
LIVESTOCK NEWSLETTER

November/December 2000

AS-1

Fall and Winter are the Times to Stock Fathead Minnows in Catfish Ponds

Gary J. Burtle
Animal & Dairy Science, Tifton

Biological control of proliferative gill disease in catfish, "hamburger gill" disease, can be accomplished by stocking fathead minnows in catfish ponds. Over the past several years, the number of cases of proliferative gill disease has gone down due to the practice of stocking fathead minnows with catfish. The minnows control the vector of the disease by eating the aquatic worm which carries the protozoan responsible for causing proliferative gill disease. The disease normally occurs in the fall and early spring so that minnows should be stocked at that time or the minnow population should be checked to see that enough remain to effectively control the aquatic worms.

Fathead minnows are stocked at a rate of at least 10 pounds per acre. That amounts to between 1,500 and 2,000 individual minnows per acre of catfish pond. These minnows eat the worms over a period of one to three months until the aquatic worm (oligochaete) population is less than 250 worms per square foot of pond bottom. The small size of the fathead minnow makes it a good predator of the aquatic worms that are less than ½ inch in length. Channel catfish fingerlings will eat some of the worms when stocked at densities greater than 50,000 per acre. However, catfish soon grow too large to be effective predators on such small prey.

Over the summer months, catfish eat some of the fathead minnows as a supplement to their pelleted commercial diet. Unless the fathead minnows are encouraged to spawn in the spring, most of the minnows will be eaten by the catfish during the growing season. By providing the minnows with boards or pallets to spawn on, the producer can allow a minnow population to increase beyond the 2,000 necessary to control proliferative gill disease. The fathead minnow lays its eggs on the underneath side of the board. About 40 feet of four inch wide board is recommended per acre of water. The spawning season starts in the spring and lasts until mid-summer. Floating boards should be anchored so that they remain 10 to 20 feet from the pond bank.

The cost of this control measure could be as high as \$50 per acre per year. Yearly stocking may not be required since fathead minnows will almost always reproduce when the board substrate is provided. Proliferative gill disease cases in Georgia were rare in 2000. Minnow stocking and control of the aquatic worm populations in Georgia catfish ponds may be the reasons for the decline. In severe cases, 70,000 catfish valued at more than \$50,000 may die from proliferative gill disease in one 10 acre pond alone. No severe cases were reported in 2000.

Taking for granted that the minnows are present is not recommended. Carefully observe the pond during the morning or evening when the minnows may be near the surface. Watch for minnows when catfish are seined for harvest. If you doubt the number of minnows needed are present, use minnow traps that are baited with catfish feed to catch minnows so that you can verify the minnows are present. Proliferative gill disease has reoccurred in ponds where the catfish have eaten most of the minnows.

Computerized Estrous Detection

Timothy W. Wilson
Extension Animal Scientist – Beef Cattle

The use of artificial insemination is growing each year across the United States. Estrous detection is a very important part of the equation when performing successful AI programs. There are many ways to determine if and when a cow is in heat. Many producers rely on visual observation to determine when a cow needs to be bred. As schedules become full, producers may not have the time to devote to proper estrous detection. At this point, estrous detection aids become very important. Detection aids such as the KMAR™ patch, chin ball makers, vasectomized bulls and paint sticks are currently being utilized.

A new tool that has hit the market recently is the Heat Watch™ system. This device utilizes computer technology to maximize data output. A specially designed patch that is equipped with a transmitting device is glued to the tail head area of the cow. This transmitting device is pressure sensitive and is activated when a bull or cow mounts a cow equipped with this unit. A signal is transmitted to a tower, then to a central computer where this data is recorded, these data include: time, length and frequency of mounts.

This tool allows producers to focus on other areas of their operation while ensuring that estrous detection will be accurate. The consistent monitoring of this program is beneficial since it is recommended that AI occur 12 hours after a cow stands in heat.

The Heifer Evaluation and Reproductive Development Program or HERD program involves breeding yearling heifers. The Heat Watch™ system is being used for the first time this year with this program, and excellent results are expected.

The cost of this system is variable from one operation to another. Heat Watch™ representatives can be reached by calling your County Agent or (912) 681-5639.

Winterizing Your Horse Barn: What is A Clean, Sanitary Stall?

Dr. Gary Heusner
Extension Equine Specialist

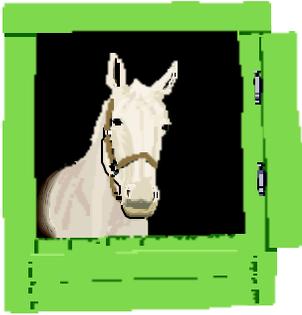
Winter is here and with winter horses usually spend more time in stalls or barns. Because horses are confined for longer periods of time, in closer proximity to one another and often in poorly ventilated barns, the opportunities for disease causing organisms are greater. We often receive questions on how to sanitize or disinfect horse facilities such as stalls, paddocks, pastures, etc. after a disease outbreak has occurred. It is almost impossible whenever dirt and organic matter (wood, feces, feed) are involved to disinfect a typical horse barn and facilities. To disinfect means to free from pathogenic (disease causing) organisms or to render them inert. In most cases in barns the best we can do is sanitize. Sanitation will reduce the levels of pathogens and improve conditions for the horses to remain healthy.

Of the known common equine pathogens, clostridial organisms are the most difficult to kill because they are spore-forming bacteria, found in feces and soil. Clostridial diseases such as tetanus and botulism are individual animal diseases and outbreaks are not common. The contagious disease-causing pathogens of most concern in horses are the bacteria *Salmonella* spp, disease = salmonella; *Streptococcus equi*, disease = strangles; and *Rhodococcus equi*, disease = pneumonia and diarrhea. Viral diseases that are contagious and of concern in horses are the rotavirus, diseases = foal diarrhea; and influenza virus, disease = respiratory disease.

How do you sanitize paddocks or pastures? There is no safe way to kill equine pathogens in soil. If chemical disinfectants are used to sanitize soil, normal flora that keeps the paddock and pasture soil healthy will also be destroyed. The best thing to do is remove feces from dirt paddocks. Proper pasture maintenance such as dragging during dry periods to dry out manure, reseeding bare spots, and not overgrazing will help to reduce the potential spread of equine pathogens. Checking soil ph of pastures will also tell you whether you may need to lime. If ph is low, adding lime will improve the fertility of your pastures and at the same time help to reduce pathogenic organisms.

In order to sanitize or attempt to disinfect a stall or paddock, as much organic matter should be removed from the stall as possible. This means taking all the bedding out of the stall and sweeping the walls. It is then best to use a pressure washer and a strong detergent to wash all surfaces. Some areas that are heavily stained may have to be scrubbed by hand. After all surfaces are cleaned and rinsed remove as much water or moisture as possible. The only types of disinfectants that have any effect in the presence of organic matter are phenolic compounds. Two phenolic compounds with greater than 20% active ingredients are Tek-Trol (Bio-Tech Industries, Inc. Atlanta, GA 800-843-7687) and 1-Stroke-Environ (Steris Cop., Mentor, OH 800-444-9009). There are other phenolic compounds on the market. Use the phenolic compound in a sprayer and spray all surfaces of the stall including the floor and allow to dry (do not rinse). If an outbreak of infectious disease is ongoing, repeat the spraying and drying of the disinfectant. Buckets and any other portable feeding or drinking vessels should be scrubbed, disinfected and rinsed. Anything a horse will eat or drink from should be rinsed of the disinfectant once it has dried.

It is difficult, if not impossible, to disinfect typical horse facilities. However, with enough elbow grease, the use of proper disinfectants, and the proper preventative measures such as a routine, complete vaccination schedule, isolation of newly arrived horses for 10 - 14 days, and isolation of sick horses, disease outbreaks can be held in check.



HORSE HAPPENINGS

Georgia Horse Council Horse Fair

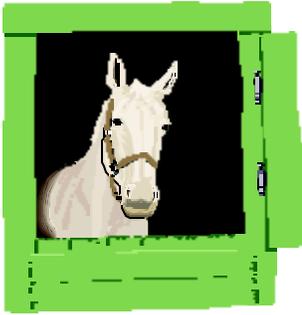
The "Greatest Show on Dirt" is scheduled to pull into the Georgia Agricenter in Perry Georgia on January 13th and 14th, 2001. As an exhibitor or a visitor you will not want to miss out on all the excitement and variety of this year's Fair!

We are currently working on a schedule of events and want to hear from you! We want the Georgia Horse Fair 2001 to reflect what YOU want to see! Please contact the Georgia Horse Council with suggestions for speakers and demonstrations that YOU want to see at this year's Fair. More specific information pertaining to the Georgia Horse Fair Schedule, Vendor information, Association information and ticket prices can be found on the GHC web site www.GeorgiaHorseCouncil.com or by calling (770)922-3350 or via email at Info@GeorgiaHorseCouncil.com.

2001 Carolina & American Youth Leader Conference

Hosted by Clemson University and the SC 4-H Program, this conference will be held January 27- 28, 2001 at the University of SC - Lancaster in Lancaster, SC. All Southeastern states 4-H members, FFA members, volunteer leaders, youth breed association directors, and other interested adult and teen leaders are invited to attend. Topics include Show Ethics, Fund Raising, Developing a Youth Club, Leadership Skills, Successful Record Books, Artistic Expression, Camps/Schools/Opportunities, and many more. This is the PREMIER annual volunteer youth leader event.

For more information call Elizabeth Buist, 4-H Specialist, (864)229-6681.



HORSE HAPPENINGS

Southeastern Equestrian Trails Conference 2001

The second annual Southeastern Equestrian Trails Conference (SETC) will be held at Clemson University March 16 - 17, 2001. This conference follows the highly successful 1998 National Symposium on Horse Trails in Forest Ecosystems and SETC 2000. SETC membership includes the states of Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia. However, trail horsemen, other recreationists, and land managers from all points of the Nation are welcome. Our creed is: *Preserving a cultural heritage in a natural heritage setting.*

The SETC 2001 theme will be "Equestrian Trails and Water Quality." The public lands are rapidly moving into the management strategy called Ecosystem Management. This strategy approaches management on a watershed unit basis, and the bottom line for decision-making on allowable uses will be water quality. Trail equestrians must become familiar with this process, and learn how to preserve their traditions as recreational use of horses on public lands becomes increasingly restricted and prohibited.

SETC 2001 will feature federal and state agency representatives that will describe new levels of water quality protective measures and what this may mean to trail users. In addition, each SETC state will offer a presentation on how they are dealing with these issues. To work towards the preservation of equestrian trail opportunities on the public lands of the future, join us at SETC 2001.

For more detailed information see our website: <http://www.strom.clemson.e> or e-mail gwood@clemson.edu or write to Dr. Gene W. Wood, Extension Trails Specialist, Clemson University, Box 340362, Clemson, SC 29634-0362, or call 864-656-0319.

Sponsorships of this Conference are available, at several levels to include a donation all the way up to Contributor and Sponsor levels. Exhibitor/Vendor booths are also available at the conference. Please contact Dr. Wood, above, for more information. Sponsor names and logos will appear in all press releases, on-line and all follow-up articles in industry-related publications, as well as in the published PROCEEDINGS of this conference. THANK YOU!!

2000 STATE MARKET LAMB SHOW RESULTS

Grand Champion	Ashley Driggers, Tift 4-H
Reserve Champion	Ash Bailey, Decatur 4-H
Georgia Bred and Born Champion	Ashley Driggers, Tift 4-H
Georgia Bred and Born Reserve Champion	Samantha Tankersley, Tift 4-H

County Group of 5 Winners	Breeder's Group
1 st Catoosa FFA 2 nd Catoosa 4-H 3 rd Tift 4-H 4 th Oconee 4-H 5 th Thomas 4-H	1 st Larry Foster Clinton TN Catoosa FFA 2 nd Stewart Club Lambs Bishop, GA

1 st Place Class Winners		
Class 1	Kate Josey	Franklin 4-H
Class 2	Scout Josey	Franklin 4-H
Class 3	Jacob Daniel	Oconee 4-H
Class 4	April Carlton	Worth 4-H
Class 5	Jonathan Parker	Gordon 4-H
Class 6	Kaitlyn Cawley	Tift 4-H
Class 7	Tiffany Harvey	Morgan 4-H
Class 8	Anna Daniel	Butts 4-H
Class 9	Leanna Morgan	Harris 4-H
Class 10	Brock Bailey	Decatur 4-H
Class 11	Melea Baldwin	Hart 4-H
Class 12	Kaitlyn Cawley	Tift 4-H
Class 13	Elton Baldy	Colquitt FFA
Class 14	Daniel Tankersley	Tift 4-H
Class 15	Kobe Wall	Telfair 4-H
Class 16	Sally Stewart	Oconee 4-H
Class 17	Matthew Driggers	Tift 4-H

Class 18	Melea Baldwin	Hart 4-H
Class 19	Teryn Tucker	Colquitt FFA
Class 20	Ash Bailey	Decatur 4-H
Class 21	Sally Stewart	Oconee 4-H
Class 22	Mary Alice Richardson	Mitchell 4-H
Class 23	Josh McCann	Oconee 4-H
Class 24	Matthew Stamey	Gordon FFA
Class 25	Nicholas Webb	Effingham 4-H
Class 26	Skye McCorkle	Bulloch FFA
Class 27	Beth Lynn	Tattnall 4-H
Class 28	Jaimie Varnedore	Appling 4-H
Class 29	Josh Phillips	Miller 4-H
Class 30	Ryan Varnedore	Appling 4-H
Class 31	Ashley Driggers	Tift 4-H
Class 32	Kathryn Hulst	Bulloch FFA
Class 33	Mathew Stamey	Gordon FFA
Class 34	Daniel Tankersley	Tift 4-H
Class 35	Jaimie Varnedore	Appling 4-H
Class 36	Kathy Roberts	Tift 4-H

Division I		
Champion	Kaitlyn Cawley	Tift 4-H
Reserve Champion	Jonathan Parker	Gordon 4-H
GA Bred and Born Champion	Kaitlyn Cawley	Tift 4-H
GA Bred and Born Reserve	Jonathan Parker	Gordon 4-H
Division II		
Champion	Brock Bailey	Decatur 4-H
Reserve Champion	Leanna Morgan	Harris 4-H
GA Bred and Born Champion	Kaitlyn Cawley	Tift 4-H
GA Bred and Born Reserve	Laurie Murrah	Walton 4-H

Division III		
Champion	Kobe Wall	Telfair 4-H
Reserve Champion	Daniel Tankersley	Tift 4-H
GA Born and Bred Champion	Kobe Wall	Telfair 4-H
GA Born and Bred Reserve	Daniel Tankersley	Tift 4-H
Division IV		
Champion	Ash Bailey	Decatur 4-H
Reserve Champion	Mathew Stamey	Gordon FFA
GA Bred and Born Champion	Sally Stewart	Oconee 4-H
GA Bred and Born Reserve	Katie Williams	Morgan 4-H
Division V		
Champion	Josh Phillips	Miller 4-H
Reserve Champion	Jaimie Varnedore	Appling 4-H
GA Bred and Born Champion	Samantha Tankersley	Tift 4-H
GA Bred and Born Reserve	Kathryn Hulst	Bulloch FFA

Showmanship (1st Place for each Grade Listed)

1 st	Kate Josey	Franklin 4-H
2 nd	Kaitlyn Cawley	Tift 4-H
3 rd	Melea Baldwin	Hart 4-H
4 th	Patrick Savelle	Oconee 4-H
5 th	Anna Savelle	Oconee 4-H
6 th	Clint Cawley	Turner FFA
7 th	Leanna Morgan	Harris 4-H
8 th	Beth Lynn	Tattnall 4-H
9 th	Brandon White	Tift 4-H
10 th	Jodi Cawley	Turner 4-H
11 th	Elton Baldwin	Colquitt FFA
12 th	Ashley Driggers	Tift 4-H

First Year Exhibitor

Grand Champion Kevin Schoettler, Catoosa 4-H

Reserve Champion James Blake Lucas, Bleckley 4-H

First Year Exhibitors (1st Place)		
Class 1	Jessica Brown	Upson 4-H
Class 2	Jacob Daniel	Oconee 4-H
Class 3	Dustin Phillips	Oconee 4-H
Class 4	Zach Matthews	Tift 4-H
Class 5	Heather Williford	Thomas 4-H
Class 6	James Lucas	Bleckley 4-H
Class 7	Whitney Chitty	Colquit FFA
Class 8	Kevin Schoettler	Catoosa 4-H

Junior Update

Ronnie Silcox
Extension Animal Scientist

Carcass Data From 2000 State Market Lamb Show

Placing	Carcass Weight	12th Rib Fat	Ribeye Area	Yield Grade	Flank Streaking	Conformation	Quality Grade
Champion	73	.11	3.5	1.5	Choice -	Prime -	Choice 0
Reserve	58.5	.10	2.9	1.4	Choice +	Prime -	Choice +

Champion and reserve market lambs from the 2000 state show were graded at the University of Georgia meats lab. Results are listed above. These were two very nice carcasses and no drug residues were detected.

Steer and Heifer Shows

Following are a few upcoming steer and heifer shows.

Date	Show	Deadline	Contact
Jan. 13	Bulloch County Young Farmers Winter Classic (Beef)	Jan. 1	Richard Herrin (912) 764-1526
Jan. 20	Carroll County Young Farmers Winter Classic (Beef)	Jan. 7	Chuck Joyner (770) 834-3386 Mike McCravy (770) 258-9411
Jan. 27	Moo Moo Classic (Screven County) (Beef) info at : www.screvenextension.org	Jan. 15	Scott Sell (912) 564-2064
Feb. 10	UGA Commercial Dairy Heifer Show (Athens)	Jan. 10	Dr. Froetschel, Amos or Gilson (706) 542-1852

A Summary of Georgia Junior Livestock Shows

Ronnie Silcox
Extension Animal Scientist

Each year about 4000 animals are entered in state 4-H and FFA livestock shows. Table 1 shows the number of animals and exhibitors that were at each state show in 2000. These totals are from shows held February 23-27, 2000 in Perry and the State Market Lamb show on October 7, 2000. As shown in Table 1, a majority of exhibitors in state breeding ewe and market lamb shows are in 4-H. FFA exhibitors show more commercial dairy heifers and market hogs. Beef heifers and steers are about evenly split between 4-H and FFA.

Table 1. Georgia Junior Livestock Show Exhibitors and Animals at State Shows in 2000.

Event	Number of Exhibitors			Number of Animals		
	4-H	FFA	Total	4-H	FFA	Total
Breeding Ewe Show	28	5	33	54	12	66
Commercial Dairy Heifer Show	44	145	189	59	156	215
Beef Heifer Show	197	205	402	266	265	531
4-H Horse Show	274	---	274	329	---	329
Market Hog Show	383	524	907	648	725	1373
Market Lamb Show	180	41	221	347	68	415
Steer Show	132	120	252	150	134	284
Totals	1238	1047	2278	1853	1360	3213

Numbers of entries each year in each show since facilities at the Georgia National Fairgrounds were opened in 1990 are shown in Table 2. Data in Table 2 represent total entries in state projects, while data in Table 1 include only those exhibitors and animals at the state show. Entry deadlines are several weeks before state shows. Some animals are entered that only show in local shows. Beef heifer numbers increased in the early 1990's and have been fairly stable over the last five years. Lamb numbers have declined since the mid 1990's. Market hog numbers have declined over the past five years during the same period that there has been a major decline in hog operations in Georgia. The commercial dairy heifer show began in 1997 and participation has more than tripled in the last four years.

All data on 2001 entries have not yet been entered, but beef heifer entries are well over 700 and dairy heifers will be well over 300. Steer entries will probably be just short of 400.

Table 2: Total Number of Animals Entered by Year

Species	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Beef Heifer	476	504	344	520	623	695	785	788	739	728	723
Dairy Heifer								82	167	261	289
Ewe						58	47	69	57	56	82
Hog	1504	1869	1948	1838	2347	2518	2384	2281	2297	2070	1850
Lamb	550	664	954	864	807	727	609	553	516	548	523
Steer	510	442	381	412	398	419	470	459	478	421	401

Paylean and Barn Talk

Calvin Alford
Extension Animal Scientist

There is more talk in the swine barn about “paylean” than all other subjects combined. When research shows 18 grams/ton of a product will increase muscle, growth rate, feed efficiency and decrease fat, barrow jocks prayers have been answered. Paylean (RACTOPAMINE) was approved by the FDA in December of 1999. This product, marketed by Eli Lilly and Company’s Elanco Animal Health Division, reports Paylean fed at 18 grams per ton improves feed efficiency by 13%, increases average daily gain by 10%, reduces average daily feed intake by 6% and increases lean gain by 25-37%. No, you can not feed Paylean to a light muscled, post legged, high topped one and produce a champion but increasing lean gain by 25-37% is a tremendous tool.

Research by Akey Inc. feeding 9.0 - 13.5 and 18.0 grams/ton of Paylean is shown in Tables 1 and 2.

Table 1. Effects of Paylean Level on Growth Performance (4 weeks)

Paylean Level				
Weeks 1-4	Control	9.0 g/ton	13.5 g/ton	18.9 g/ton
Initial weight, lb	171.56	172.52	171.92	170.65
Final weight, lb	240.88	250.67	248.35	248.94
Daily gain, lb	2.48	2.79	2.73	2.80
Daily feed intake, lb	5.97	5.92	5.60	5.67
Feed/Gain	2.38	2.13	2.04	2.04

Akey, Inc., research trial with 80 individually fed pigs, May 2000.

Table 2. Effects of Paylean Level on Carcass Measurements (6 Weeks)

Paylean Level				
Carcass Measurements	Control	9.0 g/ton	13.5 g/ton	18.0 g/ton
Tenth Rib Midline Backfat, in.	1.24	1.03	1.00	0.93
Last Lumbar Midline Backfat, in.	0.79	0.70	0.63	0.61
Loin Edge Backfat, in.	0.89	0.63a	0.57ab	0.49b
Loin Eye Area, sq. in.	7.39	8.27c	8.55c	9.09d

Ractopamine hydrochloride the active ingredient in Paylean is a repartitioning agent. Nutrients the animal consumes are shifted away from being stored as fat and used to increase muscle mass. Fat deposition decreases due to an increase in lypolysis (fat breakdown).

Now some points to consider before feeding Paylean.

- Soundness is critical - When you pack more muscle and faster growth rate on a structurally unsound pig you are in for a wreck.
- For maximum results Paylean should be fed continuously at least 4 weeks prior to show. When Paylean is taken out of the diet, fat deposition occurs rapidly and muscle disappears..
- A diet containing 11% crude protein is recommended. Increasing muscle requires increasing protein, especially lysine.
- Watch your weights. Paylean increases growth rate by 10%. Plan accordingly.
- Paylean is approved 18 grams/ton from 150 - 240 lbs. Any other use is illegal.

Dates To Remember

December 14, 2000	NW Georgia Bull Test Sale	Calhoun
February 8-10, 2001	Georgia Cattleman's Convention	Athens
January 8-10, 2001	Animal Science Technical Training Workshop Athens	Contact Billy Moss 706-542-3679
December 1, 2000	Youth PQA deadline for hog show entries	