



THE LINCOLN LETTER

THE NEWSLETTER OF THE NATIONAL LINCOLN SHEEP BREEDERS ASSOC.

WINTER

2008

PRESIDENT'S REPORT

by Brian Larson, President NLSBA

What happened in 2007?

Breeders Directory for 2007 included only 2006 dues-paid members NLSBA National Show and Sale (Springfield IL) + All American Junior Show (Lansing MI) + NAILE Junior Show (Louisville KY) + NAILE National Lincoln Show (White & Natural Colored; Louisville KY) + Not to mention county, regional & state events around the country =

A very busy 2007 for Lincolns!

Look for photos and results in this issue.

What's happening in 2008?

Breeders Directory for 2008 includes only 2007 dues-paid members + NLSBA tour to home of Lincoln Longwools in June (Lincolnshire UK) + All-American Junior Show (July 4-6; under consideration; Sedalia MO) + NLSBA Show & Sale (w/NY Bred Ewe Sale) in October 19-20 (under consideration; Rhinebeck, NY) +

All the NAILE events + county, regional & state events around the country =

A very busy 2008 for Lincolns!

Tour of Lincolnshire (approximately June 13 – 21)

See information attached to this newsletter - need to know soon who is planning to attend.

The Lincolnshire Agricultural Society (<http://www.lincolnshireshow-ground.co.uk/>) is hosting the 124th Lincolnshire Show and the Lincoln Longwool Show will be held June 18th. This is the largest Lincoln show in the UK and Lincolnshire is the home of the Lincoln Longwool breed. The North American Lincoln Breeders will be guests of the Lincoln Longwool Breeders Association (<http://www.lincolnlongwools.co.uk/>) during our stay near Lincoln, UK. Besides the Lincoln Showgrounds,



we will be visiting Lincoln Longwool sheep breeders, historical sites in the area (ex. Lincoln and Boston Cathedrals, Burleigh House), and get a first hand view of agriculture in the UK. If you do not have your passports now, you need to start the application process right away!



SLICE, SCOOP, & HANDFUL

Lincolns are Sensitive to Copper

From numerous reports, Lincolns are very sensitive to variations in dietary copper. I assisted with one situation of copper deficient anemia in a Kentucky Lincoln flock, but that is very rare. Most copper crises in sheep are with toxicity – too much copper in the diet. Several of our breeders that have multiple breeds have noted that the Lincolns are the first to show symptoms – which in the case of copper toxicity is usually too late! A beef cattle research project a decade ago identified that a fast growing breed is more susceptible to copper toxicity than slow growing breed.

The problem often comes from excess copper in purchased feed. There are several reasons this can happen: 1) a prior batch of pig or chicken feed is not cleaned out well from the bulk mixer (copper is a growth stimulant); 2) an incorrect mineral ingredient or amount of ingredient may be added to a complete mixed ration (ex., copper sulfate); 3) a mixing error in a purchased commercial mineral or supplement; and 4) feeding a commercial feed not intended for sheep (even beef protein supplements can have too much copper).

Sheep will quickly or slowly over time show the copper toxicity symptoms, depending upon the amount of excess copper in the daily diet. Those symptoms are, in rough order of appearance: 1) rust or red-colored urine and rust-tinted eye whites, 2) off-feed, 3) listless and dull movements, 4) prolonged standing at water source, 5) chewing wood, dirt, etc. and 6) a gradual suffocation due to red blood cells bursting, thus no oxygen.

One veterinarian that raises Lincolns said that early detection of the sheep making discolored urine will permit a drench or injection containing molybdenum to bind enough copper to prevent further damage. I have to confess that watching for the color of sheep urine, unless I'm suspicious or lucky, is not high on my frequent observation list! Another experienced sheep veterinarian suggested to me that since copper toxicity is rarely detected early enough, the daily drenching does not save productive sheep. Neither we nor the regular veterinarians have molybdenum (injectable or drench), and if the sheep live, they rarely are productive. Other first-hand observations have been that growthy sheep are most susceptible. That makes some sense since they usually eat more feed and gain faster.

Our recent first-hand experience with copper reared its ugly head in March 2007 – we had never had a problem in 50 years in the sheep business. We had just made a move from Missouri to Michigan after selling off 2/3 of our flock – kept some really good sheep; show flock, best breeding ewes, etc. We were busy with everything associated with moving and those things we always shouldn't take for granted! In hind sight, I should have been more vigilant. We got hit with copper toxicity by buying a beef protein supplement (no sheep protein supplement was available in the rush to get the sheep fed!)

Continued on page 5...

Visit the Lincoln Association Website for Updates and Information

www.lincolnsheep.org

NORTH AMERICAN INTERNATIONAL LIVESTOCK EXPO

Louisville, Kentucky - November 14, 2007

NATIONAL JUNIOR LINCOLN SHOW

Twenty-nine white and natural colored Lincolns:

- Grand Champion White Ram & Ewe, Reserve Champion White Ram, Reserve Champion Natural Colored Ram, Best Fleece White – J. Kruse, Illinois
- Grand Champion Natural Colored Ram & Ewe, Reserve Champion White Ewe – K. Mohr, Illinois
- Reserve Champion Natural Colored Ewe – A. Shea, New Jersey
- Best Fleece Natural Color – C. Greenwell, Indiana
- Also Showing: M. & M. Bayer



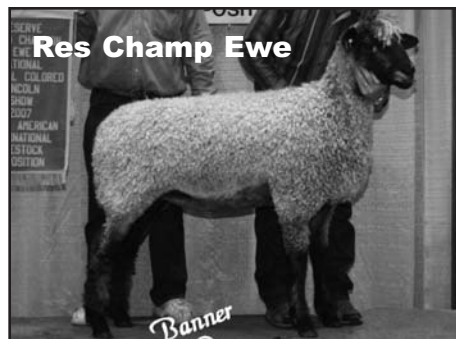
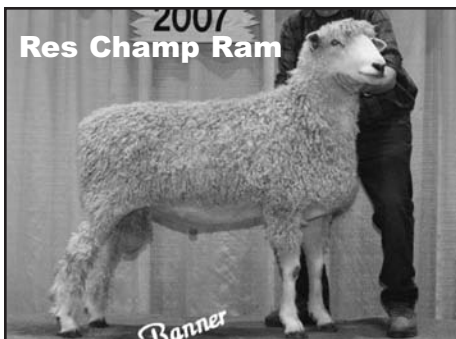
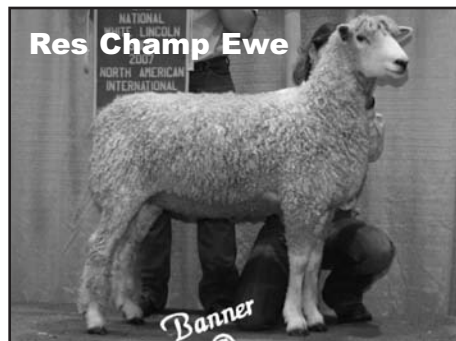
NATIONAL LINCOLN SHOW

Sixty-five white Lincolns:

- Grand Champion Ram & Ewe – Pettersson, Washington
- Reserve Champion Ram, Young Flock and Flock, and Premier Exhibitor – Boersma, Illinois
- Best Fleece Ram – Kruse, Illinois
- Reserve Champion Ewe – Mohr, Illinois
- Best Fleece Ewe – Hammer, Wisconsin

Forty-two natural colored Lincolns:

- Grand Champion Ram & Ewe, Young Flock, Flock, Premier Exhibitor – Dodds, Oregon
- Reserve Champion Ram & Ewe, Best Fleece Ram – Mohr, Illinois
- Best Fleece Ewe – Pettersson, Washington



LINCOLNSHIRE UK TOUR INFORMATION

JUNE 13-20, 2008

Travel and accommodations will be managed by **Riverbend Travel, Hastings MI**;
Connie Hayward, 269-945-9852 or 800-325-7661, connie@riverbendtv.com.

February 13: Date I need your check 'in-hand' for \$1,800 to confirm your group-rate seat on non-stop flight from Chicago O'Hare to Manchester UK (current best option). Send to Brian Larson, 8291 S. Cedar Creek Road, Dowling MI 49050. Questions? Call me at 314-308-7491 (day) or 269-623-2549 (night), e-mail addresses are longwools@mei.net or brian.larson@kellogg.com

Cost Estimates: Lodging for trip will cost approximately \$500/person (meals not included). Transportation in UK will be bus or mini-bus (depending on # of people), cost will be pro-rated per person. Mastercard and Visa credit cards are accepted widely in the UK, Discover and American Express coverage is spotty. Many US credit and ATM cards can be used in UK cash machines – check details with your credit card company.

Passport: You must have a valid passport to travel internationally. If you do not have a current passport, you must make application for your passport *immediately*.

Individual Variations: If you wish to vary your trip from the group tour departure/return dates or airports, you may work individually with Riverbend Travel OR you can make your own travel plans and meet up with the group in Lincolnshire for the tour.

JUNE 2008 LINCOLNSHIRE TOUR COMMITMENT

Name(s): _____

Address(es): _____

E-mail address(es): _____

Contact Phone Number(s): _____

US Passport Number(s): _____

Have you enclosed airfare down payment? YES _____ NO _____ but will send to arrive by February 13

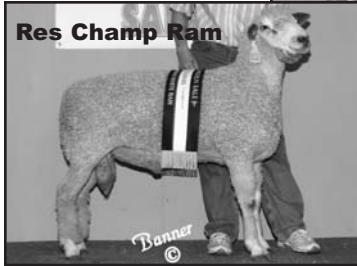
Send to: Brian Larson
8291 S. Cedar Creek Road
Dowling, MI 49050

NLSBA NATIONAL SHOW AND SALE

Springfield, Illinois - June 15, 2007

Fifty head of Lincolns sold for an average of \$400. Ten yearling rams averaged \$522 and 15 yearling ewes averaged \$428. The Townsend Best Consignor Award was won by Stanley Jackman & Son, Croswell MI.

- Champion & Reserve White Ram – Boersma, Illinois sold to M. Rader, Illinois & K. Mohr, Illinois
- Champion & Reserve Natural Colored Ram – Dodds, Oregon sold to Prairie Lane Farms, Missouri & Oak Crest Farms, Missouri
- Champion & Reserve White Ewe – Jackman, Michigan sold to B. Larson, Michigan & Packer/Rivera, Pennsylvania
- Champion Natural Colored Ewe – Kruse, Illinois sold to M. Gibson, Missouri
- Reserve Champion Natural Colored Ewe – Clifford, California sold to E. Liske, Illinois



JUNE 2008 LINCOLNSHIRE TOUR COMMITMENT

Please complete the form on the reverse side and mail to:

Brian Larson
8291 S. Cedar Creek Road
Dowling, MI 49050

SLICE, SCOOP, & HANDFUL *Continued from Cover...*

that had 300 ppm copper and our final feed mix was five times the recommended copper levels for sheep. By the time that we had diagnosed the problem and removed the feed, we had lost our entire yearling show flock and eventually lost all but two older ewes. This during lambing season, thus we fed a whole bunch of bottle lambs! Total loss was 12 of the 25 head that moved from Missouri. It's too painful to tell you any more about individual sheep. Interesting though, the copper toxicity survivors of our flock could be classified as being the 'older fashioned' Lincolns! Big, thick, barrel-chested types that would not make a big hit in the show ring, but produce wonderful lambs and wool!

Bottom line for all of us: 1) stick with reliable feed suppliers and feed mixers OR mix your own feed, 2) buy only commercial feeds intended for sheep, 3) use no commercial feeds, buy protein (ex., soybean meal) and minerals (ex., salt, di-calcium phosphate, calcium carbonate, etc.) ingredients less likely to have been miss-managed and do all your own mixing. I guess you cannot be too cautious!

The following are some interesting notes on copper:

Copper in Feeds: reflects origin area, conditions of production, handling, and preparation. The following affect amount of copper in feeds: 1) soil type and copper content, soil pH, metallic and organic residues in soil; 2) copper quantity and availability in soils; 3) growing season variations; 4) copper content of soil water source, fungicides, and fertilizers.

Copper in Animal Tissues: dependent upon diet, water, breed, species, and age. Copper is highest in liver, but is also high in brain, heart, and hair. Ruminants have high liver copper storage capacity. Up to 70% of total body copper is contained in liver of sheep when adequate-to-high copper levels are available in diet (9% in skin and wool). High copper content occurs because of high copper binding and lower capacity to excrete copper (sheep to greater degree than cattle). This accounts for the ruminant's lack of a measurable rise in blood copper when deficient animals are being replenished with copper of organic or inorganic forms. Non-ruminants exhibit an increase in blood copper in a dietary replenishing situation.

Very high copper intake can override the liver's capacity to bind copper which will result in dramatic increase in blood copper and then rupture of red blood cells (toxicosis symptom's cause). Newborn lamb liver copper is normally less than adults and increases over lifespan. Sheep is the only species known where liver copper does not decrease with age. Newborn calves have essentially adult values of liver copper. Within a normal range of dietary copper, pregnant ewe liver copper decreases during pregnancy while fetal liver copper increases up to birth. Ataxic lambs from deficient ewes have liver copper of 4-8 $\mu\text{g/g}$ (DM basis). Normal lambs (from non-deficient ewes) have 120-350 $\mu\text{g/g}$. Copper replenishment of deficient pregnant ewes increases fetal liver copper, but supplementation of non-deficient ewes will not affect fetal liver copper. Low ruminant liver copper is found in copper deficient diets/pastures.

Dietary copper required to maintain normal liver copper content also depends upon diet content of molybdenum, sulfate (both bind copper at digestive, absorptive, and cellular levels), zinc, and iron. High levels of these minerals reduce availability of copper. Cattle appear more susceptible to molybdenum-caused copper deficiency than sheep. Replenishing copper to deficient sheep will cause an increase in liver copper related to the supplement's copper content. This does not occur in non-ruminants because of their lower copper binding in the liver, higher plasma copper levels, and higher copper excretion. Under normal and excess circumstances, high protein diets will increase copper absorption, however in deficiency situations, high protein diets make copper deficiency symptoms worse (ammonia created by excess protein has high binding capacity for copper).

Storage of liver copper in ruminants is reduced by increased diet molybdenum, sulfate, zinc, and iron. Molybdenum intake as low as 0.5 mg/day can reduce copper retention in sheep liver. Vitamin C increases severity of copper deficiency, but it is not known if additions to feed will lessen toxicity. Phytates in grains and oil seed meals or hemicellulose in forages may bind copper in the digestive tract reducing absorption.

OUTSTANDING CHAMPIONS FROM THE BIG E



LINCOLNS AT THE ALL-AMERICAN JUNIOR SHOW

East Lansing, Michigan - July 7[&]8, 2007

Twelve white and natural colored Lincolns:

- Champion and Reserve Ram Lamb, Reserve Champion Ewe, Young Flock, Best Four Head Ewes, Showmanship – E. Long, New York
- Champion Ewe – T. Meek, Rhode Island
- Also Showing: C. Warrick, J. Long



Make plans to attend the
2008 ALL-AMERICAN JUNIOR SHOW
Sedalia, Missouri - July 4-6, 2008

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