

# Twenty-Sixth Annual Conference

of the  
American Association  
of  
Bovine Practitioners

Albuquerque, New Mexico

September 16-19, 1993

Specialty Seminars September 13-16, 1993

Theme: "Jumping Off the Cutting Edge"

## "Jumping Off the Cutting Edge"

On behalf of the entire program committee, I dare you to take the plunge . . . go ahead . . . JUMP off the cutting edge!

The committee has assembled an unparalleled panorama of educational opportunities for your learning pleasure. For hors d'oeuvres, partake from the offerings among the 27 pre-convention scientific seminars. The fare includes encore presentations of previous years' favorites; addressing beef management, the latest in ET, nutrition, production medicine, practice management, personal organization, and feedlot medicine. New offerings include several courses on all aspects of heifer / dairy beef management, and charging for chute side service. Due to the presence of unique local facilities, you can learn what holistic resource management is all about . . . or maybe you would rather find out how to "unleash the potential within" with the 20K and beyond seminar.

In recognition of the fact that many practitioners find time away from practice to be a premium, we offer you an action packed main program crammed into a long weekend. After an afternoon presentation of applied technology and bovine practice, Dr. Lowell Catlett will present a captivating rendition of agriculture in the future, and help you visualize your role in it.

The general session presents an immunological extravaganza which will be a landmark presentation important for all who want to maximize the effectiveness of vaccination programs. Friday evening you should experience educational anxiety from the three simultaneous programs — Practice Tips, Dairy and Beef Research Summaries. Have no fear as abstracts of all presentations will be available to help you decide what you have to miss.

On to Split Sessions, Cow/Calf enthusiasts will learn specific practical applications of immunological enhancement, receive an update on the new bull evaluation system, mastitis, IRM, larkspur poisoning, and implications of North American Free Trade Agreement on domestic animal health.

Feedlot practitioners can find out how to interpret post-mortem lesions, learn about the pharmacology of aminoglycosides and ancillary respiratory therapy as well as the latest on implants, sudden death syndrome, and lesions of endotoxin release.

Dairy practitioners can hone their nutritional knowledge with information on forage preservation, mycotoxins, the pitfalls of feed analysis, and strategies for implementing nutritional technologies. Other sessions deal with antibiotic free mastitis therapy, update on milking machine dynamics, teat dip evaluation, and the veterinarian's role in farm financial planning.

The program committee has matched timely and somewhat controversial topics with quality presenters who can and will answer your "tough questions". The ultimate success of this phase will be determined by your active participation in several scheduled panel discussions.

To round out your educational experience, scientific poster presentations will be on display in the exhibit area, you can "disk up" at the shareware library, and find out the latest applications at the software demonstrations. There will be ample opportunity for you to personally interact with poster and software authors.

Please join us!! Not to worry about that jump off the cutting edge!! This program will prove to be an exciting educational parachute to gently guide you down.

Reilly Glore, Program Chairman

## Program Committee

Program Chairman .....	Reilly Glore
Seminar Coordinator .....	Robert Smith
General Sessions Coordinator .....	Del Miles
Dairy Sessions Coordinator .....	Paul Johnson
Cow / Calf Sessions Coordinator .....	Julie Weikel
Feedlot Session Coordinator .....	Tom Noffsinger
Practice Tips Coordinator .....	Rich Meiring
Research Summaries Coordinator .....	Don Hansen
Post Session Coordinator .....	Darrel Johnson
Local Arrangements Coordinator .....	Bob Corbett
Exhibits Manager .....	Sam Hutchins
Continuing Education Liaison .....	Kathy Gloyd
Technology in Bovine Practice .....	Patty Scharko
Scholarship Auction .....	Rod Sydenham
Conference Manager .....	Harold Amstutz
President .....	Darrel Johnson

## **AN INVITATION TO ALBUQUERQUE**

### **Del Miles - District 9 Director**

As District 9 Director of the American Association of Bovine Practitioners, I invite all members of our district to come to Albuquerque and assist us in hosting the XXVI American Association of Bovine Practitioners Conference scheduled for September 13-19, 1993.

I join the members of the 9th District of the AABP in inviting all bovine practitioners to attend what we feel to be a very exciting and educational event. The program committee has assembled an excellent program incorporating information on many areas of current interest.

Bob Corbett is in charge of local arrangements and is putting together tours of interest to both spouses and members alike. Albuquerque and its neighboring city Santa Fe are beautiful cities that exemplify the local culture.

In addition, some individuals may desire to rent transportation and make a drive through the ever-changing desert of New Mexico to Carlsbad Caverns. Mother Nature has taken 250 million years to develop this gorgeous array of architecture for you to critique.

Once again, I invite all of you to join us for timely educational topics, social activities, cultural exchange, and interaction with your colleagues. We are looking forward to seeing you in Albuquerque.

### **Local Arrangements Chairman's Invitation**

#### **Robert Corbett**

As local arrangements chairman, I would like to invite all of the members of the AABP and their spouses to our annual conference in Albuquerque. Both the Spanish and Indian cultures are evidenced in the cuisine and architecture, making Albuquerque a unique and interesting place to visit.

A wide variety of tours have been put together in an attempt to provide our attendees with the most interesting and informative exposure possible to the Southwestern culture.

The New Mexico State Fair is the fifth largest fair in the nation and also provides some of the biggest names in Country Western music as evening entertainment. Carlsbad Caverns is approximately a five-hour drive from Albuquerque and is a must to see if you have the time.

I am confident that all those attending will be impressed with our meeting facilities and social activities. I hope you will be able to attend and bring your spouse with you for an experience you will not forget.

### **PRESIDENT'S WELCOME**

#### **Darrel Johnson**

From the Minnesota sky blue waters setting of the 1992 international meeting - we take you to the gold, greys, tans and blues of the high desert. The New Mexico vistas viewed in the clarity of dry, thin air are truly enchanting. Albuquerque, a city of 500,000, is a suitable conference setting for our theme "Jumping Off The Cutting Edge" and also for setting out to explore the wonders of the region.

I queried Dr. Reilly Glore during planning if he really wanted us "jumping off" that cutting edge since "staying on"

the cutting edge has been a worthy goal as well. Reilly assured us that "jumping off" is correct in that this conference will provide direction for the ways to "jump" as we strive to provide leadership in the rapidly changing food animal industry.

Dr. Lowell Catlett, our keynote speaker will provide us with an intriguing and entertaining look into the future with his renowned presentation on where rapidly advancing technology is likely to lead us.

This conference also marks the retirement of Dr. Harold E. Amstutz after almost 28 years as Executive Vice President of the AABP. Few veterinarians have had their careers so firmly and effectively involved in organized bovine veterinary medicine as Dr. Amstutz. We are at once saddened to lose his everyday skills which have led our organization to international prominence, and pleased that he and Jo will finally look forward to leisure time away from phone, fax and printer.

Many issues in animal agriculture and veterinary medicine require our expertise and leadership. The place to come together on these issues would be a national gathering of the best and the brightest in bovine medicine. The 26th Annual Conference of the AABP is the gathering and Albuquerque, N.M. is the place. Please join your colleagues in the beautiful Southwest to bid Dr. Amstutz best wishes in retirement; to welcome our new Executive Vice President; and take advantage of the "cutting edge" educational opportunities.

### **MEETING SITE**

Almost all scientific sessions, seminars, exhibits, posters and other scheduled activities will be held in the Albuquerque Convention Center (ACC), 401 2nd Street NW, Albuquerque, NM 87103. Phone 505-768-4575, FAX 505-768-3239. Exceptions will be indicated in the event description.

### **EXHIBITS**

The professional exhibits will be located in the Northeast Exhibit Hall of the Albuquerque Convention Center. Exhibits will open Thursday, September 16 at 4:00 p.m. and close promptly at 4:00 p.m. on Saturday, September 18.

### **Exhibit Hours**

Thursday, September 16	4:00 p.m. - 7:00 p.m.
Friday, September 17	9:00 a.m. - 5:00 p.m.
Saturday, September 18	8:30 a.m. - 4:00 p.m.

### **OPENING EVENING HOSPITALITY**

#### **Thursday, September 16**

ACC, Northeast Exhibit Hall

Open 4:00 p.m. - 7:00 p.m.

Hors d'oeuvres 5:00 p.m. - 7:00 p.m.

### **OPENING SESSION**

Location: Kiva Auditorium  
Program Committee Welcome &  
Awards Presentations  
7:15 p.m. - 8:15 p.m.

## GENERAL SESSIONS

Three general sessions will be held during the first 1½ days of the program format. Each session offers practical information to better prepare the bovine practitioner to meet the challenges of today's practice. Whether you work in a mixed practice or exclusively with dairy or beef cattle, these sessions contain useful information for you.

### GENERAL SESSION I

**Friday, September 17**

8:00 a.m. - 12:00 Noon

Location: ACC - Dona Ana, Galisteo,  
Aztec, Brazos, Cimarron

Moderator - **Eddie Richey**

- 8:00 The Immunologic Basis for Effective Vaccines — **Jim Roth**
- 9:30 Break
- 10:00 The Immunologic Basis for Effective Vaccines — **Jim Roth**
- 10:30 Questions
- 10:45 Visions in a Black Box: How Can We Assess a Relevant Immune Response? — **John Ellis**
- 11:45 Questions (Ellis & Roth)
- 12:00 Lunch

### GENERAL SESSION II

**Friday, September 17**

1:30 p.m. - 5:00 p.m.

Location: ACC - Dona Ana Galisteo,  
Aztec, Brazos, Cimarron

Moderator - **Del Miles**

- 1:30 Safety and Efficacy of Gram Negative Bacterial Vaccines — **Jim Cullor**
- 2:45 Questions
- 3:00 Break
- 3:30 The Practical Applications of Immunology in Developing an Effective Vaccination Program — **Ron Schultz**
- 4:30 Panel Discussion (Roth, Ellis, Cullor & Schultz)
- 5:00 Adjourn

### GENERAL SESSION III

**Saturday, September 19**

9:30 a.m. - Noon

Location: ACC - Dona Ana, Galisteo,  
Aztec, Brazos, Cimarron

Moderator - **Calvin Booker**

- 9:30 Nutritional Considerations of the Immune System — **Dave Hutcheson**
- 10:20 Questions
- 10:30 Biologics Licensing - Implications for Efficacy — **George West**
- 11:00 Is There an E. Coli 0157:H7 in Your Practice? — **Jim Cullor**
- 11:30 Panel Discussion (Hutcheson, West & Cullor)
- 12:00 Adjourn

## SPLIT SESSIONS

Split sessions are designed for all registrants, but allow you to select topics related to your specific interests in either dairy, cow/calf or feedlot practice specialties. Subject matter will be much more specific to beef or dairy when compared to the general session. Lecture style format allows speakers to cover the maximum quantity of information in each of the sessions.

### DAIRY SESSIONS

#### DAIRY SESSION I

**Saturday, September 18**

1:30 - 5:00 p.m.

Location: ACC - Brazos, Aztec, Galisteo

Moderator - **Paul Johnson**

- 1:30 Current Trends in Forage Preservation & Storage — **William Kautz**
- 2:15 Pitfalls to Forage & Grain Analysis — **David Byers**
- 3:00 Break
- 3:30 Mycotoxins in Forages & Their Impact on Animal Health — **Gary Osweiler**
- 4:15 On-Farm Strategies for Implementing New Nutritional Technologies — **Gene Boomer**
- 5:00 Adjourn

#### DAIRY SESSION II

**Sunday, September 19**

8:00 a.m. - 12:45 p.m.

Location: ACC - Brazos, Aztec, Galisteo

Moderator - **Paul Johnson**

- 8:00 Oxytocin As a Substitute for Antibiotic Therapy for Mastitis — **Walter Guterbock**
- 8:45 New Concepts in Milking Equipment Evaluation and Airflow Dynamics — **Graeme Mein**
- 9:30 Break
- 9:45 Analytical Review of New Teat Dip Efficacy Claims — **Steve Oliver**
- 10:30 Dairy Partial Budgets as a Consultation Tool — **James Lloyd**
- 11:15 Dairy Financial Consultation for the Banking Industry — **Mark Wustenburg**
- 12:00 Cash Flow Analysis — The Next Step in Dairy Production Medicine — **John Ferry**
- 12:45 Adjourn

#### COW / CALF SESSION I

**Saturday, September 18**

1:30 p.m. - 5:00 p.m.

Location: ACC - Dona Ana, Cimarron

Moderator - **Julie Weikel**

- 1:30 Role of CMI in the Neonatal Calf — **Scott McVey**
- 2:15 Genetics of Disease Resistance — **Jim Womack**
- 3:00 Break

- 3:30 Immunology of Pregnancy Practical Cow/Calf Vacc Programs — **Jim Evermann**  
 4:30 Panel: McVey, Womack, Everman  
 5:00 Adjourn

## COW / CALF SESSION II

**Sunday, September 19**

8:00 a.m. - 1:00 p.m.

Location: ACC - Dona Ana, Cimarron

Moderator - **Julie Weikel**

- 8:00 New Breeding Soundness Exam — **Peter Chenoweth**  
 8:45 Beef Cow Mastitis — **Leo Timms**  
 9:30 Break  
 9:45 Cow/Calf Practitioner Participation in IRM  
 — **Glenn Rogers**  
 10:30 Questions  
 10:45 Larkspur Poisoning — **John Olsen**  
 11:15 NAFTA Animal Health Considerations, esp. TB  
 — **Bob Hillman**  
 12:30 Questions  
 1:00 Adjourn

## FEEDLOT SESSIONS

### FEEDLOT SESSION I

**Saturday, September 18**

1:30 p.m. - 5:00 p.m.

Location: ACC - San Miguel

Moderator - **Brad DeGroot**

- 1:30 Interpreting Post-Mortem Lesions in Feedlot Cattle: Theories, Speculations, & Conclusions  
 — **John Andrews**  
 3:00 Break  
 3:30 Pharmacology of Aminoglycosides in Cattle  
 — **Scott Brown**  
 4:15 Ancillary Therapy for Bovine Respiratory Disease  
 — **Mike Apley**  
 4:45 Discussion & Questions  
 5:00 Adjourn

### FEEDLOT SESSION II

**Sunday, September 19**

8:00 a.m. - 12:45 p.m.

Location: ACC - San Miguel

Moderator — **Wade Taylor**

- 8:00 Implant Programs and Philosophy Based on Research  
 — **Pete Anderson & Robert Botts**  
 9:30 Break  
 9:45 Lesions Associated with Endotoxin Release and Subsequent Mediator Shock — **Jim Cullor**  
 10:15 Sudden Death Syndrome - A Proposal for a Different Approach — **Brad DeGroot**  
 10:45 Nutrition Management - From Start to Finish  
 — **Rod Schemm**  
 12:15 Discussion & Questions  
 12:45 Adjourn

## PRACTICE TIPS

**Friday, September 17**

7:30 p.m. - 9:30 p.m.

Location: ACC - Brazos, Aztec & Galisteo

Moderator - **Rich Meiring**

Here's an opportunity to benefit from short presentations given on a wide range of topics and focused on providing tips to make practice easier, more rewarding and more profitable. These will be short presentations by outstanding practitioners selected to share some of their practice tips in both beef and dairy practice.

- Taking Measure While Sorting the Cows From the Crowd.  
— **Keith E. Sterner**
- Bump, Twist, Rock and Roll to Correct Uterine Torsions  
— **Craig A. Johnson**
- Real Records for Real Ranchers — **Julie M. Weikel**
- Vest Pocket Fluid Therapy for Large Critters  
— **Stanley E. Held**
- Paying for Profits — **Allen G. Wesselius**
- Revamped Royalty, Rehydration and Other Revelations from Ohio's Holy Land — **Mark E. Hardesty**
- Reach Out & Touch Someone — **Donald L. Rothbauer**
- Milking Parlor Labor Efficiency - Snail or Rocket  
— **Jenks B. Britt**
- Taking the Backwork Out of Footwork  
— **W. David Hardman**
- High-Tech Communication With Your Colleagues: Fax, Computer-fax, BBS and e-mail — **Jim Ehrlich**
- Big Mac Attach - For Information Management  
— **W. Gene Boomer**
- Trumping Coliform Mastitis with a Royal Flush  
— **Donald E. Sanders**
- Dairy Fashions with a Flair . . . The Spandex Saga Continues — **Kelvin D. Pierce**
- Roll With It, Baby — **Charles W. Hatcher**
- Who's Number One? And now, the rest of the story!  
— **Rodney Sydenham**

## RESEARCH SUMMARIES

### RESEARCH SUMMARIES I

#### Beef Cattle and General

**Friday, September 17**

7:30 p.m. - 10:00 p.m.

Location: ACC - Cimarron & Dona Ana

Moderator - **Don Hansen**

- Effects of Postnatal Implantation with a Commercial Growth Promotant on Bovine Uterine Development  
— **J.G. Floyd**
- Growth of the Pelvis in Crossbred Heifers: Does It Predict Dystocia?  
— **J.D. Gaines**
- Variable Efficacy of Benzimidazole Anthelmintics Against Inhibited Larvae of Ostertagia Ostertagi  
— **Jim E. Miller**



- Evaluation of the Impact of the Ivermectin Sustained Release (SR) Bolus on Weight Gain and Parasite Control in Heifers  
— **Larry Smith**
- Clostridium perfringens C & D Vaccination in Young Beef Calves: How Protective Is It?  
— **David Morris**
- The Effect of Varying Levels of Deccox® on Experimental Cryptosporidia Infection in Calves  
— **D.R. Redman**
- The Use of J5 E. coli Common Core Antigens in Controlling Bovine Endotoxemic Disease  
— **Bruce Wren**

#### Food Safety — Beef Cattle

- Potential for Clearing Salmonella Spp. From Beef Cattle for Wholesome Meat Production  
— **Neal Woolen and Ed Daniels**

### RESEARCH SUMMARIES II

#### Dairy

**Friday, September 17**

7:30 p.m. - 10:00 p.m.

Location: ACC - San Miguel

Moderator - **R.D. McQueen**

- Milk Urea Nitrogen as a Metabolic Indicator of Protein Feeding Efficiency on Dairy Farms  
— **Linda Baker** (Recipient of AABP Assistantship Award)
- An Evaluation of the Dairy Quality Assurance 10-Point Program: Implications for the Dairy Practitioner  
— **Larry Hutchinson and Phil Sears**
- A New Software Tool to Provide Dairy Farmers With Management Advice to Control Mastitis and Improve Profitability  
— **W.J. Goodger**
- Clinical Field Trial for Remote Radio Frequency Heat Mount Detection System  
— **Marguerita B. Cattell**
- Body Condition Scoring in Holstein Dairy Cows: Relationships with Production, Reproduction and Disease  
— **Pamela Ruegg**
- Efficacy of a Broad Spectrum Antibiotic Against Clinical and Subclinical Bovine Mastitis  
— **David Wilson (and Philip Sears)**
- Propionibacterium Acnes: An Immunostimulant for the Treatment of Clinical Bovine Mastitis  
— **Page Dinsmore**
- New Findings: Mycoplasma Mastitis  
— **Ruben Gonzalez**

#### Food Safety — Dairy

- Oxytetracycline Residues in Milk After Intrauterine Infusion in Cows with Retained Fetal Membranes  
— **Page Dinsmore**

## TECHNOLOGY TRANSFER SYMPOSIUM

This symposium will present information on computers, software and related technology that is being developed but not yet available to the public.

*Fee:* Free to all registrants  
*Location:* ACC - Misella  
*Date:* Thursday, September 16  
*Time:* 1:00 p.m. - 5:00 p.m.  
*Coordinator:* **Patty Scharko, DVM**  
 Phone (902) 566-0879  
 FAX (902) 566-0958

## COMPUTER PRACTICE TIPS

These will be a series of 20 minute presentations demonstrating computer software programs on a wide variety of topics. It will be an excellent opportunity to get an overview of new software available for beef and dairy records, practice management, nutrition, and other areas of bovine practice. A schedule of presentations will be available at the registration desk.

*Fee:* Free to all registrants  
*Location:* ACC - Misella  
*Date:* Friday, September 17  
*Time:* 8:00 a.m. - 5:00 p.m.  
*Coordinator:* **Patty Scharko, DVM**  
 Phone (902) 566-0879  
 FAX (902) 566-0958

## AABP SOFTWARE LIBRARY

The AABP library of freely-copied software programs will be available to members all day. Some of the programs are in the public domain, some are marketed as shareware, and others are demonstration versions of commercially-available software.

Software is chosen to serve a variety of interests: practice management, beef and dairy applications, word processing, statistics, and fun. Each program is checked for viruses, compressed, and loaded onto the hard disks of dispensing machines. Members browse for free, then copy the programs of their choice onto floppies that are pre-formatted and pre-loaded with instructions for decompression. All proceeds from the sale of floppy disks are devoted to the maintenance of the library.

*Fee:* Free browsing to all registrants  
*Location:* ACC - Misella  
*Date:* Saturday, September 18  
*Time:* 8:00 a.m. - 8:00 p.m.  
*Coordinator:* **Julie Zdrojewski, DVM**  
 Phone (518) 638-8566  
 FAX (518) 638-6287

## SEMINARS

The following seminars will be presented. For more information please refer to the printed program.

- Quality Milk Production
- Dairy Herd Evaluation: A Microcomputer Aided Approach
- Introduction to Microcomputers for Dairy Practitioners
- Dairy Production and Health
- Veal/Dairy Beef Management
- Optimizing Dairy Heifer Replacements Programs
- Calf and Heifer Nutrition
- Managing Dairy Herd Reproductive Performance
- Quantitative Methods
- Embryo Transfer Techniques
- Frozen Embryo Thawing: Procedures Wet Lab
- Advanced Embryo Transfer
  - a. Freezing Update
  - b. In Vitro Fertilization
- Beef Replacement Heifer Development—The Bottom Line
- Cost Effective Feedlot Consulting
- Managing the Nutrition of Beef Cows Maintained on Forage-Based Diets
- Control of Calf Mortality in Beef Herds
- Parasite Evaluation Seminar
- "20,000 and Beyond, From the 'Inside Out' / Unleashing the Potential Within"
- Introduction to Holistic Resource Management
- Applied Dairy Nutrition and Lab. Problem Solving
- Ration Formulation on Microcomputers
- Implementing Veterinary Nutritional Services
- Advanced Dairy Nutrition
- Advanced Ration Evaluation and Reformation
- Charging For Chute-Side Service
- How to Manage for Success in the 90s
- The Time Course — Access to a Powerful Future
- Managing Issues and Opportunities: Media Opportunities

### TECHNOLOGY TRANSFER POSTER SESSION

**Thursday, September 16 — 4:00 p.m. - 7:00 p.m.**

**Friday, September 17 — 9:00 a.m. - 5:00 p.m.**

**Saturday, September 18 — 8:30 a.m. - 4:00 p.m.**

Location: Northeast Exhibit Hall

The TTPS supplements the formal program by providing additional information on ideas and concepts relating to bovine medicine. The session is designed to provide a forum for the exchange of information in a relaxed informal atmosphere. Participants include both university and industry representatives. Involvement in the TTPS is an excellent opportunity to teach and learn. and leads to valuable contacts in dairy and beef practice.

The TTPS will be scheduled from 4:00 p.m. Thursday, September 16 when the exhibit hall opens, and until 4:00 p.m. Saturday, September 18. The hours will coincide with the commercial exhibit hours. Presenters may be available to interact and answer questions Thursday afternoon, Friday coffee breaks, and at noon break on Saturday.

## EXHIBITS

Exhibits are an important part of the AABP Conference. The exhibits will be open 19 hours for 2 ½ days in 1993. Special features for the exhibitors are:

**AABP Pre-Convention Reception:** The exhibits will open Thursday, September 16, at 4:00 p.m., one hour prior to the reception. The mixer/buffet reception will be held in and adjacent to the exhibit area from 5:00 p.m. - 7:00 p.m. This activity brings veterinarians, spouses, and guests to the exhibit hall for a light meal and camaraderie before the opening ceremonies.

**The Bovine Giveaway:** Veterinarians are encouraged to put their business cards in a gallon milk jug at each company's exhibit. Five (5) of these jugs are selected for a business card drawing: one card from each jug. Each winner receives a \$100.00 check from AABP. Not only does this drawing increase booth exposure, but the cards also provide the exhibitor with the veterinarians' names and addresses.

Half hour coffee/milk breaks are held in the exhibit area during the morning and afternoon programs on Friday and Saturday.

Lunches may be purchased from the concession stand adjacent to the exhibit area. Good food will be available at reasonable prices. Lunch breaks are one and one-half hours in duration.

Informative booth descriptions are published in "The Guide to the Exhibits" if they are received by the Exhibit Manager by August 16, 1993.

Veterinarians come to the AABP Conference to learn new ideas and concepts which will strengthen their professional activities. Exhibits are an important part of this educational process, and we look forward to your participation.

## SOCIAL ACTIVITIES & TOURS

### OPENING EVENING HOSPITALITY

**Thursday, September 16**

Northeast Exhibit Hall

Open 4:00 p.m. - 7:00 p.m.

Hors d'oeuvres 5:00 p.m. - 7:00 p.m.

**OPENING SESSION**

Location: Kiva Auditorium

Program Committee Welcome &

Awards Presentations

7:15 p.m. - 8:15 p.m.

Keynote Speaker - Dr. Lowell Catlett  
"Green Cows, Quaggas and Mummies"  
8:15 p.m. - 9:15 p.m.

It has been said that effective planning involves not prediction of the future, but determining what you need to do today to get ready for it. You are invited to join Dr. Catlett as he presents a captivating characterization of agriculture in the future and alerts you to its opportunities.

Dr. Lowell Catlett, a Professor of Agricultural Economics and Agricultural Business at New Mexico State University, is a consultant and advisor to the United States Department of Agriculture, Department of the Interior and United States Army. With a Ph.D. in Economics from Iowa State University, he teaches and conducts research in the areas of marketing, policy, natural gas future contracts, energy futures and options market, management and futuristic issues.

Dr. Catlett is a co-author of two textbooks "Farm and Ranch Financial Management" and "Cash Flow Management". Forthcoming books are "Investing in Agriculture Real Estate" and "Investing in Futures and Options Market". Current book projects are "Green Cows, Quaggas and Mummies" — a look at the emerging trends that are likely to impact society, careers and lives at the beginning of the next century and "How Many Einsteins" — a look at the changing face of education in the next century and the role of individualized education and achieving maximum performance from individuals. In addition, he is the author of over 200 reports, articles and papers.

Dr. Catlett was voted "Teacher of the Year" at New Mexico State University and received the Don C. Roush Award for Excellence in Teaching and the Burlington Northern Foundation Faculty Achievement Award for outstanding university teaching. In 1991 he was awarded the Westhafer Award, which is the highest honor the university bestows.

## LOS AMIGOS ROUND UP EXTRAVAGANZA AND SCHOLARSHIP AUCTION

"Have Fun New Mexico Style"  
**Saturday, September 18**  
6:00 p.m. - 10:00 p.m.

Board buses at Albuquerque Convention Center from 4:30 - 6:30 p.m. and at Sheraton Old Town Hotel at 6:00 p.m.

Los Amigos specializes in Southwest hospitality. It has been in business for over ten years and is recommended by the Albuquerque Convention and Visitors Bureau.

It provides the private western banquet facilities for groups of 50-1000 people and is located along the Rio Grande River under giant shady Cottonwood trees on the Sandia Indian Reservation.

You will be greeted by the Los Conquistadores Greeters and given souvenir Indian bandanas and entertained by an Old Timey Band, Mariachis, Western Dance Troup and Pueblo Indian Dancers.

The food will consist of tender boneless ribeye steaks (all you can eat) broiled over mesquite and hickory fires, authentic Indian snacks (Sandia Indian fry bread and green chile stew) potato salad, corn, baked beans, lemonade, tea, coffee, home style dessert, beer and wine.

Come join us! This will be a fun, action packed evening that will highlight our Twenty Sixth Annual Conference.

After your fill of scrumptious treats, join the fun as retiring Executive Secretary, Harold Amstutz is feted with an official AABP Barbecue (that's kind of like a roast only less formal). Come prepared to get some good deals at the Amstutz scholarship auction. Items have been donated from each district and include hotel room packages in future and past convention cities, handmade items, and vacation getaways in Colorado, Canada, and the Pacific Northwest. Your tax deduct-

ible cash, check or Visa donation will go towards endowment of the AABP Amstutz Scholarship Fund which will be available to North American veterinary students intent on pursuing careers in bovine practice.

Do not miss this opportunity to celebrate old friendships, acquire a bargain while contributing to a worthy cause, and share in the high-lighting of the Amstutz legacy. Come join us!

Per person: \$32.00

## TOURS

Free shuttle buses will run Thursday, September 16 through Sunday Noon, September 19 from the Albuquerque Convention Center to the Sheraton Old Town District.

### TOUR 1

**Introduction to Albuquerque**  
**Thursday, September 16**  
12:30 p.m. - 3:30 p.m.

Explore Albuquerque, a city of high technology and modern art. We will take trip down Route 66 with its neon signs, Pueblo Deco Art and through the University of New Mexico — the only pueblo styled campus in the United States. Other sights will include: Kirtland Air Force Base, Sandia Peak Tram, the Petroglyphs and Old Town. Along our route you will see historical and residential areas. After this tour you will know where to go and what to see in Albuquerque.

Board bus at Convention Center  
Price per person: \$18.00  
Minimum: 20

### TOUR 2

(Repeat of Tour 1)  
**Introduction to Albuquerque**  
**Friday, September 17**  
9:00 a.m. - 12:00 noon

Explore Albuquerque, a city of high technology and modern art. We will take trip down Route 66 with its neon signs, Pueblo Deco Art and through the University of New Mexico — the only pueblo styled campus in the United States. Other sights will include: Kirtland Air Force Base, Sandia Peak Tram, the Petroglyphs and Old Town. Along our route you will see historical and residential areas. After this tour you will know where to go and what to see in Albuquerque.

Board bus at Convention Center  
Price per person: \$18.00  
Minimum: 20

### TOUR 3

Board bus at Convention Center  
Price per person: \$18.00  
Minimum: 20

### TOUR 3

**Santa Fe, New Mexico Tour**  
**Friday, September 17**  
9:00 a.m. - 4:30 p.m.

Named by *Conde Nast* travel magazine as the #1 travel destination in the World, Santa Fe, the oldest capital city in the United States, is a tri-cultural city with European charm. Enjoy a ride up the Turquoise Trail through the ghost towns of Golden and Cerrillos with a stop at the mining town of Madrid. We will then proceed to Santa Fe "The City of Faith". While in Santa Fe we take a walking tour of the Plaza, visit the Chapel of Loretto and the Oldest Church in the USA. Then free time to gallery browse, shop and lunch.

Board bus at Convention Center  
Price per person: \$28.00 - Children 11 years of age \$22.00  
Minimum: 40

### TOUR 4

**New Mexican Fiesta**  
**Friday, September 17**  
7:30 p.m. - 10:00 p.m.

We will depart to the WPA original Albuquerque airport, a lovely pueblo styled building with flagstone floors for a New Mexican fiesta compete with pinatas, luminarias, margaritas and New Mexican hors d'oeuvres. We will be serenaded by strolling Mariachis and entertained by a Flamenco dance troop. Local chefs will share recipes and the preparation of New Mexican hors d'oeuvres. Local Spanish craftsmen will demonstrate tin art, the carving of santos and retablos and the art of stained glass. Come join this festive evening full of local charm. This activity is intended for accompanying persons while veterinarians are involved in Practice Tips and Research Summaries.

Board bus at Convention Center  
Price per person: \$30.00 - Children under 11 years of age \$24.00. Price includes hors d'oeuvres and beverages.  
Minimum: 75

### TOUR 5

**Artful Continental Breakfast**  
**Saturday, September 18**  
8:30 a.m. - 11:00 a.m.

Breakfast at one of Albuquerque's leading studio/galleries with exhibits of Native American Indians doing silversmithing, painting pottery, and explaining the folklore of Indian Story Tellers. Breakfast will consist of: danish, bagels and cream cheese, fresh fruit, yogurt, juices, tea and coffee and of course, green chile grits!

Board bus at Convention Center  
Price per person: \$15.00 includes breakfast - Children under 11 years of age \$7.50  
Minimum: 25

### TOUR 6

**Indian Cultural Day**  
**Saturday, September 18**  
9:30 a.m. - 3:30 p.m.

Our first visit will be the Indian Pueblo Cultural Center which is owned and maintained by the 19 New Mexico Pueblos. At the center we will look at American history and ensure that past traditions are remembered. The museum represents a vast collection that traces the development of the Pueblo culture and is a rich resource for the study of America's first inhabitants in the Southwest. Gift shops offer fine pottery, sculpture, paintings, rugs sandpaintings, kachinas, traditional and contemporary jewelry.

We will then depart for "Sky City" Acoma Pueblo which is a 1,000 year old continuously inhabited pueblo (the oldest continuously inhabited city in the United States) which sits atop a 400 foot sandstone bluff and overlooks Enchanted Mesa. While winding through the dirt paths of the Pueblo we will see the famous Acoma pottery and other traditional art. We will learn of Indian folklore and see a truly amazing way of life — Acoma is a treasure of America.

Board bus at Convention Center  
Price per person: \$35.00 includes admissions and lunch  
Minimum: 30

### TOUR 7

**New Mexico State Fair Day**  
**Saturday, September 18**  
9:00 a.m. - 3:30 p.m.

The New Mexico State Fair — "The Biggest Show in New Mexico" is the nation's 5th largest fair and is filled to the brim with entertainment, food, educational exhibits and attractions for the young and old. While at the Fair you will find a diverse array of art galleries and displays, para-mutual horse racing, over 92 different food booths (representing over 10 cultures), 40 acres of midway, celebrity entertainment at the Miller Pavilion and Heritage Square, performances at Villa Hispano and Indiana Village and of course a host of animals and agriculture.

Board bus at Convention Center  
Price per person: \$15.00 includes admission  
Minimum: 20

### TOUR 8

**Sandia Peak Tramway**  
**Sunday, September 19**  
8:30 a.m. - 10:00 a.m.

Sandia Peak Tramway is the world's longest single span tram. While ascending a distance of 2.7 miles you will see some of nature's more dramatic beauty as we pass through four of nature's seven life zones. Once on top of Sandia Mountain (Spanish for "Watermelon") gaze at a 15,000 mile aerial view. There are trails to hike and moments to reflect nature's beauty and stillness.



Board bus at Convention Center  
 Price per person: \$20.00 includes tram ride and juice and danish on the bus  
 Minimum: 25

**TOUR 10**

**Santa Fe, New Mexico**  
**Sunday, September 19**  
 1:00 p.m. - 9:00 p.m.

**TOUR 9**

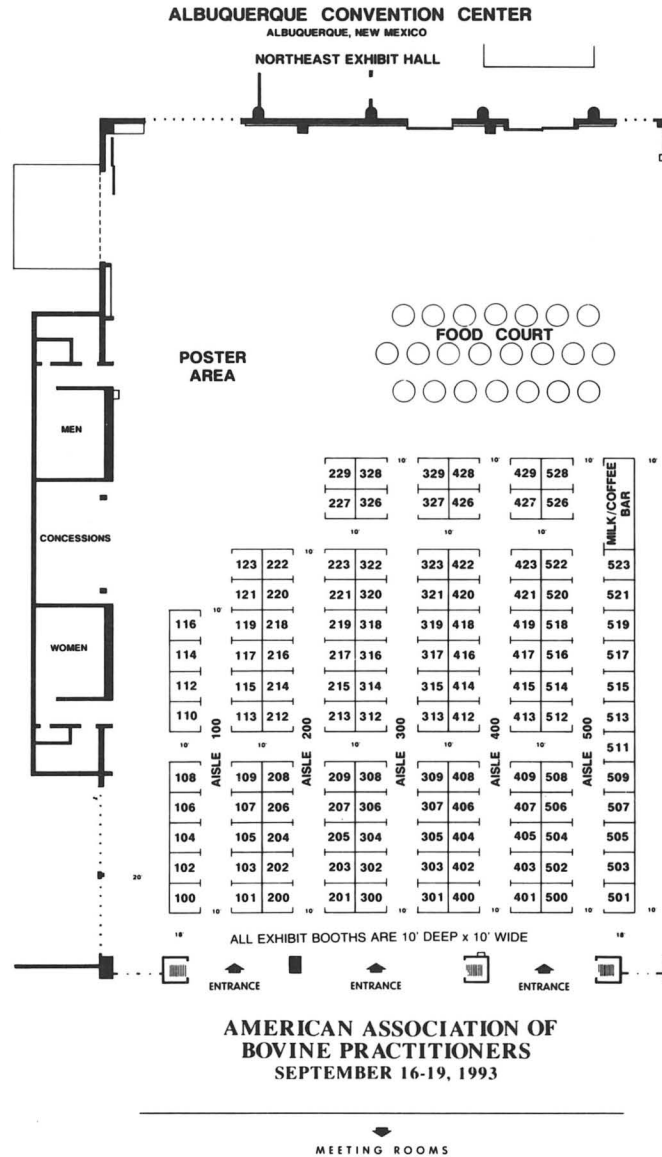
**Harvest Ceremonial — Laguna Indian Pueblo**  
**Sunday, September 19**  
 8:30 a.m. - 3:00 p.m.

A rare opportunity to visit Laguna Pueblo the largest Keresan-speaking pueblo, with approximately 8000 members and a heritage of Shoshone, Tanoan, Keresan and Zuni cultures. The feast of St. Joseph is the pueblo's largest public event with dancers in Native dress, arts and crafts exhibits and sporting events. This will be an interesting look into the Indian Culture and opportunity to spend the day in a beautiful setting at Feast Day — few people will ever experience a day like this.

We will wind up the Turquoise Trail through the ghost / mining towns of Cerrillos and Madrid toward Santa Fe — the Capital of New Mexico and oldest capital city in the United States. Upon arriving in Santa Fe we will have a brief walking tour of the Plaza which is the heart of the city and site of countless historical, cultural and social events. It was in the Plaza that the Pueblo Indians revolted against Spanish rule in 1680. There will be free time to gallery browse, shop and have dinner in one of the many gourmet restaurants in Santa Fe.

Board bus at Convention Center  
 Price per person: \$28.00 - Children under 11 years of age \$22.00  
 Minimum: 25

Board bus at Convention Center  
 Price per person: \$25.00  
 Minimum: 30



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# 1993 AABP Conference Exhibitors

## EXHIBITS OPEN

The commercial and educational exhibit hall offers a modern showcase of veterinary products and services — the biggest trade show exclusively for cattle veterinarians at any meeting! Exhibits will be open 19 hours for 2½ days. You will be inundated with biological, pharmaceutical and agricultural technical information throughout the day, including breaks and lunch time. Expand your educational processes and show your appreciation to the exhibitors who are an integral part of the AABP Annual Meeting.

**Samuel Hutchins, 3rd, DVM**  
South Barre, VT  
Exhibits Manager

### BOVINE GIVE-A-WAY

Five practitioners can win \$100.00 each by visiting the exhibit area. Bring business cards to deposit in milk cartons at each exhibit booth. Winners will be announced at the AABP business lunch on Saturday, September 18. All veterinarians registered at the meeting are eligible.

#### **Advanced Veterinary Systems**

Att: Lisa M. Lewis  
3410 Sky Park Blvd.  
Eau Claire, WI 54701

#### **Agri-Pro Enterprises of Iowa, Inc.**

Att: Robert Vosloh  
Box 27  
Iowa Falls, IA 50126

#### **Agri-Sales Assoc., Inc.**

Att: Tracye Shelby  
121 Louise Ave.  
Nashville, TN 37203

#### **Alfa-Laval Agri., Inc.**

Att: Eric H. Bonewitz  
11100 N. Congress Ave.  
Kansas City, MO 64153

#### **American Animal Health, Inc.**

Att: W. Glenn Dalton  
2619 Skyway Drive  
Grand Prairie, TX 75051

#### **American Breeders Service**

Att: Barbara M. Lee  
6908 River Rd.  
DeForest, WI 53532

#### **American Cyanamid Company**

Att: Judy Iannacone  
One Cyanamid Plaza  
Wayne, NJ 07470

#### **American Health Institute**

Att: Sandra L. Phelan  
P.O. Box 1417-D50  
Alexandria, VA 22314

#### **American Veterinary Laboratories, Inc.**

Att: W. H. Wohler, DVM  
1202 North Bell St.  
San Angelo, TX 76903

#### **AVMA Insurance Trusts**

Att: Amy Holtgreive  
55 E. Jackson Blvd.  
Chicago, IL 60604

#### **Babson Bros. Co. "Surge"**

Att: Luther Hitzereth  
1880 Country Farm Drive  
Naperville, IL 60563

#### **BallistiVet, Inc.**

Att: Mya Hultman  
8990 Springbrook Drive  
Suite 250  
Minneapolis, MN 55433

**BIO-CEUTIC Div. of  
Boehringer Ingelheim A.H.I.**  
Att: JeNelle L. Pasley  
2621 North Belt Highway  
St. Joseph, MO 64506-2002

**BioCor**  
Att: Lisa Rogers  
P.O. Box 894  
Worthington, MN 56187

**Bou-Matic**  
Att: Claudia Riedel  
P. O. Box 8050  
Madison, WI 53708

**Bowie Mfg., Inc.**  
Att: Darlene Jacobs  
313 South Hancock  
Lake City, IA 51449

**Christian Veterinary Mission**  
Att: Leroy Dorminy  
19303 Fremont Ave. N.  
Seattle, WA 98133

**Church & Dwight Co., Inc.**  
Att: Doug Merrill  
469 N. Harrison St.  
Princeton, NJ 08543-5297

**Classic Medical Supply, Inc.**  
Att: Steve DuMond  
19940 Mona Rd. #1  
Tequesta, FL 33469

**Corometrics Medical Systems**  
Att: Peter Arneson  
61 Barnes Park Rd. North  
Wallingford, CT 06492

**DHI Computing Service, Inc.**  
Att: Ken Lee Crandall  
1525 W. 820 North  
Provo, UT 84601

**Diamond V. Mills, Inc.**  
Att: Ken Franklin  
436 G. Ave. NW  
P.O. Box 74570  
Cedar Rapids, IA 52407

**DRPC Raleigh**  
Att: John S. Clay  
Box 7623, NCSU  
Raleigh, NC 27695

**DVM Newsmagazine**  
Att: David Emery  
7500 Old Oak Blvd.  
Cleveland, OH 44130

**Edwards Agri-Sales, Inc.**  
Att: Don E. Hurst  
P.O. Box 65  
Baraboo, WI 53913

**Eidson Associates, Inc.**  
3440 Beltline Blvd.  
Minneapolis, MN 55416

**Elanco Animal Health**  
Att: Richard Fossler  
Lilly Corporate Ctr.  
Drop 2047  
Indianapolis, IN 46285

**Fermenta Animal Health**  
Att: Rick A. Jordahl  
10150 N. Executive Hills Blvd.  
Kansas City, MO 64153

**Flying W, Inc.**  
Att: Laura Widney  
Rt. 1, Box 27  
Watonga, OK 73772

**For-Most, Inc.**  
Att: Robert L. Keehn  
Box 322  
Hawarden, IA 51023

**Fort Dodge Laboratories**  
Att: Dr. Wm. E. Ryan  
P.O. Box 518  
Fort Dodge, IA 50501

**Gist-Brocades Food Ingredients, Inc.**  
Att: Maria Novak  
2200 Renaissance Blvd.  
King of Prussia, PA 19406

**GLA Agricultural Electronics**  
Att: John K. Thomas  
4120 Horizon Lane #F  
San Luis Obispo, CA 93401-7500

**Grand Laboratories, Inc.**  
At: Leann Schultz DVM  
Box 1050  
Freeman, SD 57029

**Hoard's Dairyman**  
Att: Elvira B. Kau  
28 Milwaukee Ave. W.  
Fort Atkinson, WI 53538

**Hoechst-Roussel Agri-Vet Co.**  
Att: Ann C. Proffitt  
Route 202-206  
Somerville, NJ 08876-1258

**Hoffmann-La Roche, Inc.**  
Att: Chris Province  
340 Kingsland St.  
Nutley, NJ 07110

**Holstein Friesian World, Inc.**  
Att: Standley E. Bird  
8036 Lake St.  
Sandy Creek, NY 13145

**Ideal Instruments, Inc.**  
Att: Sam DeArment  
401 N. Western Ave.  
Chicago, IL 60612

**ImmuCell**  
Att: Stafford Walker  
1452 Trail Creek Ct.  
Carmel, IN 40632

**IMMVAC, Inc.**  
Att: Randy L. Rood  
6080 Bass Lane  
Columbia, MO 65201

**Impromed, Inc.**  
Att: Mary Larson  
304 Ohio St.  
Oshkosh, WI 54901

**Intermountain Vet. Supply**  
Att: Gary Jacques  
12650 E. 33rd Ave.  
Aurora, CO 80011

**Jorgensen Laboratories, Inc.**  
Att: Earl Sethre  
1450 N. Van Buren Ave.  
Loveland, CO 80538

**Kane Enterprises, Inc.**  
Att: G. Kevin Kane  
P.O. Box 1043  
Sioux Falls, SD 57101

**Land O'Lakes, Inc.**  
Att: Ruth Hancock  
2827 8th Ave. S.  
Fort Dodge, IA 50501

**Large Animal Veterinarian**  
Att: Clay Schreiber  
122 S. Wesley Ave.  
Mount Morris, IL 61054

**Master Magnetics, Inc.**  
Att: Jennifer Brown  
607 S. Gilbert  
Castle Rock, CO 80104

**Merck AgVet Division**  
Att: Nancy C. Patterson  
P.O. Box 2000-WBF-445  
Rahway, NJ 07065-0912

**Miles**  
Att: Lee S. Beatty  
Box 390  
Shawnee, KS 66201

**Pfizer, Inc.**  
Att: Roger Kohl  
235 East 42nd St. 3rd. Fl.  
New York, NY 10017

**Pitman-Moore, Inc.**  
Att: Marcy Shall  
421 E. Hawley St.  
Mundelein, IL 60060

**Pioneer Hi-Bred Int'l. Inc.**  
Att: Kathy Schuler  
4601 Westown Pkwy., Suite 120  
West Des Moines, IA 50266

**Porta-Vet Industries, Inc.**  
Att: Gordie Moser  
110 Wood St.  
P.O. Box 598  
Hudson, IA 50643

**PRN Pharmacal, Inc.**  
Att: Gary H. Cushing  
5830 McAllister Ave.  
Pensacola, FL 32504

**P.S.I.**  
Lisa Hoelscher  
One P.S.I. Plaza  
Effingham, IL 62401



**Rhone-Poulenc Animal Nutrition**

Att: Larry Landes  
500 Northridge #620  
Atlanta, GA 30350

**Sanofi Animal Health, Inc.**

Att: Kelly L. Ethington  
7101 College Blvd. Ste. 610  
Overland Park, KS 66210

**Schering-Plough Animal Health**

Att: Dorothy Randall  
P.O. Box 3182  
Union, NJ 07083-1982

**Selzler Computing**

Att: Douglas Selzler  
P. O. Box 6114  
Longmont, CO 80501

**Shank's Vet. Equip., Inc.**

Att: Jennifer Dettman  
410 Cochran Ave.  
P. O. Box 397  
Milledgeville, IL 61051

**SmithKline Beecham Animal Health**

Att: Ana Fontanez  
812 Springdale Drive  
Exton, PA 19341

**Stone Manufacturing & Supply Co.**

Att: Sharon Hess  
1212 Kansas Ave.  
Kansas City, MO 64127

**Syntex Animal Health**

Att: Carolyn Wilkins  
4800 Westown Parkway St. 200  
West Des Moines, IA 50266

**The Butler Co.**

Att: Thomas Hilbert  
5000 Bradenton Ave.  
Dublin, OH 43017

**The Upjohn Co.**

Att: Lynne Bodnar  
7000 Portage (9550-190-47)  
Kalamazoo, MI 49001

**Torpac Capsules, Inc.**

Att: Raj V. Tahil  
26 Littell Rd.  
East Hanover, NJ 07936

**Valley Agricultural Software**

Att: Connor Jameson  
2861 So. K St.  
Tulare, CA 93274

**Vance Publishing**

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7950 College Blvd.  
Overland Park, KS 66210

**Veterinary Biological Sys. Analysis**

Att: Robert T. Coffee DVM  
RR 1, Box 362  
Newton, IA 50208

**Veterinary Concepts, Inc.**

Att: Dora Mann  
P. O. Box 39  
Spring Valley, WI 54767

**Veterinary Data**

Att: Ann Jones  
P. O. Box 1209  
Wildomar, CA 92595

**Veterinary Learning Systems**

Att: Sharon Aquaro  
425 Phillips Blvd. #100  
Trenton, NJ 08618

**Veterinary Practice Pub. Co.**

Att: Nancy A. Bull  
P. O. Box 4457  
Santa Barbara, CA 93140

**W. B. Saunders Co.**

Att: Paul Winters  
142 Vineyard N.W.  
Albuquerque, NM 87107

**West Agro. Inc.**

Att: Kim Bertz  
11100 N. Congress  
Kansas City, MO 64153

**Western Vet. Supply**

Att: Mark Middleton  
P.O. Box 82656  
Oklahoma City, OK 73148

**Zinpro Corp.**

Att: Dr. John Crissinger  
7825 Washington Ave.  
Suite 850  
Edina, MN 55439

# ALBUQUERQUE: The "Duke City"



*AERIAL VIEW OF ALBUQUERQUE — Founded on the hospitable banks of the Rio Grande with the Sandia Mountains as a backdrop, Albuquerque spreads over nearly 100 square miles at elevations ranging from 4,500 to 6,500 feet.*

Albuquerque, New Mexico's largest city (current population approximately 480,000), actually was named to honor an authentic Spanish Duke, the 10th Duke of Alburquerque. Colonial Governor Don Francisco Cuervo y Valdez selected the name, but the first "r" was subsequently dropped.

In 1706, Albuquerque was founded by a group of colonists who had been granted permission by King Philip of Spain to establish a new villa on the banks of the Rio Grande (which means big or great river).

Two or three Indian pueblos were already in the vicinity, and the colonists chose a place along the river where it made a wide curve providing good irrigation for crops, a source of wood from the bosque (cottonwoods, willows and olive trees) and from the nearby mountains.

The site also provided aid, protection and trade with the Indians.

The early Spanish settlers were religious people, and the first building erected was a small adobe chapel. Its plaza was surrounded by small adobe homes, clustered close together for mutual protection against any threats posed by hostile forces in this vast and dangerous country.

The church, San Felipe de Neri, still stands on the spot. The building itself has been several times enlarged and remodeled, but its thick original walls are still intact. The church is the hub of Old Town, the historic and sentimental heart of Albuquerque, with activity revolving around shopping and dining. To this day, special holidays and feast days are still commemorated

as part of the year-round attractions of this "original" Albuquerque.

The spread of Albuquerque can be traced to two changes in the early development of the area. First, the Rio Grande changed its course a little further west, causing a slight shift in the population. Second, the railroad came to Albuquerque in 1880 and "New Town" grew along the tracks two miles east of Old Town.

From the beginning, Albuquerque was a trade and transportation center. It was an important station on the Old Chihuahua Trail, an extension of the Santa Fe Trail winding down into Mexico.

Between 1850 and 1875, many forts were established in the Southwest to protect the westward migration. Albuquerque was a major supply center for these forts. During this same period, merchandising companies that had first shipped goods by wagon across the Santa Fe Trail, then by rail after 1880, established warehouses and stores in Albuquerque. Manufactured goods from the east were brought in. Hides, pelts, livestock, lumber and minerals were shipped out.

Albuquerque never went through the lawless days of the raw frontier as did other western towns. When those times came (the last quarter of the 19th century), there was already an established culture, a century-and-a-half old.

Much of Albuquerque's appeal today can be attributed to the subtle blending of many cultures that comprise its fabric---Native American, Spanish, Anglo American, Afro-American and Asian. Each has left its mark in food, music, religion, art customs, architecture, traditions and attitudes.

Albuquerque is a "spread-out" horizontal city. Because it covers so much geography, it includes a surprising diversity of terrain.

Along the river in the north and south valleys, elevations hover at around 4,800 feet. To the east land rises over *mesas* (flat tabletop land) to the foothills of the Sandia Mountains at an elevation of 6,500 feet.

West of the Rio Grande, where much of Albuquerque's growth is now taking place, the *mesa* rises more abruptly than it does to the east-- with a difference of 1,700 feet in the lowlands and highlands of Albuquerque. There is a variance in temperatures, often as much as 10 degrees. Just as elevations and temperatures vary, so does the weather. It has been known to snow or rain in one section of the city with nary a flake or a drop in other areas of town!

The Sandia Mountains visually dominate the city and exert a great influence on its climate. They are a bulwark against cold winds and storms that sweep across the plains of the Midwest. In summer great thunderheads build up above the mountains, spilling brief, dramatic showers over the city.

The Sandias rank among Albuquerque's greatest

recreational assets . . . a mountain playground at the very edge of the city. The west side facing Albuquerque is a rugged, rocky escarpment rising almost vertically for a mile above the city. Sandia Peak Tram, the longest clear span tramway (2.7 miles) and most spectacular tram ride in the world, rises up the mountain's west face.



*SANDIA PEAK TRAM: The longest tramway in North America whisks visitors to the top of 10,378 foot high Sandia Peak. Just minutes from downtown Albuquerque.*

There are picnic areas, horseback trails and hiking trails, canyons, streams and ski runs on the east side of the mountain. Skiers can take the tram up to the top within 15 minutes and ski down the east side or they can drive up the east side and be at the base of the runs in half-an-hour.

The highest point of the Sandia Mountains is Sandia Crest at 10,678 feet. Sandia Crest is the officially determined summit of the Sandia Mountains. The Crest is located within Cibola National Forest, officially designated as a National Forest Recreation Area. The drive, an easy 30 miles from downtown Albuquerque, takes you through breathtaking *vistas*, from piñon and juniper vegetation at 6,300 feet, through stands of stately ponderosa pine and mixed conifer, spruce and fir forests at higher elevations. The view from Sandia Crest is awesome, with a 360 degree panorama encompassing 11,000 square miles!





**INDIAN DANCES** — *Spectacular Ceremonial Dances take place throughout the year at all the Indian Pueblos of the Rio Grande Valley. Many dances and costumes such as these at the Indian Pueblo Cultural Center in Albuquerque are very realistic in the representation of nature and animals.*

Because of mild winters, comfortable summers and invigorating elevations, it is possible for people to be outdoors much of the time. All sorts of spectator and participation sports are available here or within an afternoon's drive.

Albuquerque offers good hotel/motel accommodations (approximately 8,000 rooms), ranging from budget-priced singles to luxury suites. Campground facilities for recreational vehicles are in the eastern, western and northern edges of the city.

Albuquerque's year-round calendar of events includes two major arts and crafts fairs; ¡MAGNIFICO! Albuquerque Festival of the Arts is held every May; the annual New Mexico State Fair (one of the top ten in the nation); hot air balloon events including the Albuquerque International Balloon Fiesta; Christmas festivities with a special "luminaria" tour; events at the Indian Pueblo Cultural Center, offering displays and working exhibitions by members of the 19 New Mexico pueblos; and a prominent Hispanic arts and crafts exhibition, Fiesta Artistica de Colores, every August.

*Photos and information courtesy of Albuquerque Convention and Visitors Bureau.*

The New Mexico Museum of Natural History, across from the Albuquerque Museum, opened in 1986. It is the first such museum built in the United States before the turn-of-the-century and offers fascinating exhibits that take advantage of this state's natural wealth. Don't miss the Dynamax Theater, a high-tech theater experience that puts you in the on-screen action. Theater films change every six months.

Touring road shows, University of New Mexico programs and sporting events, the appearance of many theater and musical groups, all add to the cultural arts and entertainment mix.

The museum is open from 9 a.m. to 5 p.m. daily, with the exception of New Year's Day, Easter, Thanksgiving and Christmas. Admission is free and cameras are welcome.

Enter Kirtland Air Force Base at Wyoming Blvd., south. A pass from the military guards at the visitors center provides access to the museum, approximately one mile south of the gate on Wyoming Blvd.