feed or free choice to ruminants with the exception of dry cows.
- Bicarb can also be added to poultry rations but proper sodium balance is important.
- Salt is critical. Be sure adequate salt is included in all rations.
- Potassium may be critical, especially for heavily lactating dairy cattle. Add potassium (DynaK) as needed.
- B Vitamins are essential for non-ruminants if heat stressed. Add B vitamin fortified stress packs to water.
- Don't depend on forages offered free choice being consumed as desired. Monitor forage intake closely.
- Feed better quality forages during times of heat stress to ruminants and horses to optimize intake.
- When feeding a TMR be sure moisture of the TMR is 50% or more and watch for animals sorting feed.
- In hot weather ammonia builds up in the bedding and can be a killer. Feed Micro Aide to trap ammonia in bedding.
- In extreme situations cool animals by direct application of cold water.

Economics of Starch Digestibility

A cow cannot access the energy in a whole corn kernel due to the outer coat of the kernel called the pericarp. The breakage of this hard seed coat is necessary to extract the full energy content of the corn kernel. We process corn kernels by rolling, grinding or adding water to disrupt this pericarp and expose the corn starch content for digestion. With corn silage, the entire plant is rolled which breaks this seed coat for better starch digestion. In either case, breakage of the pericarp exposes floury and vitreous endosperm which contains starch. The greater the starch digestibility the more efficiently the cow's rumen will utilize the energy from corn. High prices of corn grain made it more essential to optimize rumen efficiency and digestibility. Additionally, as more energy is available to the rumen microbes they will produce more microbial protein and less supplemental protein from the diet will be needed. This can be a cost savings!

Timely harvesting of corn silage and proper kernel processing affects total starch content and rumen starch digestibility. The starch content of corn silage increasing as the plant matures. Based on research in 1997 at the University of Wisconsin, corn silage in the early dent stage will have an average starch content of 18 percent dry matter (DM). Corn silage at ¼ milk line will have a starch content will be about 29% DM. Corn silage at 2/3 milk line and at black layer will again average have 37% starch content. These were average values and corn varieties will also affect total starch content. As the corn plant approaches maturity, the rumen digestibility of the starch drops rather dramatically. The researchers also found that the corn silage starch digestibility dropped from 86% at 2/3 milk line to only 75% at black layer. The optimum would be to harvest the corn plant at or near maximum starch content and before the digestibility drops significantly. If the plant matures too rapidly prior to harvest, kernel processing becomes more advantageous. **This is why timely harvesting of corn silage and processing kernels results in optimum digestibility.** The corn variety has an affect by the proportions of starch in the floury or vitreous form. The kernels floury endosperm (the white portion of the kernel) becomes less available to the rumen as it dries. Vitreous endosperm (orange color in the Kernel) is negatively related to degradability of starch. Corn genetics largely determines the proportion of floury and vitreous endosperm.

What does this mean to you financially? Let us assume you are feeding a 35% corn silage DM diet (50 lbs as fed with 30% starch content) and the cow is consuming 50 pounds dry matter intake. The average 7-hour in-vitro starch digestibility of corn silage is 62%.

How will dietary changes affect her? What happens when digestibility of corn silage starch goes up? If starch digestibility would increase +10% units it would result in a 2.5% reduction of corn grain needed. In plain language 1.5#/cow/day of less corn would be required. If a +20% unit in digestibility would occur, a 3#/cow/day corn reduction would result, thus providing a financial savings.

Potential Reduction in Feed Costs

Corn Silage Value	\$24/ton	\$32/ton	\$40/ton	\$48/ton
Corn Reduction	\$3/bu.	\$4/bu.	\$5/bu.	\$6/bu.
lb/cow/day	\$ per cow per month ¹			
-1.5	\$1.02	\$1.36	\$1.70	\$2.04
-2.5	\$2.04	\$2.73	\$3.41	\$4.09
-5.0	\$3.41	\$4.54	\$5.68	\$6.81

¹ Corn silage priced at 8x per bushel price of corn used to calculate the cost of filling diet formulation space with corn silage. From U.W. Extension

This is why processing the corn kernel is critical. This is **your money** being saved.

Based on \$6.00/Bushel Corn

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Corn Reduction	40 cows	100 cows	150 cows	200 cows
Lb/cow/day	Dollars	Per cow	Per Year	Savings
-1.5#	\$979	\$2448	\$3672	\$4896
-2.5#	\$1963	\$4908	\$7362	\$9816

The above example may not apply to your farm but **timely harvest of corn silage and processing corn kernels means optimum dollar return for your work.**

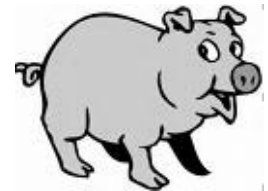
RAISING A HOG

Look for a healthy feeder pig that is 6-8 weeks old. The feeder should weigh approximately 45 lbs. It can be a female or a castrated male.

Housing or shelter varies on the time of the year that you start your feeder. In the cold months of the year inside housing with a heat lamp to keep the pig warm works best. Keeping the feeder pig warm and dry will aid in the pigs growth and health. A minimum area of 5 X 15 feet will provide a resting area and a manure area. Keep the manure area clean. In the summer time feeders can be kept outside behind a woven wire fence. To prevent

digging, a board can be placed at soil level against the fence.

Provide the young pig with fresh water and *Brown's Pig Grower T Pellets* to maximize growth and minimize fat, until the pig weighs 125 pounds. If the feeder pig is 35 lbs. start it on *Brown's Pig Primer Plus NT Pellets* to provide higher protein and energy. When the pig reaches 125 lbs., start feeding *Brown's Hog Finisher Pellets* until finish weight of 220 - 230 lbs.



Hog Feeds

PIG PRIMER PLUS NT PELLETS

Go for economy and value with these 18% pellets fortified with Neomycin and Oxytetracycline. Brown's Pig Primer Plus NT Pellets combine the feed efficiency of a pelleted feed with rapid growth rates and high energy intakes at a low cost per pound to your hog farm. Feed to 45 lbs. of body weight.

Estimated Average Daily Gain 1.2 lbs/day
Expected Intake 2.75 lbs/day

PIG GROWER T PELLETS

This feed is formulated to provide optimum growth between 45 lbs. and 125 lbs. with minimum excess fat. Pig Grower T Pellets has the added benefit of Tylosin to stimulate growth, increase feed efficiency, and prevent dysentery.

Estimated Average Daily Gain 1.7 lbs./day
Expected Intake 4.75 lbs/day



HOG FINISHER PELLETS (B)

This 14% pelleted feed contains the growth promoter Bacitracin Methylene Disalicylate to provide rapid economical gains and with high feed efficiency.

Estimated Average Daily Gain 1.8 lbs/day
Expected Intake 6-6.5 lbs/day

BROWN'S HOG SUPPLEMENT 40% Hog Concentrate

Brown's offers two hog supplements to be mixed with shelled corn or to make economical grower, finisher, lactation, and gestation rations. We can also formulate a super concentrate or custom supplement.

For larger operators we can formulate custom feeds and premixes, such as Akey premixes. Akey 46/37 grower finisher premix are available. Contact your area director for a custom feeding program.

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THIS-N-THAT

- Hard textured corn kernels have a larger portion of vitreous endosperm which is less digestible in the cow's rumen and total tract. Soft kernel grains will increase milk yields because of greater digestibility. Remember this when ordering seed corn.
- Please do not forget about heifers and dry cows on pasture. Make sure salt and minerals are provided. Clean fresh water is important so keep the water bowls/troughs clean.
- What is the value of corn silage? Take the cash value of shelled corn times 8-10. There is no agreement on whether you should use the 8 or the 10 factor. It depends on whether you are buying or selling.
- "If you understand and use the biology and physics of how hay dries in the field, you stand a much better chance of harvesting higher quality forages that haven't been rained on", says Dan Undersander, University of Wisconsin extension agronomist.

"As mowing and conditioning equipment has evolved, some of the basic drying principles of forages have slipped by the wayside, and we need to review them," he asserts.

His recent "Focus on Forage" fact sheet shows how forages dry in the field.

Furthermore, he offers several suggestions to help improve your in-field drying management:

1. Put cut forage into a wide swath at cutting that covers at least 70 percent of the cut area.
2. For haylage, if drying conditions are good, rake multiple swaths into a windrow just before chopping. (usually five to seven hours later) For hay, if drying conditions are good, merge/rake multiple swaths into a windrow the next morning after mowing (when forage is 40 to 60 percent moisture) to avoid leaf loss.

Source: University of Wisconsin

