

The ALPACA lifestyle

Alpaca Owning and Breeding from Topknot to Toenails

Magical Farms, Inc.

Fall/Winter 2004

Hmmmm...

October 28th, 2004, the full moon rose immensely orange in the clear night sky, then whitened to a bright Hunter's moon before it passed completely into Earth's shadow and a full lunar eclipse. In time it emerged; brighter, stronger, and seemingly prouder for the adversity. It was an abbreviated metaphor for what was happening in St. Louis.

The same night, the Boston Red Sox fought their way out of the shadows, and under the white light of the rekindled full moon they won the 2004 World Series to end a tough losing streak that hadn't been broken since 1918. Congratulations to the Red Sox and their legions of devoted fans -- I wouldn't be surprised if there was a new cria somewhere in the North-East named Johnny Damon,

Curt Schilling, or Bronson Arroyo the next morning by a bleary eyed fan on a New England alpaca farm.

Aside from some cria names, what does this have to do with alpacas, you ask? Not much about the animals themselves, but a parallel to alpaca farming can certainly be drawn. Although the Red Sox and their fans referred to themselves affectionately as "the idiots" and sometimes resembled a hard-working, unshaven bunch of ruffians, it was their teamwork, good spirit, love of the game, and perseverance that won the day. An unsigned quote on Peeper Ranch's website describes this team and their achievements well,



"Excellence is never an accident; it is the result of high intention, sincere effort, intelligent direction, skillful execution, and the vision to see obstacles as opportunities."

It is the same in all endeavors, alpaca farming included. And when the occasional eclipsing shadow stands in your way (whether it be the moon's several hours or the Sox's 86 years), with strong teamwork, good spirit, and honest resolve you'll emerge brighter and stronger on the other side. Boston's celebrations on the last days of October were much deserved.

November swept in quickly amidst the fever-pitch of election rhetoric, and then exited gracefully with family and friends, dinner-tables washed

in candlelight, and many moments of quiet thanks for the men and women defending us abroad who were unable to join us for the feast, but are the ones who continue to make it possible.

It is now December, and although Ohio's summer crias have yet to see a lasting snow, the cold North winds remind us of their intentions with a slick skin of ice over puddles and water-buckets, their point driven home by increasing both the thickness and the regularity with each successive morning. Birds raid the haylofts to line their nests with extra insulation, and autumn's smells of burning leaves have given way to the unmistakable scents of crackling fireplaces and Christmas cookies. Everyone here at Magical Farms wishes you and your alpacas a happy, healthy holiday season, and many crias in the new year!

From all of us at Magical...
Happy Holidays!

Ty



An Historic Event in the Alpaca Industry!

Thanks to all who participated.

October was an exciting month full of energy and accomplishment. The pages of this newsletter outline the incredible results, record sales, and just some of the one-thousand faces that attended the 2004 Breeder's Choice Auction and Customer Appreciation Futurity. It was a night of beautiful alpacas, new records, many smiles, and generous donations to the Quechua Benefit and the Ohio State University's Camelid program. Thanks to all who attended either in person, by phone, or watching the live feed over the internet...

Auction Results

Peruvian Accoyo Lightspeed \$24,000
Gwen & Tim Smith Smith-Haven Farm

Peruvian Persia \$18,000
Charlotte & Michael Goldston High Meadow Alpacas

Endurance \$18,000
Kathy & Vincent Conkey Conkey Alpacas

Peruvian Pasadena \$29,000
Brenda & Dana Smith

Dolce's Daphne \$23,500
Daren & Roger Dunn Angel Fleece Alpaca Farm

Peruvian Mondavi \$42,000
Ruth & Mark Musselman Wings Abound Alpacas

Ameripaca's Tulip \$20,000
Cindy & Tim Lavan Chase Tavern Farm Alpacas

Peruvian Accoyo Dazzler \$45,000
Joe & Diane Nelson Crescent Moon Ranch

Keota \$30,000
Dr. Del & Caroline Mixon Carodel Alpacas

Peruvian Last Impression \$82,000
William & Mary Pearce Five Star Alpacas

Performer \$62,000
Robert Sash Tiskilwa Farms Alpacas LLC

Candela's Candide \$27,000
Bari & Andy Horisberger Birch Knoll Alpacas

Karma \$42,000
Mary & John Bell Windy Hill Farm

Peruvian Starletta \$70,000
David & Laurye Feller Sunset Hills Alpaca

My Peruvian Extraordinaire \$48,000
Chuck & Kathleen Thompson Coffee Pot Farm

Radar \$34,000
Page & Craig Nitterhouse Shasta Springs Alpacas

My Peruvian Arella \$24,000
Donna & Alan Pointer Skyhawk Ranch Alpacas

Misty's Miranda \$20,000
Carol Testa Alpaca Outback Farm

Sparticus \$27,000
Don & Karolyn Pfeister Pfeister's Alpaca Pfarm

Lillybell \$31,000
Cindy & Tim Lavan Chase Tavern Farm

My Peruvian Angelheart \$40,000
Ruth & Mark Musselman Wings Abound Alpacas

Silver Shadow's Coalfire \$38,000
Norm & Lyne Limoges Northern "L"pacas

Versace \$28,000
David & Laurye Feller Sunset Hills Farm Alpacas

Peruvian Accoyo \$52,000
Page & Craig Nitterhouse Shasta Spring Alpacas

Peruvian Temecula \$32,000
Linda & Paul Huber Seldom Scene Farm

Peruvian Accoyo Moonglow \$65,000
Ann & Don TerHorst

Phantasm \$23,000
Carol & Martin Knight Alpaca Knights Farm

Charmagne \$25,000
Patricia & Tim McAndrew Huntington Farm

Echo Mountain's Evangeline \$19,000
Kathy & Vincent Conkey Conkey Alpacas

Peruvian Special Delivery \$28,000
Scott & Maria Yaecker

Lexus \$21,000
Gabe & Jess White

Peruvian Latte \$20,000
Aileen & David Manuszak Gene Genie LLC

Peruvian Aviela \$39,500
Scott & Maria Yaecker

Peruvian Monsanto \$125,000
McCarthy/Kempfert BelleauWood/Blue Ridge Farms

Peruvian Elegant Light \$20,000
Dr. Stuart & Trisha Chesky Terra Del Lago Alpaca Farm



Shawnee \$18,000
Vincent & Kathy Conkey Conkey Alpacas

Lady's Gigi \$30,000
Mike & Julie Safley Northwest Alpaca Ranch

Peruvian Melosa \$20,000
Kathy & Vincent Conkey Conkey Alpacas

Blackberry \$21,000
John & Lauren Loverde Fleecy Dale Farm

My Peruvian Maxine \$26,000
John & Susie Timm Suri Pleasures Alpacas

Peruvian Macademia \$27,000
Charlotte & Michael Goldston High Meadow Alpacas

Stacie \$44,000
Doug Fieg

Gold Charm \$23,500
Jim & Sue King Skyview Alpacas

Cassia \$32,500
Page & Craig Nitterhouse Shasta Springs Alpacas

Ricardo \$30,000
Stephanie & Mike Barnhart The Alpaca Trading Co.

Nolita \$34,000
Charlotte & Michael Goldston High Meadow Alpacas

Shelly \$35,000
Loren & Judy Stevens Stevens Llama Tique

Segovia \$73,000
Mary Jaffe Skyline Alpaca

Mona Lisa & Moonstruck \$61,000
Josh & Tonya Wuerfel Stone Brook Farms

Peruvian Geranium \$62,000
Mary & John Bell Windy Hill Farm

Peruvian Center Ice \$46,000
Bob Fish Flying Pony Alpacas LLC

Amaretta \$27,500
Bill & Juanita Crake Ridgeview Farm

Peruvian Muriel \$27,000
Al & Genine Bednarski Canterbury Farms

Liquid Platinum \$55,000
Mary & John Bell Windy Hill Farm

Peruvian Dovetail \$31,500
Nanette Belanger

Peruvian Faustina \$35,500
Bob & Kathy Arnold Whistlers Glen Alpacas

Macademia \$29,000
Cheri & Don Parks Wind Walker Ranch

My Peruvian Chateau \$60,000
Kevin & Ann Tarsagian Glen Ridge Farm

Chicora \$25,500
Norm & Lyne Limoges Northern "L"pacas

Accoyo Natalie \$41,000
Bob Fish Flying Pony Alpacas LLC

Peruvian Adonis \$40,000
Karen & Gary Burnworth Mill Creek Farm

Karina \$32,000
Robert Sash Tiskilwa Farms Alpaca LLC

Truffle \$28,000
Robert Sash Tiskilwa Farms Alpaca LLC

Zetta \$34,500
Josh & Tonya Wuerfel Stone Brook Farms

Peruvian Navarone \$61,000
Charlotte & Michael Goldston High Meadow Alpacas

Sanzia \$24,000
David & Vicky Brooks Heatherbrook Farms

Opalescent \$36,000
Mary Blowers Aussie Hill Alpacas

Peruvian Jubilation \$47,500
Brent & Tamara Hiben Hiben Hollow Alpacas

Peruvian Mirena \$39,000
Ruth & Mark Musselman Wings Abound Alpacas

Peruvian Melrose \$26,000
Karen & Gary Burnworth Mill Creek Farm

Yancie \$36,000
Randy Welman American Style Farm

Peruvian Luna \$34,000
Mary Jaffe Skyline Alpacas

Peruvian Total Asset \$100,000
Bob Fish Flying Fish Alpacas LLC

Java's Jasmin \$24,000
Randy & Laura Adair

Quinine \$25,000
Ruth & Mark Musselman Wings Abound Alpacas

Minerva & Shadow Ranger \$50,000
Page & Craig Nitterhouse Shasta Springs Alpacas



Futurity Results

Place Entry Name Owner

HUACAYA

Juvenile Silver Grey M/F

- 1 My Peruvian Chateau Kevin & Ann Tarsagian
- 2 Granite Uraqt Chris Barty & Eric Lorince
- 3 Amelia Bedelia J.C. Williamson, Nancy Barkoviak

Juvenile Rose Grey M/F

- 1 Donovan's Irish Rose Bob & Leslie Gosnell
- 2 Mr. Pink Floyd Timm & Helen Herman

Juvenile Multi-Color Females

- 1 Coffee Pot Miss Ellie Kathy Zabar

Juvenile Black Males & Females

- 1 NA Lord Forrester Dan Nash
- 2 Logan's Annabelle Lee Charlotte & Mike Goldston
- 3 Hita's Black Beauty Judie Gilpin

Juvenile Brown Females

- 1 MFI Frangelica Charlotte & Mike Goldston
- 2 Talulla Kathy & David VanGelder

Juvenile Med. & Dark Fawn M/F

- 1 Smokey Mary Blowers
- 2 My Peruvian Arella Donna & Alan Pointer
- 3 MFI Peruvian Gunslinger Margie Kempfert

Juvenile Med. & Dark Fawn M/F- 2nd half

- 1 MFI Segovia Mary Jaffee
- 2 MFI Phantasm Martin & Carol Knight

Juvenile Beige & Lt. Fawn Males

- 1 SF Asteroid Jacki & Joe Kraft
- 2 Jeronimo's Mr. Destiny Arnold & Susan Brunner
- 3 KCF Royal Ransom Chris & Lori Works

Juvenile White Females

- 1 Patagonia's Bright Eyes Arnold & Susan Brunner
- 2 Sweet Autumn Blaze Richard & Esther Barty
- 3 MCF Morning Dove Karen & Gary Burnworth

Juvenile White Males

- 1 Peaches and Cream Bob & Leslie Gosnell
- 2 Seagram's Siete Kevin & Deborah O'leary/Shields
- 3 Bellasera's Accoyo Romeo Al & Catherine Beatty

Yearling Silver Grey Females

- 1 Silver Keepsake Ed & Ruthanne McCaslin
- 2 Casanova's Silver Jewel Eric & Jennifer Folkman
- 3 Lysette Charlotte & Mike Goldston

Yearling Silver Grey Males

- 1 Blue Ridge Mountain Boy Eric & Jennifer Folkman
- 2 Sergeant Pepper Kevin & Deborah O'leary/Shields
- 3 Tribute to Money Bob & Leslie Gosnell

Yearling Rose Grey Males & Females

- 1 Toby Keath Jim and Cyndy Sas
- 2 Crockett Gary & Linda Grimes
- 3 E.V.A. Fiesta Rose Marianne Klein

Yearling Multi-Color Males & Females

- 1 Logan's Raider Charlotte & Mike Goldston
- 2 MFI Peruvian Persia Charlotte & Mike Goldston

Yearling Black Females

- 1 Cassis Carol Howard
- 2 Behold Peruvian Dharma Mary Hazelton
- 3 My Peruvian Extraordinaire Chuck & Kathleen Thompson

Yearling Black Males

- 1 HA Sancho Marcee Stephenson

Yearling Light Brown Females

- 1 MFI Sanzia David & Vicky Brooks
- 2 MFI Peruvian Faustina Bob & Kathy Arnold
- 3 Hermanita's Henna Bob & Leslie Gosnell

Yearling Med. /Dark Brown Females

- 1 Spinalong Lindy and Paul Huber
- 2 My Peruvian Jubilation Brent & Tammy Hiben
- 3 MFI Peruvian Melrose Karen & Gary Burnworth

Yearling Brown Males

- 1 SSF Peruvian Seabiscuit Lindy and Paul Huber
- 2 RV Caliente Kevin & Deborah O'leary/Shields
- 3 Logan's Bandito Charlotte & Mike Goldston

Yearling Med. & Dark Fawn Females

- 1 Seagram's Emma Kevin & Deborah O'leary/Shields
- 2 MFI Quinine Ruth & Mark Musselman
- 3 Coffee Pot Elizabeth Ken & Jennifer Qualls

Yearling Med. & Dark Fawn Males

- 1 Lotta Luv's King Klas Lotta Giblin
- 2 Captain Jack Sparrow Chris & Lori Works

Yearling Lt. Fawn Females

- 1 My Peruvian Accoyo Tiara Nance Sturm
- 2 MFI Gold Charm Jim & Sue King
- 3 MFI Peruvian Pasadena Dana & Brenda Smith

Yearling Beige Females

- 1 PH Seagram's Dawn Linda and Bill Ley
- 2 MFI Peruvian Latte Aileen & David Manuszak
- 3 MFI Peruvian Melosa Kathy & Vincent Conkey

Yearling Lt. Fawn Males

- 1 Sweet Talkin Man Jeff Skinner & Shauna Brummet
- 2 The Peruvian Giovanni Al & Catherine Beatty
- 3 Cinn. Toast's Tecumseh Karen & Gary Burnworth

Yearling Beige Males

- 1 Deillah's Derringer Alison & Greg Meyer
- 2 HA Kazio Larry & Joann Downs

Yearling White Females

- 1 MFI Peruvian Temecula Lindy and Paul Huber
- 2 MFI Peruvian Mirena Ruth & Mark Musselman
- 3 MFI Peruvian Last Impression Bill & Mary Pearce

Yearling White Males

- 1 MFI Peruvian Mondavi Ruth & Mark Musselman
- 2 MFI Peruvian Renosant Les & Patty Fuller
- 3 E.V.A. Quazar Marianne Klein

SURI

Juvenile Rose Grey Males

- 1 Ameripaca's Radar Page & Craig Nitterhouse

Juvenile Black Males & Females

- 1 Briar Rose's Aurora Barbara & Jerry DuVall
- 2 Shasta Springs Beretta Page & Craig Nitterhouse
- 3 Chocolate Moose Delight Lora McMunn

Juvenile Brown Males & Females

- 1 Keely's Kahlua Alison & Greg Meyer
- 2 Surelock Holmes Joy Mike & Kim Montjoy
- 3 Ameripaca's Amaretta Bill & Juanita Crake

Juvenile Med. & Dark Fawn Females

- 1 Mochachino by Torbio Steph & Mike Barnhart

Juvenile Lt. Fawn Females

- 1 Marilyn Monroe Incognito Mike & Kim Montjoy
- 2 MFI Keota Dr. Del & Caroline Mixon
- 3 MFI Shawnee Kathy & Vincent Conkey

Juvenile Beige Females

- 1 Ameripaca's Stacie Doug Fieg
- 2 Ameripaca's Macadamia Cheri & Don Parks
- 3 Ameripaca's Yancie Randy Wellman

Juvenile Beige & Lt. Fawn F/M

- 1 LHA Figiro Margaret Laird
- 2 Blue Ribbon's Nemo Glen & Susan Cook

Juvenile White Males & Females

- 1 Evanescence by Torbio Steph & Mike Barnhart
- 2 MFI Peruvian Moonglow Don & Ann TerHorst

Yearling Silver Grey Males & Females

- 1 Shadow's Liquid Platinum Mary & John Bell
- 2 MFI Karma Mary & John Bell
- 3 Shasta Springs Sageworth Page & Craig Nitterhouse

Yearling Rose Grey Males

- 1 The Firelord Steph & Mike Barnhart
- 2 Atticus Finch Cindy & Wayne Aldrich

Yearling Multi Color Males

- 1 Machismo by Torbio Karrin & Rob Campf

Yearling Black Females

- 1 Silver Shadow's Coalfire Norm & Lynn Limoges

Yearling Med. & Dk. Fawn Females

- 1 MFI Chicora Norm & Lynn Limoges
- 2 My Peruvian Maxine John & Susie Timm
- 3 Ameripaca's Tulip Tim & Cindy Lavan

Yearling Lt. Fawn Females

- 1 Ameripaca's Shelly Judy & Loren Stevens
- 2 MFI Karmina Robert Sash

Yearling Beige Males & Females

- 1 Ameripaca's Zetta Josh & Tonya Wuerfel
- 2 Ophelia's Orion Alison & Greg Meyer

Yearling White Males & Females

- 1 Lord Cuzco McMatley Cliff Exley & Ernesto Matos Jr.
- 2 Accoyo Ameripaca's Diamond Page & Craig Nitterhouse
- 3 Peruvian Accoyo Lightspeed Gwen & Tim Smith

CHAMPIONSHIPS

Huacaya Grey

- Champ** Toby Keath Jim and Cyndy Sas
R.Champ Crockett Gary & Linda Grimes

Huacaya Multi-Color

- Champ** Coffee Pot Miss Ellie Kathy Zabar
R.Champ Logan's Raider Charlotte & Mike Goldston

Huacaya Black

- Champ** NA Lord Forrester Dan Nash
R.Champ Cassis Carol Howard

Huacaya Brown

- Champ** Spinalong Lindy and Paul Huber
R.Champ Peruvian Seabiscuit Lindy and Paul Huber

Huacaya Dark & Medium Fawn

- Champ** Smokey Mary Blowers
R.Champ MFI Segovia Mary Jaffee

Huacaya Beige/Light Fawn

- Champ** PH Seagram's Dawn Linda and Bill Ley
R.Champ SF Asteroid Jacki & Joe Kraft

Huacaya White

- Champ** MFI Peruvian Mondavi Ruth & Mark Musselman

- R.Champ** Peaches and Cream Bob & Leslie Gosnell

Suri Grey

- Champ** The Firelord Steph & Mike Barnhart
R. Champ Ameripaca's Radar Page & Craig Nitterhouse

Suri Multi-Color

- Champ** Machismo by Torbio Karrin & Rob Campf

Suri Black

- Champ** Briar Rose's Aurora Barbara & Jerry DuVall
R.Champ Silver Shadow's Coalfire Norm & Lynn Limoges

Suri Brown

- Champ** Keely's Kahlua Alison & Greg Meyer
R.Champ Surelock Holmes Joy Mike & Kim Montjoy

Suri Dark Fawn/Medium Fawn

- Champ** Mochachino by Torbio Steph & Mike Barnhart
R.Champ MFI Chicora Norm & Lynn Limoges

Suri Beige/Lt. Fawn

- Champ** Ameripaca's Zetta Josh & Tonya Wuerfel
R.Champ Ameripaca's Stacie Doug Fieg

Suri White

- Champ** Lord Cuzco McMatley Ernesto Matos Jr. & Cliff Exley

- R.Champ** Evanescence by Torbio Steph & Mike Barnhart

**Peruvian
Monsanto**

\$125,000



2005
Eastern
Alpaca
Festival



2005
**BREEDER
CHOICE**
AUCTION & EXHIBITION

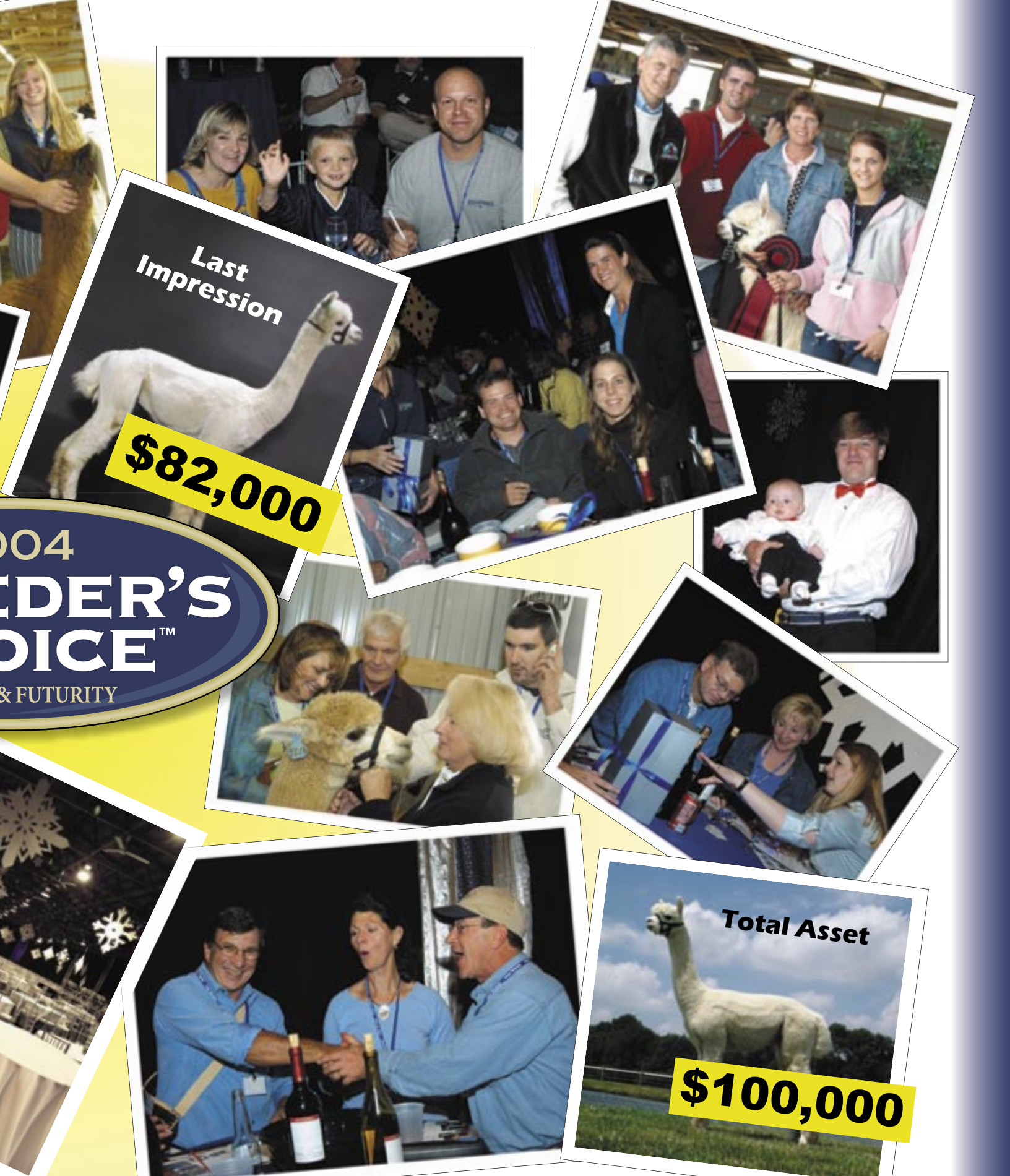


Segovia

\$73,000



See you on October 7, 8 & 9, 2005 for the next



Last Impression

\$82,000

2004
BREEDER'S CHOICE™
& FUTURITY

Total Asset

\$100,000

Breeder's Choice™ Auction in Litchfield, Ohio!

Overdue Females and Females with Problem Pregnancies

David E Anderson, D.V.M., MS,
Diplomate ACVS
Ohio State University, Columbus, OH

Assessment of fetal well-being is an area of ongoing research. We are particularly interested in predicting or determining fetal stress so that treatments aimed at preventing abortion or premature birth. This information would allow us to "prophylactically" applying these treatments in females speculated to be "at risk".

Behavior of the Dam - The behavior of the dam must not be under emphasized. If the dam is behaving normally, eating normally, and no changes in routine have been observed, then most likely the fetus is fine. We consult with many owners about "overdue" birthing. Many of these females ultimately are found not to be pregnant. Occasionally, prolonged gestation does occur in llamas and alpacas and the causes are not well understood. Our protocol for evaluation of females that are 11.5 months or longer in gestation is to perform a complete physical examination, rectal and vaginal examination, ultrasound examination, and fetal heart rate assessment. If the dam and fetus are normal in all respects, then the pregnancy is allowed to continue undisturbed. Using this protocol, we have had excellent success with healthy neonates being born. Occasionally, an abnormal or stillborn cria is born, but these are far outnumbered by the problems caused by premature termination of pregnancy. The problem is knowing what is "normal" with these tests and how to conduct them.

Rectal, and Vaginal Examination - Rectal palpation is often difficult in alpacas because of their small size, but most mature llamas can be palpated if proper precautions are observed. A solid sided llama or alpaca restraint chute is important to allow easy and efficient reproductive examinations. Performing these diagnostic tools

on free-standing females or females pressed against a wall are stressful for the patient, veterinarian, and owner. Sedation should be used sparingly. When needed, butorphenol tartrate (0.1 mg/kg IV or IM) provides excellent sedation with minimal to no untoward effects on the fetus or dam. Before rectal palpation, I prefer to place 60 to 100 ml of lubricant into the lumen of the rectum. In small females, 10 ml of lidocaine can be added to help relax the anal sphincter. Rectal palpation should be performed with caution because rectal tears have been reported to occur in llamas. The examiner should make the owner aware that bleeding from the anal sphincter is common when rectal palpation is performed. This is caused by over-stretching of the mucous membrane and sphincter muscle. This does not pose a risk to the animal in most cases (I have never seen a complication from mild anal sphincter bleeding). Rectal examination should be used to assess fetal movement, uterine tone, position of the broad ligaments (rule out uterine torsion), and the presence of adhesions or other periuterine masses. An interesting observation is that we have found the head and front limbs of the fetus within the pelvic canal up to 3 months before parturition. Also, we have failed to find the head and feet of the fetus within the pelvic canal as early as 3 days before parturition in llamas and alpacas to whom the cria was ultimately delivered in a normal anterior, longitudinal, dorsosacral position. Using these qualitative methods, we can say that the fetus is alive, but no definitive comment can be made concerning fetal stress. Vaginal examination will allow assessment of the cervix for inflammation, discharge, and the presence of the mucous plug. If the cervix is closed and no discharge is noted, then we can say that all appears normal, but no definitive statement can be made concerning fetal stress.

Hormonal Tests - Many owners and breeders have relied upon serum progesterone concentration to assess pregnancy status. We have not found an association between fetal stress and serum progesterone status, but we have

not had the opportunity to perform serial assays on "at risk" females. My opinion is that a sudden



decrease in serum progesterone would be found too late for effective treatment to be initiated. No "llama or alpaca side" progesterone test has been developed to date. However, we have conducted research correlating serum progesterone assays with the commercial test kits available for canine (Target Canine Ovulation Timing Kit, BioMetallics, Princeton, NJ) and equine (Target Equine Breeding System, BioMetallics, Princeton, NJ) progesterone (Table 1). In our study, we found the equine kit was more consistently correctly interpreted, but the accuracy of the tests is broad (C2/3 range = 1 to 5 ng/ml).

Ultrasonography - Ultrasonography is useful for non-invasive evaluation of the intrauterine environment and fetus. This is the mainstay of our current state-of-the-art evaluations. If the fetal thorax and heart can be seen, the fetal heart rate (FHR) can be counted. I routinely use a 5 MHz linear transducer for evaluation of all stages of pregnancy (approximately 12 to 15 cm penetration of adequate resolution images). A 3.5 MHz transducer can be used for deeper penetration of the abdomen (up to 20 to 23 cm), but signif-

icant loss of image resolution occurs at these depths. Most modern ultrasound machines are equipped for simultaneous B- and M-Mode ultrasonography. This allows assessment of fetal heart rate and some quantitative estimates of cardiac contractility. If the uterine fluid appears normal, then we would assume that the fetus-placenta-dam unit is normal. The placenta can be evaluated to a certain extent and premature separation of the placenta or placental edema may be found in females having had a uterine torsion. These findings suggest that a C-section may be necessary to save the life of the cria. If the FHR is normal, we would assume that the fetus is normal (adequate oxygen supply and waste removal). In our fetal stress research, we have determined that normal fetal heart rate range for alpacas and llamas is 80 to 120 (fetal heart rate ranges from 1.5 to 2.0 x maternal heart rate (MHR)). The late gestation fetus (> 6 to 7 months) is positioned in the uterus with the fetal head and thorax located near the maternal xiphoid bone just to the right of midline. Thus, the hair may need to be clipped to allow ultrasonography of the fetal heart. Most owners do not object to having this done because this region of hair removal is not seen and is not economically important. Occasionally the fetal heart can not be found because of fetal positioning (fetal backbone or maternal viscera obstruction of ultrasound waves, positioning too deep in the abdomen for viewing, etc). Also, we have seen fetal ultrasound examinations where there was no apparent heart beat, but the fetus was alive and was normal at birth. Thus, fetal heart ultrasound images must be interpreted with caution.

Fetal ECG - In our early research to establish a tool for assessment of fetal stress, we attempted to perform fetal ECG. This technique has been used successfully in horses to assess fetal heart rate and rhythm. We used several models of ECG machines including a physograph with high sensitivity leads and were unable to consistently record fetal ECG patterns. In the llamas and alpacas we tested, the fetal complexes were only intermittently recorded and were usually buried within maternal complexes such that they were unrecognizable. Rarely, we could obtain a clear ECG complex, but we were not able to determine rate or rhythm in any fetus. We concluded that fetal ECG's are seldom successful because of the size of the abdomen, position of the fetus, low magnitude of fetal complexes, and the over-

whelming ECG of the dam. To date, we have not been able to record any diagnostic fetal ECG segment.

Fetal Cardiotocography - Recently, we have been investigating the use of fetal Doppler ultrasound for assessment of fetal well-being (Fetal Monitor 155, Corometrics Medical Systems, Inc, Wallingford, Conn, USA). The Fetal Heart Monitor records fetal heart rate and heart rate variability (external Doppler probe), and uterine contractions (external probe with pressure sensor). Jonker has published a text on cardiotocography in cattle. This text is recommended reading for those interested in developing skills in fetal heart monitoring. Rabello and Lapidus published a text on electronic fetal monitoring in humans and this text is highly recommended for knowledge of techniques for assessment of fetal stress. The Corometrics unit has the ability to record FHR and uterine activity pressure waves in humans. To date, we have not been able to successfully record diagnostic uterine activity tracings because of interference by forestomach motility, maternal movement, fetal movement, and the maternal abdomen geometry. However, we have been able to consistently and reliably record fetal heart tracings to assess rate and variability. Based on Doppler ultrasound recordings of fetal heart rate, we determined that FHR is expected to be between 80 and 120 (roughly 1.5 to 2 times the MHR). However, the normal fetal heart rate is not consistent from moment to moment. We have identified three fetal heart rate patterns: 1) low frequency undulation, 2) sudden acceleration followed by deceleration, 3) no undulation. Based on our clinical research, low frequency



undulations are the normal pattern for gestating fetuses of llamas and alpacas. At this time, we are not certain about the significance of rapid accelerations and decelerations or the absence of undulation. I feel that the absence of undulation may represent periods of fetal quiescence and are not abnormal unless they are associated with low heart rate (FHR < 60). The only FHR's that we have seen that were consistently below 60 were in dams with severe illness and the cria ultimately were delivered by C-section or were aborted. Rapid acceleration and deceleration have been reported to occur in cattle, but were uncommon. These periods may be associated with sudden fetal movement, maternal excitation, uterine contraction, or unknown stimuli. We have observed this pattern in only one alpaca and the recording was obtained 2 days after non-surgical correction of a uterine torsion. In that alpaca, we elected to perform a C-section because of concerns for fetal stress. At surgery, premature separation of the placenta seemed to have occurred but a live male cria was delivered. This episode of sudden FHR acceleration was thought to have occurred because of developing fetal hypoxia.

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Magical Farms, Inc.
5280 State Route 83
Litchfield, Ohio 44253
(330) 667-3233
www.alpacafarm.com
info@alpacafarm.com

Mark Your Calendars
**2005
BREEDER'S
CHOICE™**
AUCTION & FUTURITY
Oct. 7, 8 & 9, 2005

2004 Magical Farms Futurity Tent and Auction Barn



MARKETING WORKS!

Here's a story from Rod Johnson, Alpacas del Rio, shortly after attending a Jerry Forstner marketing seminar at Alpacafest West.

An interesting thing happened to me on the Monday after your seminar at the Alpacafest West Show. I had bought a shirt with the Alpacafest West logo on the front of it and wore it to a medical appointment on Monday. While in the office area paying my bill, the accountant asked about the logo on my shirt. I explained that I was at an alpaca show over the weekend at the Firestone Vineyard. She got all excited and wanted to know more. Another office person overheard the conversation and exclaimed, "Oh, I love alpacas!" and "I was just at a website reading all about them". So, I said, "I live on Riverside Road and you're welcome to come by any time and visit our alpacas." At that point another person in the office stated that she drives down my street just so she can see my animals. In a matter of minutes the whole office was involved in the conversation and there I was wearing a shirt with a logo on it that doesn't even belong to me. Worse I didn't even have a business card to give away. And, I had a crowd of people excited about my animals. All of this occurred because of an alpaca logo on the front of my shirt. Too bad it wasn't mine.



This is exactly what you talked about and said would happen. Needless to say, my next big step in my alpaca business is to buy clothing bearing our ranch name and logo, and to never be without a set of business cards again.

Jerry, thanks for the advice.

Rod Johnson