PROCEEDINGS OF THE TWENTY-SEVENTH ANNUAL

FLORIDA DAIRY PRODUCTION CONFERENCE

"Dairying In The 90's"

The Albert Bowie, Jr. family were the recipients of the 1990 Dairy Family Award that was sponsored by the Florida Farm Bureau Federation. Back row, standing (1-r) Mike Kelly (Extension Dairy Agent), Bob Bowie, Robin Bowie, David Anderson, Marty Millan, Wade Price, Danny Bowie, Jim Bowie, Betty Bowie, Johnny Bowie, and Frankie Hall (Florida Farm Bureau Federation). Front row, seated, (1-r) Ann Millan, Betty Anderson, Cloie Bowie (holding Kristin Bowie), Lisa Bowie (holding Michael Bowie), Mrs. Albert Bowie Jr. (Margaret) and Mrs. Johnny Bowie (Joyce.)

UNIVERSITY OF FLORIDA, GAINESVILLE • APRIL 10-11, 1990

Sponsored by the Dairy Science Department, Florida Cooperative Extension Service and the Agricultural Experiment Station of the Institute of Food and Agricultural Sciences with the Cooperation of State Dairy Organizations.
DATE: April 16, 1990

TO: FLORIDA DAIRYMEN AND ALLIED INDUSTRIES

RE: TWENTY-SEVENTH ANNUAL FLORIDA DAIRY PRODUCTION CONFERENCE

Economic survival of dairymen and the dairy industry in the 1990’s will require implementation of many new ideas, plans and technologies. Continuing education is key to progress, just as sound business decisions result from well founded facts and past experiences.

We would like to thank our Dairy Advisory Committee and planning committee for their assistance in providing timely topics. Also, special appreciation to US Sugar Corporation and Monsanto Company for their support and sponsorship of the milk and coffee breaks.

Special appreciation and thanks is extended to the Farm Credit Services in Florida, the Florida Farm Bureau Federation, Florida Bankers Association, State Department of Agriculture and Consumer Services, PDCA, State DHIA Board, and Dairy Farmers Incorporated for their support and participation in the awards program Tuesday evening, April 10.

We would like to say thanks to North Florida Farm Credit Service for their sponsorship of the lunch on Wednesday at their facilities in Hague. The smoked steaks served were most delicious and were a real treat prior to the tour of the Dairy Research Unit and Holstein meeting.

The proceedings contain a list of those attending the conference as well as a list of the sponsors and those having commercial exhibits at the conference. Additional copies may be obtained by calling or writing our office.

Thanks to everyone for your help and support.

Roger P. Natzke, Chairman
Dairy Science Department

Barney Hatfield, Jr., Chairman
Dairy Production Conference
(Extension Dairyman)
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<td>W. Art Darling</td>
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MILKING PARLOUR FOR THE FUTURE -- Dennis V. Armstrong

DAIRY MANURE MANAGEMENT: PARTITIONING EXCRETION AND DEVELOPING
LAND APPLICATION BUDGETS -- H. H. Van Horn

HEAT STRESS AND DRY PERIOD MANAGEMENT EFFECTS
ON SUBSEQUENT REPRODUCTION AND LACTATIONAL
PERFORMANCE OF HIGH YIELDING COWS IN ISRAEL --
David Wolfenson, I. Flamenbaum and A. Berman

THE EFFECT OF A MICROBIAL INOCULANT AND/OR
SUPPLEMENTAL SUGARS ON THE FERMENTATION
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AT TWO MOISTURE CONTENTS -- Rafael Umana, Charles Staples,
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ATTENDERS OF THE TWENTY-SEVENTH ANNUAL FLORIDA DAIRY
PRODUCTION CONFERENCE
1. **DAIRY FAMILY AWARD** - For more than a decade, Florida Farm Bureau Federation has presented a plaque to an outstanding Florida Dairy Family at the Annual Dairy Production Conference. The family recognized is selected by the Dairy Science Department of the University of Florida, the dairy division of the F.D.A., county extension agent and the commodity division of the Florida Farm Bureau.

Some of the criteria used in making the selection include:

1. Contributions made to the dairy industry.
2. Longevity in the dairy business (two, three or four generations).
3. Record of quality milk production.
4. Cooperative attitudes.
5. Success in milk production.

This year we are pleased to recognize the Albert Bowie Jr. Family. All five of Albert and Margaret Bowie’s children had 4-H dairy heifer projects while they were growing up, and in 1952 Al and Margaret were able to build a dairy beginning with the cows their children raised as 4-H projects. Today, the children and their children are operating three dairies -- the original Bowie dairy, a second operation known as "Shoestring Dairy", and Cypress Lane Dairy. The herd has grown from a dozen or so cows in 1952 to 1,000 cows at three sites. But let's go back to the beginning for a moment and give you the history of our Dairy Family.

Albert Bowie Jr. moved to Florida from Pennsylvania in 1925 at the age of 10 with his parents, Albert Sr. and Grace Bowie, and a sister Betty. The family purchased property at Dinsmore, just north of Jacksonville, in 1927. Albert Sr. added to the property as adjoining sites became available.

In 1935, Albert Jr. married Margaret Danson. They had five children, Albert III, Robert, Betty June, John and Ann. Albert Jr. worked at numerous jobs before getting into the dairy business. He worked at the Jacksonville shipyards, operated a grocery store, a service station and a tractor business and worked for Jacksonville Tractor Co.

The founder of Bowie Dairy continued to work at Jacksonville Tractor while getting his dairy started. He, Margaret and the children would milk the cows before and after work and school. In a few years Albert Bowie Jr. devoted full time to the dairy and it continued to grow.

In 1980 he sold the dairy to his sons Robert and John. In 1987 Albert Bowie Jr. passed away.
John Bowie is now operating the 600-cow Cypress Lane Dairy in Callahan with his wife, Joyce; sons Jim and Danny, daughter-in-law, Lisa and grandson, Michael. Wade Price has also worked with the Bowie's for several years and is almost a member of the family. John purchased the dairy in November 1988 and in that time has brought the rolling herd average up from about 9,000 pounds of milk per cow to more than 14,000 pounds per cow. He hopes to increase his herd by another 200 cows in the next few years.

Robert Bowie is dairying at Bowie Dairy Farm in Dinsmore with his wife, Cloie, sons Robert Jr. (known as Robin), and Todd, daughter-in-law, Vonda and granddaughter, Kristin.

2. DAIRY HERD MANAGEMENT AWARDS - The awards are sponsored by Farm Credit Service in Florida and are selected from recipients nominated by the County Extension Faculty. Selections are based on changes and progress in milk production and herd management practices. Also, involvement in association, community and Extension programs are given consideration.

Small Herd Division - Submitted by Andy Andreasen, County Extension Livestock Agent, Jackson County.

Working Cows Dairy is the recipient of the 1990 Dairy Management Award in the small herd division. The dairy is owned by Jan and Rinske DeJong.

Jan and Rinske are natives of Holland. They were married in 1985 and have two children - Jonny and Mendy. While dairying with his father in Holland, Jan studied agriculture in college. After marriage and due to limitations on dairy expansion at his father’s dairy, Jan worked as a herd manager in Germany for 18 months. Afterwards, the DeJong’s moved to Florida where they were associated with Arie Heykoop for a period of time. With help from dairymen like Arie Heykoop and Doyle Harris as well as the Cooperative Extension Service and their veterinarian Paul Johnson, they were able to get started in the dairy business. They are presently operating on a leased dairy in Jackson County with 192 cows that have a rolling herd average of 19,334 lbs milk and 683 lbs fat.

Jan’s herd receives a high-fiber mixed grain with some hay and pasture. The pastures are divided into small acreage to prevent mud. The dairy is a strong supporter of Extension activities and is actively involved in the DHI program. The DeJong’s believe that success is a result of hard work and good management decisions.

Medium Herd Division - Submitted by Clayton Vaughn, County Extension Livestock Agent, Marion County.

The 1990 Dairy Management Award in the medium herd division is awarded to Hidden Hammock Dairy, owned and operated by Nels and Marilyn Siverson. The dairy is fairly new in Florida, having started in 1983 as a result of a 4-H dairy project and labor problems that were being
experienced at Eastern Airlines. Prior to the Siverson’s involvement in the dairy industry, Nels had been an Eastern Airlines pilot for 23 years. Nels states that without his wife Marilyn, the dairy would never have materialized.

Hidden Hammock Dairy has compiled some exceptionally good records over the past six years. The dairy presently milks about 300 Holsteins and 15 Jerseys and has a rolling herd average of 20,062 lbs milk and 678 lbs fat. Success has been contributed to the selection of good cows and sires as well as the excellent feeding and management programs in use at the dairy.

The Siversons are actively involved in community affairs and have served as leaders of the local Pedro 4-H club for eight years.

Large Herd Division - Submitted by Larry Halsey, County Extension Director, Jefferson County.

LAD Dairy is the recipient of the Florida Dairy Herd Management Award in the Large Herd Division. LAD Dairy was established by SIF Corporation in 1982 with Al Whener, Jr. as General Manager. In 1985, Al and his wife Desiree became partners in the corporation and continue in the management role. The dairy is located in Jefferson County, 15 miles northeast of Monticello and near Ashville.

Al grew up in New York State where his father operated a dairy. Desiree grew up in Gainesville, Georgia where her parents were involved in the poultry business. They met at the University of Georgia where they both majored in dairy science. Afterwards, they were married, moved to Florida and soon became involved in the dairy business in Jefferson County. They are the parents of three children, Jessica age 9, Clay age 8, and Kyle age 6. Jessica is already involved in showing a 4-H animal.

The success of the dairy operation is attributed to their overall management strategies and excellent feeding program. The 1,180 dairy cows are milked 3X through a trigon parlor. Presently, the dairy has a rolling herd average of 20,643 lbs milk and 708 lbs fat. In 1986, Al Wehner, Sr. joined the staff at the dairy and handles the farming operations. Roger Bermudes, a recent UF graduate, serves as herdsman. The dairy grows corn for silage, bermudagrass for hay and small grains for grazing. They practice minimum tillage, contouring, cover crop management and manure application through center pivot irrigation. Because of their excellent conservation and management practices, in 1989 they received the National Endowment Farmer and Rancher Conservation Award sponsored by DuPont for demonstrated protection of soil and water resources.

The Wehners are participants in the Aucilla Watershed project and members of the Big Bend DHI Association. Al serves on the Board of Directors of the Georgia-Florida Fertilizers and Desiree is chairman of the parent teachers advisory committee for the Jefferson County
Elementary School System. In addition, the dairy is a frequent host
to tours in Jefferson County such as the Farm-City tour.

Al and Desiree are both very much involved in the operation of the
dairy and community affairs.

3. THE OLYMPIAN AWARD - Sponsored by the Florida Bankers Association.
Each year, this award recognizes a dairyman that has made significant
progress and/or contributions to the dairy industry, is progressive in
management concepts and facilities, is involved in community and
association activities and supportive of Extension programs. Such is
the case for Mr. Kent Bowen who serves as president of McArthur Farms,
Inc.

McArthur Farms is presently a family corporation, having been formed
about 61 years ago in Broward County by Gene McArthur. The dairy moved
to Okeechobee in the late 1950’s. The original dairy is now located
on 5 farms and houses 9,000 lactating and dry cows and an additional
6000 replacements.

Upon graduation from Purdue University in 1958 with honors in the
Agriculture Economics Department, Kent Bowen served a hitch in the
U.S. Army as First Lieutenant. Afterwards, he was employed by Central
Soya Co., as a feed salesman and grain merchant. Other positions held
include managing a country elevator and feed mill at Bowen Feed and
Grain, working as a feed sales manager at Illinois Cereal Mills, and
in 1968 moving to Okeechobee as a sales manager at Syfret Feed Mills.
Seven months later and during the same year, Mr. Bowen accepted a
position at Charles McArthur Dairies.

In 1974, Mr. Bowen accepted a position at McArthur Farms, Inc., after
having served 6 years as Executive Vice President at Charles McArthur
Dairies.

Since 1974, Mr. Kent Bowen has served as president of McArthur Farms,
Inc. In addition to the duties at the dairy, Mr. Bowen serves as
president of Dairy Feeds, Inc.; president of Producers Meat Packing
Cooperative; he serves on the executive committee and is a director of
Florida Dairy Farmers Association; serves on the board of directors of
DFI; serves on the University of Florida Dairy Science Advisory
Committee and is a member of the Florida Dairy Hall of Fame.
Additional responsibilities include serving on 9 other important
committees involving dairy, beef and citrus industry organizations.
As an example, in the early 70’s he was appointed by Commissioner Doyle
Conner to the state Brucellosis Dairy Advisory Committee and later to
USDA’s Blue Ribbon Committee for brucellosis. His involvement in
environmental issues includes having served on Lake Okeechobee’s
Technical Advisory Committee and the Ad Hoc Committee for the Kissimmee
River Coordinating Council as well as the committee for developing the
dairy rule on environmental regulations.
4. **DAIRY SCIENCE SENIOR AWARD** - Florida Dairy Princess, Sarita Henderson presented the Outstanding Dairy Science Senior Award to Chad Mayo at the 27th Annual Florida Dairy Production Conference Banquet. This award is sponsored by Dairy Farmers, Inc., and recognizes the strong leadership that Chad has demonstrated during his undergraduate study in Dairy Science. In addition to his Dairy Science Club activities, Chad has been active in Alpha Gamma Rho fraternity and Agricultural Student Council. Upon completing his degree, Chad plans to return to the H and C Dairy Farm located in Lakeland. He began working at the dairy while attending Plant City High School and looks forward to a challenging and rewarding career in dairy management.

5. **PDCA AWARDS** -
   a. IFAS Award - Mr. Terry Courneya, County Extension Director from Lake County.
   b. Special Award - Mr. Danny Yant, Florida Representative for VA/NC Select Sires.
   c. Posthumous Award - Mr. W. A. Boutwell (1883-1982) was recognized by the Florida Purebred Dairy Cattle Association for his many contributions to the Florida dairy industry. The Award was accepted by his son and daughter-in-law, George and Mable Boutwell.
TOP DHIA HERD RECOGNITION
1990 DAIRY PRODUCTION CONFERENCE

DIVISION I - UNDER 500 COWS

<table>
<thead>
<tr>
<th>HERD</th>
<th>LOCATION</th>
<th>NO. COWS</th>
<th>MILK</th>
<th>FAT</th>
<th>PROTEIN</th>
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<tbody>
<tr>
<td>*Condale Farms</td>
<td>Anthony</td>
<td>286</td>
<td>21,602</td>
<td>683</td>
<td>628</td>
</tr>
<tr>
<td>*Eicher Dairy</td>
<td>Walnut Hill</td>
<td>95</td>
<td>20,975</td>
<td>721</td>
<td>660</td>
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<tr>
<td>*Hidden Hammock Holsteins</td>
<td>Summerfield</td>
<td>192</td>
<td>20,537</td>
<td>694</td>
<td>624</td>
</tr>
<tr>
<td>*Estal &amp; Wanda Mattox</td>
<td>Graceville</td>
<td>57</td>
<td>20,465</td>
<td>676</td>
<td>644</td>
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<tr>
<td>*VanWagner Dairy</td>
<td>Sparr</td>
<td>366</td>
<td>20,164</td>
<td>690</td>
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<td>*Working Cows Dairy</td>
<td>Grand Ridge</td>
<td>128</td>
<td>20,012</td>
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DIVISION II - 500 TO 1000 COWS

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<th>HERD</th>
<th>LOCATION</th>
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<th>MILK</th>
<th>FAT</th>
<th>PROTEIN</th>
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<tr>
<td>*Oaklane Dairy #2</td>
<td>Alachua</td>
<td>683</td>
<td>19,491</td>
<td>717</td>
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<td>*PineValley Dairy, Inc.</td>
<td>Lakeland</td>
<td>684</td>
<td>19,467</td>
<td>657</td>
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<tr>
<td>*Mecklenburg Farm</td>
<td>Jacksonville</td>
<td>709</td>
<td>19,150</td>
<td>699</td>
<td>597</td>
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<td>*Trinity Dairy</td>
<td>Brooksville</td>
<td>611</td>
<td>18,142</td>
<td>MO</td>
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<td>*Wolff Brothers Dairy, Inc.</td>
<td>Okeechobee</td>
<td>615</td>
<td>17,949</td>
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DIVISION III - OVER 1000 COWS

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<th>HERD</th>
<th>LOCATION</th>
<th>NO. COWS</th>
<th>MILK</th>
<th>FAT</th>
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<tr>
<td>*L A D Dairy Farm</td>
<td>Greenville</td>
<td>1,025</td>
<td>20,508</td>
<td>761</td>
<td>654</td>
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<tr>
<td>*Levy County Dairy</td>
<td>Chiefland</td>
<td>1,638</td>
<td>19,309</td>
<td>698</td>
<td>593</td>
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<tr>
<td>*North Florida Holsteins</td>
<td>Bell</td>
<td>1,894</td>
<td>18,704</td>
<td>660</td>
<td>589</td>
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<tr>
<td>*Perret's Dairy, Inc.</td>
<td>Callahan</td>
<td>1,252</td>
<td>18,344</td>
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<tr>
<td>*GenFarm III Ltd</td>
<td>Bell</td>
<td>2,095</td>
<td>17,777</td>
<td>697</td>
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Production data from DHI test year ending September 30, 1989.

* All or part of herd milk 3X.
Top Three Honor Roll Awardees were:

a. Small herd division (less than 200 cows) - River Dairy, George White, DeLand, Florida, 80 cows.

b. Medium herd division (200-499 cows) - Thomas Brothers Dairy, Edward and Lester Thomas, Mayo, Florida, 390 cows.

c. Large herd division (greater than 500 cows) - Turnpike Dairy, James E. Legg, Palm City, Florida, 650 cows.

Other herds receiving Honor Roll Certificates:

12 Months

Larry H. Crosby
Branchland Dairy
PO Box 175
Dade City, FL 33516

Frank Denham &
Carl Sheffield
D & S Dairy
4700 NW 16th Place
Gainesville, FL 32601

John L. Cloyd
J. S. Cloyd Dairy
Route 1, Box 84
Jasper, FL 32052

W. L. Commander
Commander Dairy
PO Box 38
Westville, FL 32464

G. E. Toms
Graham Company No. 1
PO Box 41
Moore Haven, FL 33471

Louis Larson
Larson Dairy #7
PO Box 1242
Okeechobee, FL 33473

Ted Cummings
Cummings Dairy
6907 Simmons Loop
Riverview, FL 33569

Charlie Harris
Harris Holsteins
Route 3 Box 122
Mayo, FL 32066

24 Months

Norm Nickerson
Bellview Dairy
12835 SE Hwy. 301
Bellview, FL 32620

Mike & Cindy Reagan
Rolling Hills of Pasco Co.
1062 Covington Rd.
Dade City, FL 33525

Jean McArthur Davis
McArthur Farms, Inc. #3
1550 NW 208th St.
Okeechobee, FL 33472

Wayne Lee
Lee Dairy
Route 1, Box 173 F
Chipley, FL 32428

Robin Bowie
Shoe String Dairy
11855 V C Johnson Rd.
Jacksonville, FL 32218

Steve Shiver
Mill Creek Dairy
Route 1, Box 475
Mayo, FL 32066

Ray Melear
Ray Melear Dairy Inc.
Route 5, Box 1890
Okeechobee, FL 33474

Raymond C. Melear
Stoane-Ray Dairy
5200 Highway 98 North
Okeechobee, FL 34972

Doug Morris
Morris Dairy Farm
Route 1, Box 248
O'Brien, FL 32071
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<th>Name</th>
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<tr>
<td>Rex Fish</td>
<td>Rex Fish Dairy, Route 2, Box 265, Glen St. Mary, FL 32040</td>
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<tr>
<td>Edward &amp; Lester Thomas</td>
<td>Thomas Bros. Dairy, Route 1, Box 358, Mayo, FL 32066</td>
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<tr>
<td>Joe Walden</td>
<td>Walden Dairy, 4312 N. Cork Rd., Plant City, FL 33566</td>
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<td>Collie &amp; Steve Mattox</td>
<td>Shamrock Dairy, Route 1, Box 269B, Chipley, FL 32428</td>
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<td>O. W. Goolsby</td>
<td>Triple G. Dairy, 1939 S. E. Lakeview, Sebring, FL 33870</td>
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<td>Sam R. Wright</td>
<td>Wisteria Dairy, 2899 Wisteria Farm Rd., Green Cove Springs, FL 32043</td>
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<td>Clifton O. Shiver</td>
<td>Shiver's Dairy Farm Inc, Route 1, Box 474, Mayo, FL 32066</td>
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**36 Months**

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<td>Arndt Dairy, Route 1, Box 178, High Springs, FL 32643</td>
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<td>R. L. Price, Jr.</td>
<td>R. L. Price Dairy, Route 1, Box 7, Grand Ridge, FL 32442</td>
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<tr>
<td>Jim Henderson</td>
<td>Shenandoah Dairy, Route 8, Box 153, Live Oak, FL 32060</td>
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**48 Months**

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<tr>
<td>Jean McArthur Davis</td>
<td>McArthur Farms Inc. #5, 1550 NW 208th St., Okeechobee, FL 33472</td>
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**60 Months**

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<td>G. E. Toms</td>
<td>Graham Company #2, PO Box 1108, Moore Haven, FL 33471</td>
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**72 Months**

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<tr>
<td>J. O. &amp; Everett Kerby</td>
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**96 Months**

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<tr>
<td>James E. Legg</td>
<td>Trunpike Dairy, PO Box 385, Palm City, FL 34990-0385</td>
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**156 Months**

<table>
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<tr>
<th>Name</th>
<th>Address</th>
<th>Other Information</th>
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<tr>
<td>Wallace Eicher</td>
<td>Eicher's Dairy, Route 1, Box 175, McDavid, FL 32568</td>
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**180 Months**

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<th>Name</th>
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<tr>
<td>Mrs. Max Brantley</td>
<td>Brantley's Dairy, 3825 Turtle Mound Rd., Melbourne, FL 32905</td>
<td></td>
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<tr>
<td>George White</td>
<td>River Dairy, 2642 Flowing Well Rd., DeLand, FL 32720</td>
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</table>
SPONSORING ORGANIZATIONS

Milk and Coffee Breaks:

US Sugar Corporation
Monsanto Company

Wednesday Lunches:

North Florida Farm Credit Service

COMPANIES HAVING EXHIBIT TABLES

Ag. Bag Corp. of Florida
Lemuel E. "Book" Cunningham
7000 W. 7 Rivers Drive
Crystal River, FL 32629

Agri Dynamics, Inc
Mr. Jerry Brunetti
PO Box 318
Martins Creek, PA 18063

Albers Manufacturing, Inc.
Simon Van Beek
PO Box 222
Fruitland Park, FL 34731

Alltech, Inc.
Mr. Bill Cheek
3031 Catnip Hill Pike
Nicholasville, KY 40356

American Breeders Service
Rodney Moore
2463 Heritage Village-101
Snellville, GA 30276

American Cyanamid Company
Tommy Martin
104 Lake Otis Road SE
Winter Haven, FL 33884

Balanced Energy Co.
Ted Kuntz
PO Box 949
Clinton, IA 52732

Black Gold Compost Co.
Bob Lange
Rt. 1 Box 38C
Oxford, FL 32684

Carolina By-products
Ray Alberty
P. O. Drawer 20687
Greensboro, NC 27420

Chr. Hansens Laboratory, Inc.
Jane Allman
9015 W. Maple Street
Milwaukee, WI 53214

Church & Dwight
Randy Cawood
Rt. 2, Box 144A
Abbeville, SC 29620

Controls & Weighing Systems, Inc.
Steve Wooten
P. O. Box 549
Brandon, FL 33511
Donovan Enterprises, Inc.
Max Owens
2951 SE Dominica Terr.
Stuart, FL 33497

Elanco
Larry Howard
202 Sunnymead Drive
Valdosta, GA 31602

Farm Credit Service
Charles Thompson
PO Box 909
Alachua, FL 32615

Federated Genetics
Les Anderson
1581 Apollo Dr.
Lancaster, PA 17601

Florida DHIA Board, Inc.
Dan Webb/Don Shaw
701 IFAS
Gainesville, FL 32611-0701

Fogleman Welding & Fabrication Works, Inc.
Boyd C. Fogleman
2170 Herron Road
Whitsett, NC 27377

Franklin Laboratories
David G. Buckman
4040 Chelsea Lane
Lakeland, FL 33809

Furst McNess Co.
James E. Troncin
120 E. Clark St.
Freeport, IL 61032

Germania Dairy Automation
Tommy Lynn
385 SW 60th Ave.
Ocala, FL 32674

Gold Kist, Inc.
Mr. Mike Taylor
PO Box 340
Valdosta, GA 31601

Holstein Association
Robert L. Cain
Box 565
Shelbyville, KY 40066

Kentucky Dept. of Agriculture
Barney Hornback
63 Wilkinson Blvd.
Frankfort, KY 40601

Lakeland Cash Feed Co.
Dr. James D. Chapman
P. O. Box 24868
Lakeland, FL 33802-4868

Life Services
Tommy Lynn
385 SW 60th Ave.
Ocala, FL 32674

M & M Supply Company of Florida
Roger Abbott
P. O. Box 248
Thonotosassa, FL 33592

M.R.B., Inc.
Jim Waits
P. O. Box 1347
Zephyrhills, FL 33539
Meadowlake Farms
Troy Orwig
R. R. #1
Vermont, IL 61484

Monsanto Company
Steve Coop
Rt. 1 Box 38C
Mt. Dora, FL 32757

MSD AGVET, Division of Merck & Co.,
Tony Aquilino
12329 Areaca Dr.
West Palm Beach, FL 33414

NOBA, Inc.
Walter Oelfke
PO Box 607
Tiffin, OH 44883

Norden Laboratories
Mr. Kurt Piepenbrink
1507 Desoto Ave., Rm. 13
Tampa, FL 33606

Parallel Milking Parlors, Inc.
Colleen DeJong
23430 High Bridge Rd.
Monroe, WA 98272

Paul Mueller Company
Tommy Lynn
385 SW 60th Ave.
Ocala, FL 32674

Pine Point Construction
Co., Inc.
Edwin H. Pedrick
1001 East Screven St.
Quitman, GA 31643

Southeastern LTM
Mike James
Rt-1 Box 64B
Gallant, AL 35972

Tenneco Co.
c/o Bernie Haskins
PO Box 1330
Alachua, FL 32615

Tico Manufacturing, Inc.
David Degrass
1105 3rd St. N E Box 1158
Ruskin, FL 33570

U.S. Sugar Corporation
Bill Gober and John Black
PO Drawer 1207
Clewiston, FL 33440

The UpJohn Company
Tom Holloway
2626 Handley Blvd.
Lakeland, FL 33803

VA/NC Select Sires
Danny Yant
1428 Rosecrane Lane
Green Cove Springs, FL 32043

Westfalia Systemat
Jim Abercrombie
1862 Brummel Drive
Elk Grove Village, IL 60007
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J. Woeste, Dean, Cooperative Extension Service, University of Florida, Gainesville.

D. Wolfenson, visiting Professor from Israel, University of Florida, Gainesville.

G. L. Zachariah, Vice President for Agricultural Affairs, University of Florida, Gainesville.