

**From The American Horse Council
House Farm Bill Makes Horses Eligible For Emergency Relief**

The House Agriculture Committee concluded action on the 2001 Farm Bill and included emergency relief for horses in two separate provisions. The first is particular relief for horse owners and breeders who suffered losses caused by Mare Reproductive Loss Syndrome (MRLS) in Kentucky this year. The second and broader provision would for the first time make horse owners and breeders eligible for emergency loans under the Consolidated Farm and Rural Development Act just like producers of other crops and livestock affected by an emergency or disaster.

“This is an important first step,” said AHC President Jay Hickey. “Horses have never been eligible for agricultural emergency relief before.”

MRLS is the syndrome that refers to the foal loss suffered in Central Kentucky this year in all breeds. The rate of aborted fetuses and stillborn foals was six to seven times higher than normal. The effort to provide emergency relief for horse owners who suffered losses from MRLS was led by Agriculture Committee members Ernie Fletcher (R-KY) of Lexington, Kentucky and Ken Lucas (D-KY). Mr. Fletcher tried to include the same loan program for horses in the Agricultural Supplemental Bill last June, but Committee Chairman Larry Combest (R-TX) suggested it would fit better in the Farm Bill. True to his word, Chairman Combest supported the inclusion of the provision in this bill.

Under the provision, the secretary of Agriculture must make loans available to eligible horse farmers who have suffered a 30% loss in healthy foals in mares owned or boarded by the breeder. As with similar loans available to other crops and livestock producers, a breeder must not be able to get credit elsewhere. Loans may be made for up to 15 years, at interest rates charged under the emergency disaster loan program by the secretary and cannot exceed 500,000.

“Thanks to Chairman Combest and his staff, we were able to secure this funding so our small horse farmers will not lose their farms due to devastating losses associated with Mare Reproductive Loss Syndrome, said Mr. Fletcher.

During the same mark-up Congressman Colin Peterson (D-MN) also included a provision to have horses treated the same as other livestock under the Consolidated Farm and Rural Development Act. This is the first time that horses have been made eligible for the same emergency loan programs that other crops and livestock have enjoyed. “This is a big step for the horse industry,” said Hickey. “It is a recognition that horses are an important part of American agriculture and are eligible for the same treatment as other crops and livestock. We appreciate Mr. Peterson’s efforts.”

The House Farm bill will be considered by the full House after the August recess and will then go to the Senate for consideration.

Management of Catfish During Troubled Times

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We often find ourselves on a treadmill toward higher production levels, higher stocking rates, more aeration, and higher input costs to produce as many pounds of catfish per year as we possibly can. Within the limits of what is biologically possible, given the current state of the art of catfish farming, some might actually be producing 15,000 pounds of catfish per acre per year. However, the inputs for achieving high levels of production can strain our financial resources in times of economic or political uncertainty. In the past, periods of fish meal scarcity have caused catfish feed prices to rise above \$400 per ton. Some producers learned lessons then that could apply to the current economic climate in the United States.

What does the future hold?

I think that most of us have to face the reality that fuel and electricity will become more expensive. It is also possible that our feed costs will increase as manufacturers are faced with higher costs. Fish meal and fish oil have increased in price since 2000. A 25% increase in fish meal price is a reflection of the increased demand of fish meal in the aqua and agri industries. Fish oil price has doubled. Some blame the ban on the use of meat-bone meal in the EU as a contributing factor. Therefore, it would be wise to manage your catfish operation to minimize the amount of aeration and if possible to minimize the amount of feed fed. There are several ways to do this that can result in good catfish yield.

Currently, catfish prices are lower than they have been in the past five years. This price drop has been blamed on the import of Vietnamese catfish, however, the U.S. economy has suffered in general and particularly in some local areas due to layoffs in the textile industry. Now that we are seeing a reduction in business travel and layoffs in the transportation industry, more negative market effect is expected.

Searching for optimum catfish survival?

The number of catfish that survive from the point of stocking to the time they are harvested has had a great effect on the catfish industry. Not only are stocking densities increased to account for the percent of the catfish that do not reach market, but the duration of the growing period has increased to allow larger fish size to replace the catfish that died along the way. In the pond that is never drained, inventory control is difficult. We estimate catfish numbers by their feeding activity, not by actual counts. When fish die, we may only see one in every six or seven that have died. Not only have fish farmers carried catfish longer in order to get the poundage yield up, but processors have marketed the large catfish to allow producers to raise fish that average 3 pounds. As a result of inevitable disease, predation, and incidental mortality, when ponds are drained, survival may average between 60 and 70 percent of the numbers of fingerling catfish that were stocked. It is not unusual for catfish to remain in the grow-out ponds for 18 months or longer. We should be targeting survival of better than 85%. Our catfish should be in ponds for the shortest time possible.

What can we do?

Reducing stocking densities can help if the result is a higher survival rate. Stocking at 5,000 catfish per acre produces the same number of catfish at 85% survival as does stocking at 7,000 catfish per acre and getting 60% survival. Improved survival will occur at the lower stocking density due to reduced stress from crowding. Survival can also be improved by purchasing the largest fingerling you can find, hopefully larger than eight inches in length. You will find that your harvest time will come two to three months earlier by stocking larger catfish. Now that an effective vaccine is available for ESC disease, it would be wise to purchase fingerlings that have been vaccinated. Vaccinated fingerlings used at Tifton add 10 to 15 % to catfish survival over an eight month period. Lower stocking densities allow for a better feed conversion efficiency of as much as 20%.

Aeration management will change as stocking densities are reduced. Dissolved oxygen concentration will be higher on the average at lower catfish densities than at higher densities. Eventually, daily feed allocations will equal those when higher densities are stocked, however, feed conversion efficiency will allow more nutrients to be retained in the catfish body rather than wasted into the pond environment. Pond water quality will still need to be carefully monitored. Aeration should be applied at the appropriate times, usually when dissolved oxygen is predicted to fall below 3 ppm.

Stock threadfin shad or develop an algicide treatment program in order to reduce algal population density. You should manage for off-flavor with both biological and chemical controls. Stock fathead minnows in order to provide control of the proliferative gill disease. The use of fish as biological controls will improve catfish survival as well as provide a food supplement.

Use care in your feed purchases. Plan ahead so that you can book feed at the current prices. Consider using feed that has little or no fish meal. Meat-bone meal and blood meal can be efficiently utilized in catfish diets as a replacement for fish meal. Request a discussion of feed composition with your feed manufacturer. Offer feed to your fish when water quality parameters are good, usually after mid-morning to obtain better feed conversion efficiency.

How long will it last?

Before the terrorist attack, some economic downturn had already affected the catfish industry. Feed costs were predicted to rise between now and 2005. We do not know the long term effects of our impending war, however, when we prevail we expect the economy to recover over a period of years. It will take time to change our catfish management philosophy after a period of carefully evaluation for our individual circumstances. In my opinion, we should plan now and act on your plan as soon as possible.

The Basics of Breeding Soundness Exams

Timothy W. Wilson
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Brood cows and heifers are culled each year based on their inability to produce and wean quality calves. These females lower the overall profitability of the herd and make it difficult to reach break-evens. If a percentage of females are cycling properly, are in good condition, yet still do not conceive, what could be wrong? The problem may not be the females, but rather the bulls used in the breeding program. An important management practice that should be considered is conducting breeding soundness exams on herd sires each year prior to the breeding season.

A veterinarian or a qualified technician should perform this exam 30 – 60 days prior to the breeding season. Timing this exam appropriately allows producers to either re-test a preferred bull or purchase a replacement bull if a negative classification is awarded. It is also suggested to re-examine herd sires after the breeding season to help explain low calf-crops.

This exam evaluates: 1.) soundness, 2.) reproductive anatomy, 3.) semen quality and 4.) libido.

Soundness is critical in the breeding process. Bulls must be in good body condition, have appropriate eyesight, adequate motor skills and be able to support themselves on their hind two legs. If any of these physical characteristics are lacking, a bull may not be able to successfully identify females in estrus and mount them properly.

If the bull is physically sound, the next step is to ensure that the reproductive anatomy is sound and can be used effectively. Palpation of the external genitalia (penis, testis and epididymis) is performed to identify structural abnormalities. Scrotal circumference can be correlated to puberty and is therefore measured and compared by age to the minimum recommended guidelines. Vesicular glands are palpated rectally to identify any inflammation.

After assuring the reproductive anatomy is sound, an ejaculate is taken to evaluate semen quality. Percent motility and morphology are examined to verify viable semen in the ejaculate.

Libido is the final evaluation performed for a breeding soundness exam. Libido is the bulls desire to breed. This is an important evaluation used to determine the sexual stamina of the sire.

There are many different factors involved in performing a breeding soundness exam. Failure of any one of the observations can result in an "Unsatisfactory Classification" being awarded to a bull. Young bulls or bulls that have a temporary problem may be classified as "Classification Deferred" and required to retest to receive a "Satisfactory Classification".

If you have any questions regarding breeding soundness exams, please contact you local county agent or call me at (912) 681-5639.

Georgia 4-H'ers Compete in Southern Regional 4-H Horse Championships

The Southern Regional 4-H Horse Championships were held August 1 - 5, hosted by the Mississippi State University Extension Service and Mississippi 4-H Horse Clubs, Inc. at Shelby Farms Show Place in Germantown Tennessee. The Southern Regional 4-H Horse Championships is an educational and competitive event among the thirteen southeastern states that include Virginia, Kentucky, North Carolina, South Carolina, Florida, Alabama, Tennessee, Louisiana, Arkansas, Texas, Oklahoma, Mississippi and Georgia. Each state can send two teams or individuals to compete in each of the following education events; Hippology, Horse Bowl, Horse Judging, Team Demonstration, Public Speaking and individual Demonstration. In addition, each state can send up to forty - two riders and horses to compete in Stock Seat, Hunt Seat, Saddle Seat, Speed events and Roping events. The following 4-H'ers from Georgia placed in the top ten in the events listed:

Horse Bowl:

6th Morgan County team members included:

Merideth Bryans
Colleen Shumake
Laura Kelly
Melody Bryans
Lindsay Chestnutt

Horse Judging:

6th High Team Overall Morgan County
6th High Team Placings Morgan County
7th High Team Reasons Morgan County

Morgan County team members included:

Merideth Bryans
Colleen Shumake
Lindsey Chestnut
Marilyn Howard

Individual Demonstration:

8th Kristen Yeane Oconee County

Public Speaking:

5th Melody Bryans Morgan County

Stock Type Geldings:

6th Katherine Crowe Gwinnett County
7th Evan Seedorf Cobb County

Hunter Type Geldings:

9th Nathan Hutcheson Newton County
10th Merideth Bryans Morgan County

Saddle Type Mares (Trotting)

1st Caitlin Pumpelly Liberty County
6th Melody Bryans Morgan County
7th Jacquelyn Smith Douglas County
8th Sandy Smith Douglas County

9th Lauren McGirt Douglas County

Showmanship (Western Attire)

9th Madison Sargent Gwinnett County

Showmanship (Saddle Seat, Trotting)

1st Melody Bryans Morgan County
3rd Caitlin Pumpelly Liberty County
5th Hillary Garbutt Wayne County

Western Pleasure

2nd Katie Casey Cobb County

Western Riding

1st Katherine Crowe Gwinnett County

Reining

2nd Kate Stewart Terrell County

Pole Bending

2nd Molly Ricketson Coffee County

English Pleasure (Saddle Seat Trotting)

2nd Caitlin Pumpelly Liberty County
7th Tiffany Bowen Wayne County
10th Anne Walker Wayne County

Saddle Seat Equitation (Trotting)

1st Caitlin Pumpelly Liberty County
8th Hillary Garbutt Wayne County
10th Sandy Smith Douglas County

Hunter Under Saddle

1st Travis Fowler Jasper County

Hunt Seat Equitation

4th Megan Troesken Fayette County
7th Merideth Bryans Morgan County

Pony Working Hunter (14.2 Hands and Under)1st Emily Heidt Bulloch CountyWorking Hunter (Over 14.2 Hands)6th Travis Fowler Jasper CountyEquitation Over Fences8th Megan Troesken Fayette CountyOpen Jumping3rd Tricia Fowler Jasper County
10th Nathan Hutcheson Newton CountyDressage4th Nathan Hutcheson Newton County
6th Tricia Fowler Jasper County

In addition to the above placings Georgia 4-H'er Caitlin Pumpelly was the Southern Regional Champion Saddle Seat Exhibitor. A champion and reserve champion are named from each division, based on points accumulated according to placings in the classes that count toward the division. Caitlin, from Liberty County, had eight more points than the Reserve Champion Saddle Seat Exhibitor.

HORSE IMPORTATION INTO ATLANTA HARTSFIELD EQUINE COMPLEX

The USDA has announced that beginning September 12, 2001 APHIS Veterinary services will be accepting reservations for the importation of horses through Atlanta Equine Complex. Reservations will be taken for shipments beginning October 8, 2001 through March 31, 2002. Advance notice is being provided in order for everyone to have an opportunity to submit complete packages. Packages and information may be obtained by contacting the APHIS (Animal and Plant Health Inspection Service) USDA Georgia Office, 770-922-7860.

Dates to Remember:

October 5-14	Georgia National Fair	Perry
October 16-18	Sunbelt Expo	Perry
December 13	Calhoun Bull Sale	Calhoun

Comparisons of Weaning Weights in Commercial Cattle

Ronnie Silcox
Extension Animal Scientist

Weaning weights of calves are valuable tools for selecting replacements in cow herds. Since calves are not all born on the same date, weaning weights need to be adjusted to a constant age to make fair comparisons. We normally adjust weaning weights to 205 days.

The formula for adjusting weaning weights is:

$$\text{Adjusted 205-Day Weight} = \frac{(\text{Weaning Weight} - \text{Birth Weight})}{\text{Age at Weaning}} \times 205 + \text{Birth Weight}$$

For example, a calf was:

80 pounds at birth,
480 pounds at weaning,
and 200 days old when weighed.

$$\begin{aligned} \text{Adjusted 205-Day Weight} &= \frac{(480 - 80)}{200} \times 205 + 80 \\ &= (2.0) \times 205 + 80 \\ &= 490 \text{ pounds} \end{aligned}$$

The above calculation adjusts for age of calf. The age of the cow also affects weaning weight. A cow usually has her heaviest calves when she is five to ten years of age. To be fair to all calves the age of the cow needs to be considered. Beef Improvement Federation standard adjustment factors for age of dam are included in the accompanying table.

BEEF IMPROVEMENT FEDERATION AGE OF DAM ADJUSTMENT FACTORS*

Age of Dam (years)	Value to Add For Males (lbs)	Value to Add for Females (lbs)
2	60	54
3	40	36
4	20	18
5 - 10	0	0
11 and older	20	18

*For use in commercial herds.

If the calf above was a heifer, out of a three-year-old cow the 205-day weight adjusted for age of dam would be:

$$490 \text{ pounds} + 36 \text{ pounds} = 526 \text{ pounds.}$$

Notice that an adjustment is made for older or younger cows, while zero is added to cows that are 5 - 10 years old. Using these adjustment factors, all weights are adjusted to a mature cow basis.

Quite often birth weights are not taken in commercial herds. If a birth weight is not available, a standard birth weight of 75 pounds for males and 70 pounds for females may be used in the formula.

Comparisons of adjusted weaning weights are only meaningful within a contemporary group. A contemporary group is a group of animals within a herd of the same sex that have received the same type of treatment. There should not be more than 90 days difference in ages. Adjusted weaning weights on bulls should not be compared directly with adjusted weaning weights on heifers. Comparisons of weaning weights from different herds or across years can also be misleading due to differences in management.

In evaluating cows it is desirable to look at their calf records. Since bulls or steers grow faster than heifers, cows with bull calves will look better if you use weaning weights directly. The way around this is to use ratios.

$$\text{Weaning Weight Ratio} = \frac{\text{Individual Adjusted Weaning Wt.}}{\text{Contemporary Group Average}} \times 100$$

After you have calculated adjusted weaning weights for all of the heifer, add them up and get the average. If our heifer above came from a group of heifers with an average adjusted weaning weight of 500 pounds, her weaning weight ratio would be:

$$\frac{526 \text{ pounds}}{500 \text{ pounds}} \times 100 = 105.2$$

This heifer has a weaning weight that is about 5% higher than average. Comparisons of weaning weight ratios on bulls and heifers will give a better indication of how cows have produced, than trying to compare weaning weights directly.

Purebred producers have weaning weights and ratios calculated by breed associations. Expected progeny differences (EPDs) are also calculated for purebred cattle and offer the best tool for comparisons. The adjustment factors presented in this article are for commercial cattle. Most breed associations have developed specific adjustment factors for the individual breed. Some of these are very complex. For purebred cattle contact the breed association for current adjustment factors.

Horse Feed Quality and Contamination

By Gary Heusner
Extension Animal Scientist

Anyone who has fed a horse has heard the speech not to feed musty, moldy feed or feed that contains other contaminants. Other contaminants include such things as bacteria (botulism), insects that may produce toxins and environmental contaminants such as weed seed, dirt and rocks.

Little research has been done on the effects of molds in horse feed. Moldy feed can affect horses in three different forms by affecting the nutrient levels, mycoses or mycotoxicosis. Mycosis is a disease state caused by the fungi (molds) themselves and mycotoxicosis is a disease state caused by secondary metabolites of the fungi, usually referred to as mycotoxins. Nutrient wise it is estimated that moldy corn grain will have a 5% lower energy value. Additionally, nutrient utilization of feedstuffs may be reduced due to disequilibrium of large intestine (cecum and colon) microflora. Many molds produce substances with antibiotic activity; thus an alteration of large intestine microflora in the horse may occur. Mycoses refers more to the respiratory distress that may occur due to the presence of mold spores which may cause physical irritation and/or allergic reactions. The biggest threat to the health of a horse is the presence of mycotoxins. Toxicogenic molds most commonly isolated from grains are *Aspergillus sp.*, *Penicillium sp.*, and *Fusarium sp.* *Aspergillus sp.* produce aflatoxin; *Penicillium sp.* produce penicillins and patulin and *Fusarium sp.* mainly fumonisin, deoxynivalenol (DON; vomitoxin) and zearalenone (ZEN; F-2 toxin). Nontoxicogenic molds include *Absidia sp.*, *Acromoniella sp.*, *Alternaria sp.*, *Cephalosporium sp.*, *Chaetomium sp.*, *Epicoccum sp.*, *Helminthosporium sp.*, *Mucor sp.*, *Nigrospora sp.*, *Phoma sp.*, *Scopulariopsis sp.*, and *Trichoderma sp.* Mycotoxins have been implicated in a number of health problems in the horse, including colic, liver or hepatic disease, hypersensitivity, neurological disorders, paralysis and brain lesions. As stated earlier the maximum levels of mycotoxins in horse feeds has not been thoroughly researched and are estimates based mostly on field observations. Mold growth and contamination cannot occur without certain conditions. Molds need moisture, oxygen, time and the correct temperature (high temperature promotes *Aspergillus*, low temperatures promote *Fusarium*). Mold growth may occur on grain in the field or storage. Most feed mills and feed companies inspect and test grains thoroughly sorting by moisture content, quality, foreign material and mycotoxins. In addition, grains are usually fanned and screened to help remove dust and fines where mycotoxins tend to concentrate. Grain storage is monitored extensively so that the potential for mold growth is reduced. Most of the time mold growth in horse feed occurs after the feed leaves the mill and occurs in the bag or the bin. Most feed manufacturers incorporate a mold inhibitor in the feed at the time of mixing before bagging. Horse feed with high levels of molasses and/or fat are more prone to molding in the bag and/or bin at the farm. It is very important in the Southeast that you store feed at the farm no longer than three to four weeks. In other words feed kept in a feed bin should be completely emptied out every three to four weeks to prevent "caking" of feed on the side of the feed bin, due to condensation. The caking may lead to moldy "hunks" of feed. Fortunately, the horse is a very selective eater and will generally not eat the molded hunks of feed. Also, most of the time these molded hunks have not produced any mycotoxins. The same can be said about feed in feed bags. Feed bags should be stored in a dry, relatively cool place. Old chest freezers work well if you do not have a dry, cooler feed storage area for sacked feeds. It is also important to look at manufacturing dates on the feed bags just like you look at freshness dates in the grocery store.

Following are some basic precautions in the prevention of having contaminated horse feeds:

Deal only with reputable feed mills and buy only top-quality feeds (generally, price is a good indication of quality)

Inspect each bag of feed before you feed. Look for obvious signs that the bag has gotten wet; examine the grain for mold, insects, foreign objects, etc.

Check the date code on the feed bag or tag before you buy and select the freshest bags you can find.

Buy feed in batches, which will be fed in three to four weeks time, in the hot, humid summer months you

might consider two to three weeks supply as maximum.

If feeding grain from a bulk bin, be aware that feed closest to the wall might be exposed to greater temperature fluctuations, moisture and mold growth. When adding feed make sure the bin has been completely emptied.

Ask about your feed supplier's return policy.

If you find evidence of contamination contact your feed dealer and save enough of the contaminated feed (one to two pounds) for testing.

Store bagged feed in a cool, dry, rodent proof environment.

Do not feed any feed in which you find a dead animal, since there is a serious risk for botulism.

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COUNTY/CHAPTER _____ Circle one: 4-H or FFA

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Ronnie Silcox
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