

EDUCATIONAL DIRECTOR
Dr. Howard "Jack" Rollins
1290 Cherry Valley Road
Gilford, NH 03246

(603) 293-0008 (office)
(603) 293-0008 (home)
(603) 293-2638 (FAX)

BUSINESS DIRECTOR
Charles J. Ax, Jr.
14 South Main Street
Middleburg, PA 17842

(office) (717) 837-1551
(home) (717) 539-8300
(FAX) (717) 837-0090

COMPACT NEWS

A Periodic Newsletter of the International Dwarf Fruit Tree Association

No. 1

April 1991

A MESSAGE FROM THE EDUCATIONAL DIRECTOR

The 34th Annual Conference held in Grand Rapids, Michigan, Feb. 24-29 is now history and efforts are under way to get the proceedings, "Compact Tree Fruit" written, published and out to all members.

The summer tour is to be held in Western North Carolina: June 9-11, and detailed plans have been well developed. Be sure to read the description of the tour that is included "later" in this issue of "Compact News". Dick Unrath, Eric Young and Mike Parker have done an excellent job of developing the total program. It will be important to get registrations in early to help our hosts with bus, meal, and lodging commitments.

The 35th Annual Conference is scheduled to be held in Niagra Falls, Feb. 23-27, 1992. We are working on the program plans now and I would appreciate you sending me any suggestions for a conference theme, speakers, and any other ideas you may have.

H.A. (Jack) Rollins, Jr.

Rootstock Research

The IDFTA Board of Directors report that modest monies are becoming available and are being reserved in a separate account restricted for the support of appropriate research proposals.

In late summer we will include in "Compact News" a proposal form with guidelines for submission. All proposals will then be sent to members of the rootstock research committee for review and evaluation. The committee will meet at the annual conference in Niagra Falls and recommend the distribution of the monies allocated by the Board.

Efforts are also underway to identify sources and initiate programs to generate increasing funds for research. •

Also in this issue of Compact News . . .

• • • • •

34TH ANNUAL CONFERENCE NOTES

An overview of the events and discussions from year's spectacular convention.

• • • • •

THE NORTH CAROLINA APPLE INDUSTRY AND SUMMER TOUR PLANS

Background on the location of this year's summer tour. Tour destinations, information and more! Be sure to fill out and send in your Summer Tour Registration form. Do it today!

34th Annual Conference Notes

.....

***"The farmer
must make
up his mind
and be
convinced
of his ability
to manage
the density
he chooses.
But one
thing is sure:
Not less
than 1000
trees/acre."***

KURT WERTH

.....

Due to illness in his family, Dan Neuteboom was unable to attend and speak at the conference. In his place, Bruce Barritt, Horticulturist at the Tree and Fruit Research and Extension Center, Wenatchee, Washington, adjusted his schedule to attend and present two talks: "The HYTEC Orchard System for Apples" and "Choosing the Components of an Orchard System."

In discussing HYTEC, Bruce reviewed a design to balance and maximize the efficient use of available sunlight with a canopy density to achieve high yields of quality fruit. In his discussions, he also stressed the importance of each orchardist carefully evaluating all components of an orchard system individually and how they may be integrated under his or her conditions. A total orchard system that may be successful for one grower with one set of conditions may not be the best system for another.

Kurt Werth, with the South Tyrolean Extension Service for Fruit and Winegrowing in Neumarkt, Italy, reviewed the trends and changes that are taking place in Europe with respect to acreage and production, new varieties, and planting densities in his first talk.

He discussed the "Economics of Very High Density Plantings" in a second talk.

Kurt reported that in South Tyrol they have not recommended that producers select the extremely intensive plantings until now. They are, however, now encouraging farmers to experiment with such plantings on small plots. Kurt commented that "It's good to be progressive, even to risk, but not life and limb."

He, in concluding comments, summarized his presentation with the following:

"The farmer must make up his mind and be convinced of his ability to manage the density he chooses. But one thing is sure: Not less than 1000 trees/acre.

We base this conclusion on the basis of experience with High Density Plantings.

-
- WITH LESS PRUNING YOU GET CALMER TREES
-
- CALMER TREES ARE MORE PRODUCTIVE
-
- PRODUCTIVE TREES CAN BE PLANTED MORE CLOSELY
-
- CLOSER PLANTING LEADS TO HIGHER INCOME."
-

34th Annual Conference Notes . . . continued

This year the "Robert F. Carlson Distinguished Lecture" was presented by Roy Rom of the University of Arkansas. He titled his presentation: "Looking Inside the Compact Tree." Roy reviewed the evolution and emergence of the smaller than standard tree. He further reviewed the current fundamental knowledge of those physiological factors within the tree that influence its tree size and other characteristics. His paper will be published in Volume 24 of Compact Fruit Tree and will provide an excellent reference.

In addition to presentations made by a number of researchers and extension educators reporting on new findings and observations several growers, including Jim Chase, Steve Blizzard, Brian Putney,

Mike Rash, Mike Wittenbach, Darrell Oaks, Mitch Lynd and Harold Thome, made talks reflecting on their observations and experiences with high density plantings including concerns as well as mistakes made.

The final day of the conference was devoted to tours of a number of Michigan orchards. In spite of the cold weather, growers did an excellent job of showing and telling what their objectives had been and what they had done to satisfy those objectives.

The 34th IDFTA Annual Conference provided those in attendance with much food for thought and the proceedings, "Compact Fruit Tree" will provide valuable information and ideas for all members. •

.....

***"This year
the "Robert
F. Carlson
Distinguished
Lecture" was
presented
by Roy Rom
of the
University
of Arkansas.***

.....



The North Carolina Apple Industry and Summer Tour Plans

*Dick Unrath and Eric Young
Department of Horticultural Science
North Carolina State University
Raleigh, NC 27695*

The topography of NC can be described as an east to west climb from sea level to the Blue Ridge Mountains, which includes the highest point east of the Mississippi River (Mt. Mitchell, 6684). North Carolina's apple industry is primarily located on the slopes of the Blue Ridge Mountain range and is concentrated at elevations from 1000' to 3500'. The largest apple-producing county is Henderson County which is located south of Asheville and astride the eastern continental divide.

North Carolina began serious commercial apple production in the late 1950s and really came into its own with the development of high coloring 'Red Delicious' sports in the 1960s. We experienced rapid growth and relatively high profits in the 1970s because we were the first to begin harvest each fall and essentially had the early fresh market to ourselves. The events of the 1980s took the

NC growers down off "cloud 9." The impact of world apple competition, higher quality expectations of consumers, the loss of 2,4,5-TP, the Alar fiasco, frost/freeze crop losses 8 or 10 years, and Hurricane Hugo all contributed to reduced profits and capital investments. '70s profit margin produced

little impetus for grower interest in dwarfing, high density orchards or cultivar diversification, thus there was little substantive dwarfing rootstock evaluation in NC prior to 1980. The profit squeeze of the '80s have made growers very reluctant to begin renovation and commitment to high density



NC Apple Industry/Summer Tour. . . *continued*

intensive orchards systems. After the '70s high profits, most NC growers are only now understanding and accepting the full impact of the '80s events.

As a result, NC apple acreage has shrunk by 20-25% (down to nearly 15,000 acres), with 'Red Delicious' being the big loser. Some of the lost acreage was marginal but the rest has been a reaction to lost chemical uses, poor fruit quality and low profit levels.

NC has approximately 35 storage facilities with up to 2.5 million bushel capacity, only 2 are CA capable and none are currently being used for CA.

Currently, our highest quality, most productive orchards are those with 200-300 trees/acre on semi-vigorous, free-standing rootstocks, central leader trained. However, tree numbers will likely increase as future orchard density will more than compensate for any further acreage losses.

Present acreage is approximately divided: 38% 'Reds', 32% 'Goldens', 20% 'Romes', 5% 'Stayman' and 5% other. Growers are searching for new alternative cultivars which are adapted to our climate and with green, yellow or blush color as opposed to full red, and preferably earlier maturity.

Our industry is moving toward

more direct grower marketing. Making this shift will in itself promote cultivar diversity and a more pedestrian approach to orchard management.

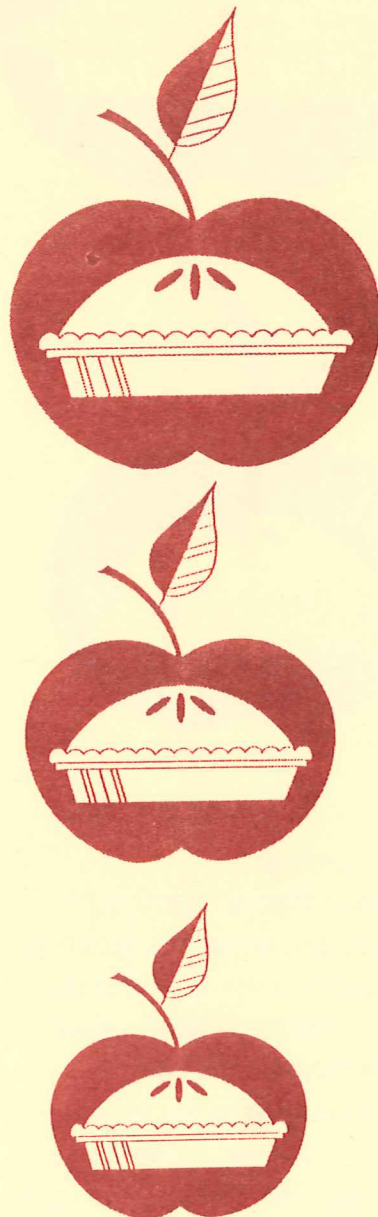
North Carolina has several strong factors fueling this marketing shift, including: good population centers, rapid population growth, a high

summer vacation resident population and excellent travel and tourism exposure generated by the ocean beaches and mountain topography. By the year 2000 tourism is expected to surpass agriculture as NC's number one industry.

Western North Carolina allures Blue Ridge Parkway visitors, Florida retirees escaping to cooler summers, fall color spectacle visitors, and a large number of state and national park visitors.

Considering the drastic shift in profitability in the last 10 years, NC's apple industry is alive and has weathered the storm surprisingly well, primarily because of good processing demand and prices in recent years.

However, partly because of terrain and climate and partly because of lack of experience, our growers are not yet convinced that the most profitable orchard management systems are necessarily the highest density systems. Most growers are now genuinely aware that significant additional changes will be required in management intensity, production efficiency, quality cultivar and marketing if they are to remain profitable and they are beginning to plan for and make some of these changes.



NC Apple Industry/Summer Tour. . . *continued*

Summer Tour Plans

The 1991 IDFTA Summer Tour will be held in the beautiful mountain orchard country of Western North Carolina.

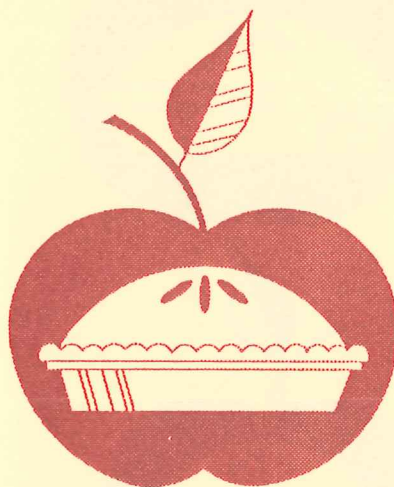
This is your chance to see an apple industry in transition; from big, old standards trees in low density orchards to medium and high density plantings on size-controlling rootstocks; from 'Starkrimson Delicious' to new, high demand varieties; and from 'rush the early market' selling to diverse marketing strategies through many outlets.

The North Carolina apple industry is a unique entity, it grew up fast and furious, and now it's maturing and stabilizing.

The 1991 IDFTA Summer Tour is an opportunity to have a glimpse of the sixth largest apple-producing area in the U.S.

The tour will kick off with a social mixer Sunday evening at tour headquarters, the Radisson Inn-on-the-Plaza Hotel in Downtown Asheville. A buffet dinner will follow with an orientation program which will introduce the Western North Carolina apple industry and provide highlights of the tour.

To close the evening, all tour participants will be invited to give an informal crop report, comments, and/or share slides



from other fruit tours on their own operation.

Early Monday morning the deluxe tour buses will depart for Henderson County, where over half of North Carolina's apple production occurs.

Orchards to be toured are the Ken Justus Orchard, Billy McKay Orchard, and Greg Nix Orchard.

Tour Highlights

Tour highlights include:

- productive central leader blocks of Red and Golden Delicious, Stayman, Rome, and Granny Smith on seedling, MM.111, MM.106, and M.7a rootstocks;
- young blocks of several varieties on Mark rootstock trained to a modified central leader or slender spindle; wind machines for frost/freezing protection and slender spindle training technique trials.

Mid-afternoon the tour will arrive at the Mountain Horticultural Crops Research and Extension Center, Fletcher, NC.

Participants will be welcomed and hear an overview of station facilities, including the two-year-old, multi-million dollar research and extension building. North Carolina State University Pomologists will be on hand to conduct tours of the apple research plots on the station including:

- the 1984 NC-140 apple rootstock trial;
- 1990 NC-140 apple systems trial;
- ground cover/rootstock interaction trials;

NC Apple Industry/Summer Tour. . . *continued*

- a large block of Red and Golden Delicious on Mark rootstock with various apple replant treatments;
- and high density slender spindle and modified central leader trials with Mark rootstock.

After returning to the Radisson and a chance to freshen up, we'll meet in the hotel lobby for a short walk to dinner and entertainment at Bill Stanley's Bluegrass and Barbecue.

You'll experience a true taste of Western North Carolina.

Dinner will feature an authentic North Carolina barbecue buffet and salad bar, with barbecued chicken, Southern fried chicken, and barbecued pork.

Entertainment will be provided by a live band playing a wide selection of mountain music typical of Western North Carolina.

In addition, a group of Mountain Cloggers will perform dances that are uniquely North Carolinian. A cash bar will also be open with beer, wine, and mixed drinks available.

• • • • •

The second day will begin as the buses depart for Wilkes County, another large apple production area with unique 'thermal belts' running along

the mountain ridges which allow peach and nectarine production as well as apple.

Orchards to be toured are:

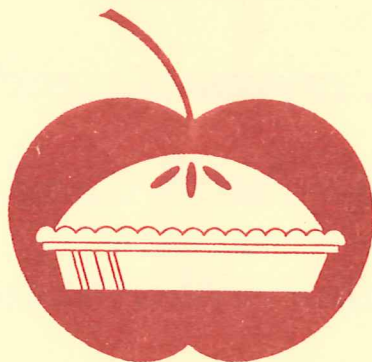
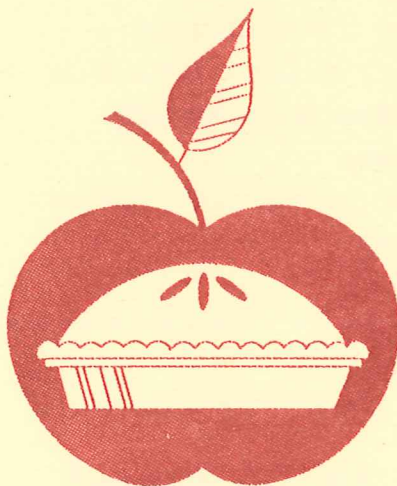
- the Perry (Ty) Lowe, III Orchard,
- Dwight Baity Orchard,
- and Gary Morrell Orchard.

Tour highlights include:

- productive central leader blocks of Red and Golden Delicious, Stayman, and Rome on seedling, MM.111, MM.106, and M.7a rootstocks;
- young plantings on M.26, M.9, and Mark being trained as slender spindle;
- a new block on Mark being trained as Tatura trellis and V-spindle, the first of their kind in North Carolina;
- IPM pest and weather monitoring equipment;
- young plantings of newer varieties such as Gala and Fuji;
- and nectarines trained as open center and central leader.

Our tour buses will then travel west to MacRae Meadows at the base of majestic Grandfather Mountain in Linville, NC, where we'll enjoy a delicious dinner with your choice of ribeye steak, stuffed mountain trout, or fried chicken and all the trimmings served in the shadow of Grandfather Mountain.

Weather permitting, shuttle buses will be available to transport you to the top of Grandfather Mountain for



NC Apple Industry/Summer Tour. . . *continued*

Our tour buses will then travel west to MacRae Meadows at the base of majestic Grandfather Mountain in Linville, NC, where we'll enjoy a delicious dinner with your choice of ribeye steak, stuffed mountain trout, or fried chicken and all the trimmings served in the shadow of Grandfather Mountain.

Weather permitting, shuttle buses will be available to transport you to the top of Grandfather Mountain for

spectacular panoramic views of surrounding mountains and valleys.

For the adventuresome soul, an exciting trip across the famous mile-high suspension foot bridge will yield an experience you won't soon forget.

The tour will close with a scenic trip back to Asheville via the magnificent Blue Ridge Parkway.

Highlights along the Parkway include:

- a portion of the highway suspended above the mountain side to avoid disruption of natural habitats;
- Mt. Mitchell, the highest elevation along the parkway and the highest peak in the Eastern United States;
- numerous vistas overlooking the lower elevations south of the Blue Ridge Crest;
- and, hopefully, a beautiful sunset behind the Southern Appalachian Mountains.



*You're invited
to learn, experience, and enjoy
all that North Carolina
mountain orchard country
has to offer
on the 1991 IDFTA Summer Tour.*

For more information contact:
Drs. Dick Unrath (704) 684-3562, Mike Parker (919) 737-3322,
or Eric Young (919) 737-3166.

REGISTRATION FORM

IDFTA SUMMER TOUR
Western North Carolina, June 9 -- 11

REGISTRATION AND PAYMENT DUE BY MAY 1

NAME: _____ /SPOUSE _____

ADDRESS: _____

Street/Box Number

City

State and Zip

Phone

TOUR REGISTRATION

Orientation Banquet ----- No. Attending _____ x \$20.00 ea = cost: _____

Monday Orchard Tour ----- No. Attending _____ x \$50.00 ea = cost: _____
includes: bus, box lunch and dinner and entertainment at Bill Stanley's

Bill Stanley's Dinner and Entertainment Ticket:

Adult ----- No. Attending _____ x \$20.00 ea = cost: _____

Children (12-18, under 12 free) ----- No. Attending _____ x \$15.00 ea = cost: _____

Tuesday Orchard Tour ----- No. Attending _____ x \$50.00 ea = cost: _____
includes: bus, box lunch and dinner and sightseeing at Grandfather Mtn.

TOTAL ENCLOSED (all tour events must be prepaid with registration) ----- Total: _____

HOTEL REGISTRATION

**Radisson Inn-on-the-Plaza
Asheville, NC**

Date of Arrival _____ Date of Departure _____

Room type: Single _____ No. of Rooms _____ x \$50/night = cost: _____

Double _____ No. of Rooms _____ x \$50/night = cost: _____

Name of Person sharing room: _____

TOTAL ENCLOSED (one night's deposit is required for each room) ----- Total: _____

NOTE: Room rates only available when reservations made with this form.

I will be making my own arrangements for accommodations _____.

There will be other motels/hotels in the area, but due to the high tourist travel, space is limited and early reservations are recommended. Also, there are many fine campgrounds near Asheville.

Make checks payable to: **NCSU/IDFTA Tour**, and mail to: **Ms. Ann Green, Department of Horticultural Science, Box 7609, NCSU, Raleigh, NC 27695** by **MAY 1**.

Late registrations will be accepted on a "space available" basis only.



CONFERENCE BULLETIN

34th Annual IDFTA Conference • February 24-27, 1991 • Grand Rapids, Michigan

I D F T A I D F T A I D F T A I D F T A I D F T A

☆ Well, it's that time again... preparations for another exciting, information-filled IDFTA Conference are under way; and your attendance is essential to a success!

The city of Grand Rapids, Michigan, will host our conference February 24-27, 1991, and a host of professional educational experts are scheduled to speak on a variety of innovative and informative subjects.

The Conference will be held in the Amway Grand Plaza Hotel, Grand Rapids, Michigan. The Amway Grand Plaza is a standard by which you rate other hotels. It is western Michigan's largest and most complete hotel/convention complex. It features nine award-winning restaurants and lounges and houses 682 rooms.

The Amway Grand Plaza, located on the Grand River, is within easy walking distance of the Gerald Ford Museum.

**Register NOW
for this year's
exciting
conference!**

A block of rooms has been reserved for the IDFTA, but your prompt response in making reservations will be necessary to ensure that you have a room. The rooms are being held until

January 31, 1991, at which time the reserved block will be released. Thereafter reservations will be based upon availability.

Special convention rates have been arranged and are as follows:

Single - \$76.00	Triple (2 beds) - \$89.00
Double - \$76.00	Quad (4 people, 2 beds) - \$102.00

Room reservations are to be made directly with the Amway Grand Plaza. The phone numbers for reservations are:

1-616-774-2000; In Michigan 1-800-632-6120

Nationwide 1-800-253-3590

Fax 1-616-776-6489

We're in a jam! PLEASE HELP US!

YES, WE'RE IN A JAM. You should have received this information before now. However, circumstances prevented earlier distribution.

PLEASE HELP US!! REDUCE OUR STRESS!! If you already made your decision to join us in Michigan, return your registration TODAY. If you are just now considering it, return your registration TOMORROW.

We realize that such a request may be somewhat inconvenient. On the other hand, the sooner we receive the registrations, the sooner we can complete the arrangements for meals, busses, etc.

Thank you for your cooperation.



A Message from the Educational Director ° · ☆ ☆

The 34th Annual IDFTA Conference plans are reaching completion and tentative details are enclosed. While the program of present speakers is included, there will be additional speakers once their acceptance and travel arrangements are confirmed.

The emphasis of the program will concentrate on the interest of creative and progressive tree fruit producers in smaller than standard trees. It will also focus on management systems necessary to obtain economic benefits from high density tree fruit plantings.

Early IDFTA Conferences were held in Hartford, Michigan and then later in Grand Rapids. In recent years, annual conferences have been held in other US and Canadian tree fruit producing regions. The upcoming annual conference is scheduled for February 24-27, 1991 in Grand Rapids, Michigan. In many ways, the 34th Conference can be considered as "coming back home."

The transition to smaller than standard apple rootstocks

continues to be an important phase of the association's annual conferences. However, it is recognized that the rootstock is only one component in the total transition. The 1991 annual conference will also place influence on training systems and other management considerations in the commercial production of high density tree fruit systems.

Steve Blizzard will present two lectures at the 34th Conference. As usual, he can be expected to broaden and stimulate your thinking.

I am established in my new office in Gilford, NH (on Route 11A near the Gunstock Recreation Area and Laconia, NH) Address: Dr. Howard "Jack" Rollins, 1290 Cherry Valley Road, Gilford, NH 03246. My home and office telephone number is 1-603-293-0008. My fax number is 1-603-293-2638. Come see us.

Finally, note the announcement below of the availability of a new Slender Spindle pruning publication.

• *An Important Publication* •

Don't pass this one up.

PRUNING THE SLENDER SPINDLE

by Herman Obenhoffer

A new well written and illustrated publication has been printed and a limited supply is now available. **Pruning the Slender Spindle** was authored by Herman Obenhoffer who is with the Advisory Service and located in Lana, Italy.

It has been translated into English by the B.C. government, printed and made available to B.C. fruit growers. A limited surplus of copies was printed and can be obtained by sending a money order of \$5.00 Canadian money to:

Minister of Finance
Spindle
1873 Spall Road
Kelowna, B.C. V1Y4R2

This publication provides a down-to-earth, hands-on, detailed description with pictures on how to develop, handle, and follow through with the establishment of a productive, high density, slender spindle apple planting. Growers interested in such plantings will find this publication a valuable manual and reference.

ROY ROM TO PRESENT ANNUAL ROBERT F. CARLSON LECTURE

Dr. Roy C. Rom will present the Robert F. Carlson Distinguished Lecture at the 34th Annual Conference.

Roy was born and raised in Milwaukee, Wisconsin and received B.S. and PhD degrees from the University of Wisconsin.

Prior to returning to the University of Wisconsin for his graduate education program, Roy was a coach/instructor for the sculling crew at Yale University. While in Connecticut, he purchased a small farm with blueberry production in mind. A highway project condemned and bought the land however, before any production ever occurred at his first horticultural enterprise.

The focus of Roy's professional career continues at the University of Arkansas where he began in 1958. In addition to being an avid Razorback athletic fan, he has been widely recognized as a researcher and a teacher

(Gamma Sigma Delta Outstanding Teacher Award recipient in 1970).

His research emphasis continues to be in the area of Tree Fruit Physiology. Roy is co-editor of the book *Rootstocks For Fruit Crops* which has been translated into several languages. The royalties from the sale of this book have been donated to IDFTA for the support of Dwarf Fruit Tree Research.

Roy purchased a 10-acre farm in 1965 in Northwest Arkansas and in 1969 opened a roadside market and pick-your-own operation which he refers to as a "weekend hobby."

On Monday, February 25, his lecture entitled, "Looking Inside the Compact Tree," will concentrate on research and observations on the known and the unknown about the fundamental growth influencing factors within the tree.

Overseas speakers to share a wealth of information and experience at the 34th Annual IDFTA Conference

Two European speakers, Dan Neuteboom from England and Kurt Werth from Italy will be among the featured participants at the 34th Annual Conference.

Dan Neuteboom is an English fruit grower.

He received four years of formal horticultural education in Holland and gained two years of practical experience in Western European orchards before returning to England to start a seven acre tree fruit planting.

The orchard gradually was expanded to a 200-acre one-half-million-tree high density diversified operation.

Included in his operation is what Dan refers to as a Leisure Center consisting of a golf course, restaurant, garden center, and plantings of strawberries and other fruits.

Dan Neuteboom has also served as chairman of the National Fruit Grower Organization and Chairman of a National Fruit Marketing Organization. He has given up these responsibilities to concentrate on his own business.

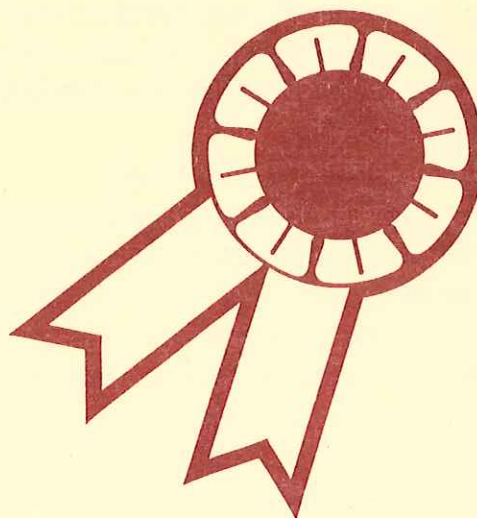
Dan Neuteboom will present two lectures during the conference. One will be on the topic of "Making a Profit Growing Fruit" and the other on "Developing Fruit Growing in Western Europe."

Kurt Werth is with the Advisory Service for Fruit and Vine Crops located in Neumark, Italy.

He has had 25 years of experience with the economic relationships in fruit production systems.

Kurt will present two lectures.

One will be titled "Economic Considerations of high density apple planting" and the other "Current Trends in European Apple Production Systems."



Gentlemen . . . Have we got tours for you!

Many exciting stops are planned for the 1991 IDFTA Winter Tour to be conducted Wednesday, February 27.

Productive low to high density orchards will be visited on "The Ridge" in the Belding area and in the Ada area.

A favorite stop will be the return to Bruce and Joe Rasch Farms of Ada. They are the next door neighbors of Bastian Blok.

This combined one stop will be the same orchards toured during the last two visits to Michigan. You'll be able to see these orchards as they have grown and changed. The orchards are high density plantings on Mark and M-26 and are 3 to 15 years old.

Bruce and Joe have recently planted Mark and M-26 using many different varieties. The trees are staked or on wire support systems.

Bastian Blok has been growing M-26 at 3' by 16' for over 15 years.

In the Belding area neighboring farms will also be visited.

Tom Rasch, Jr. and Sr. have farms next to Ed and Mike Wittenbach. Although the Rasch farm is predominantly a central leader planting, they are obtaining high density production.

Some of their central leader orchards are averaging 1,000 bushels per acre year after year. Spacing in one 20-year-old block is 14' by 24' using 106 and 111. They are held to their allocated space and are bearing heavily.

High density planting has not been neglected. They are planting some of their acreage using stakes and wire support.

The Rasch's also have a unique method of harvesting apples. The apples are collected in a central area and then moved to the storage/packaging house.

Ed and Mark Wittenbach are changing to "keep up with the times," as they put it.

Over the years they have stressed high production/acre but are also experimenting with high density and varieties in order to remain competitive. Their high density average is on Mark and M-26 with support.

Three stops are planned on "The Ridge."

The first stop will be the Harold Thome farm. There you will see and prune central leader Mercier Red Chief. This is a more vigorous strain of red delicious as compared to the Campbell strain. Harold has been a long time member of the IDFTA and is continually experimenting with new systems and varieties.

The second stop will be the Merlin and Gary Kraft farm where participants will see a medium density planting of Northern Spy on Mark from budded liners from the nursery.

The trees were staked and limbs were tied down to reduce vigor and increase productivity.

The last "Ridge" stop will be the Leo and Jim Dietrich farm.

There you will see a block of three-year-old trees planted on Mark, using stakes. These are now being changed to a wire at 6' with old railroad ties being used as posts. Much bending and tying was used to hasten fruiting. Varieties such as Fuji and others were planted in this new existing block.

All stops promise to be interesting and educational.

We will be stopping in the orchards regardless of weather and lunch will be a hot, two meat buffet-style meal with vegetable, potatoes, rolls, salad and beverage.

The busses for the tour will leave the Amway Grand Plaza at 8am and return at 12noon.

An optional tour will be conducted on Thursday, February 28, 1991 to the Clarksville Experiment Station.

There you will visit research plots as well as the research station. Research personnel will be available to discuss various projects.

The busses for this tour will leave the Amway Grand Plaza at 8am and return at 12 noon.

See you on the tours!

QUICK REFERENCE GUIDE TO THIS YEAR'S CONFERENCE TOURS

Tuesday, February 26
8:30am to 5pm

LADIES' TOUR - Stops include the Robinette Apple Haus and Gift Barn, National Fruit Products Co., and the Gerald Ford Museum. Lunch is provided.

Wednesday, February 27
8am to 12noon

ORCHARD TOURS - Stops include productive low to high density orchards on "The Ridge" in the Belding area and in the Ada area. Special stops will be the return to some of the same orchards toured during the last two visits to Michigan. Lunch is provided.

Thursday, February 28
8am to 12 noon

OPTIONAL TOUR - A visit to the Clarksville Experiment Station. Tour the research station as well as visit the research plots. Lunch is not included.

...and Ladies, We've got a tour for you, too!

The Ladies' Tour for the 1991 IDFTA Annual Conference is being sponsored by the Michigan Apple Promoters.

The Michigan Apple Promoters is comprised of a group of ladies from the Grand Rapids area whose goals are to promote and educate consumers on the varieties and versatility of Michigan apples.

The tour will take place February 26, 1991 beginning at 8:30am. The first stop will be the Robinette Apple Haus and Gift Barn.

The operation, owned by Jim and Bethel Robinette, is entirely retail and consists of a cider mill, apple market and bakery.

The bakery sells desserts such as pies, donuts, and other calorie-enriched goodies. The market sells cider, jams and jellies, nuts, dried fruit, and of course apples.

The Robinettes' also have as a part of their market, a Gift Barn. Here they sell quilts, bedding, lace, dried flowers, gifts, collectibles, unfinished furniture, and handmade baskets.

The next stop will be the National Fruit Products Co. The

facility processes apples into applesauce and apple juice. This will be an interesting and informative tour.

Lunch will be served at the St. Joseph's Church Hall. The meal will feature hot chicken salad, rolls, jello fruit square or apple fruit salad, and choice of beverage.

After dining, the tour participants will meet the Michigan Apple Promoters and view their new video "The Michigan Apple Story."

The final stop will be the Gerald Ford Museum.

Here you will find a wealth of information on the life of the former President and his dedication to public service.

If, after you complete your tour of the museum, you still feel energetic, you can walk across the bridge over the Grand River to the Grand Center.

The tour will end at the Grand Center at approximately 5pm.

Finally, for those men who believe the tour will be more exciting than walking through a frozen orchard, you are also welcome!

Banquet Time..Banquet Time..Banquet Time

The annual banquet of the International Dwarf Fruit Tree Association will be held in the Pantlind Ballroom of the Amway Grand Plaza Hotel, Grand Rapids, Michigan on February 26, 1991, at 7:30pm.

The meal will begin with a Plaza Garden Salad with basil vinaigrette dressing followed by a combination entree consisting of a Grilled Breast of Chicken and Medallion of Beef Tenderloin, Sauce Madeira, fresh-baked Rolls and Creamery Butter, plus Chef's selection of Seasonal Vegetables and Potato. Coffee, decaffeinated Coffee and Herbal Teas will be served. The meal will culminate with Mocha Toffee Torte.

The cost? \$30.00 per person. This price includes 4 percent sales tax and 16 percent service charge.

Expensive? To this small grower, YES.

Worth it? In my opinion, YES.

We used your Board of Directors as guinea pigs on this one. They were served the same menu at a recent Directors' meeting. Of course, they initially grumbled about the price. However, at the completion of the meal, they agreed, without exception, that the quantity and quality of the food was excellent.

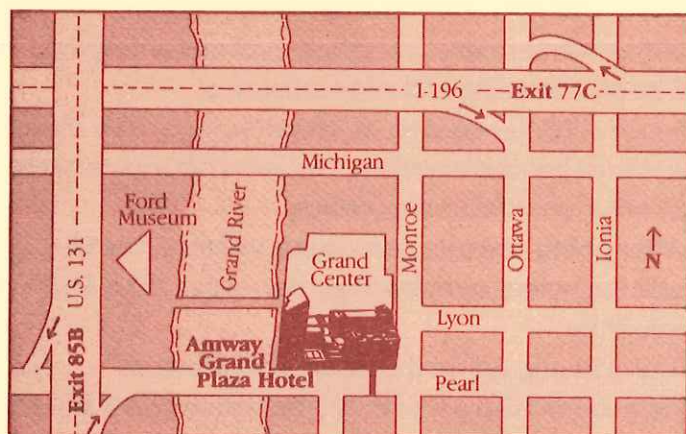
If the description of the meal doesn't entice you, then just look at the surroundings in which you'll dine. The elegance of the Pantlind Ballroom is beyond description. Look at the enclosed brochure of the Amway Grand Plaza Hotel and judge for yourself.

Every year members of the IDFTA enjoy the banquet to renew friendships and acquaintances. This banquet will be one of the most memorable.

Come join us!



Street Map to the Amway Grand Plaza Hotel



Hotel Information: *Make your reservations TODAY!*

AMWAY GRAND PLAZA HOTEL

Pearl at Monroe

Grand Rapids, Michigan 49503

Telephone 1-616-774-2000

Toll-Free in Michigan 1-800-632-6120

Toll-Free Nationwide 1-800-253-3590

Fax 1-616-776-6489

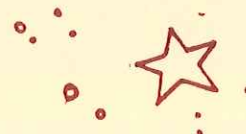
Rooms will be held for reservation only until January 31, 1991, at which time the reserved block will be released.



Preliminary Program 34th ANNUAL IDFTA CONFERENCE

Amway Grand Plaza Hotel - Grand Rapids, Michigan

FEBRUARY 24-27, 1991



SUNDAY EVENING, FEBRUARY 24

Chairperson: Paul Rood — IDFTA board member, Covert, Michigan

8:00 Informal presentation to be announced.

MONDAY MORNING, FEBRUARY 25

Chairperson: Harold D. Schooley — IDFTA member, Windham Centre, Ontario, Canada

8:30 Jack Pearson — President IDFTA, North Greece, New York
Welcome to the 34th IDFTA Conference

8:45 Dan Neuteboom — Stoneham, Ipswich Suffolk, England
Making a Profit Growing Fruit

9:30 Roy Rom — Fayetteville, Arkansas
Robert F. Carlson Distinguished Lecture
Looking Inside the Compact Tree

10:00 Break

10:15 Steve Blizzard — Kerrville, Texas
Growing Apples on the 30th Parallel

11:00 Questions and Open Discussion

11:45 Lunch



Preliminary Program continued.

MONDAY AFTERNOON



Chairperson: Arthur Lister — IDFTA board member, Ludington, Michigan

- 1:00 Kurt Werth — Neumark, Italy
Update of the Different European Apple Growing Areas
- 1:30 David C. Ferree — Wooster, Ohio
Influence of Mechanical Tree Size Control in Intensive Plantings
- 2:00 Ron Perry — East Lansing, Michigan
Dwarfing Apple Rootstocks Adapted to Soils
- 2:30 Break
- 2:45 Grower experiences with high density apple production techniques.
Speakers to be announced.
- 3:45 Panel Discussion
Summarization of the 1980 N.C.-140 Planting of 9 Apple Rootstocks
- 4:45 Open Discussion

MONDAY EVENING

Poster Paper Session



TUESDAY MORNING, FEBRUARY 26

Chairperson: Mitch Lynd — IDFTA board member, Pataskala, Ohio

- 8:30 Kurt Werth — Neumark, Italy
Economics of Very High Density Plantings
- 9:00 Steve Blizzard — Kerrville, Texas
Observations of Apple Production Trends in South America
- 9:30 Grower experiences in production transitions.
Speakers to be announced.
- 10:15 Break
- 10:30 Dan Neuteboom — Stoneham, Ipswich Suffolk, England
Developing Fruit Growing in Western Europe
- 11:00 Questions and Answers
- 11:45 Lunch



Preliminary Program continued.



TUESDAY AFTERNOON

• • •

Two sessions will be held concurrently — Stone Fruits and Pome Fruits

Pome Fruit Session

Chairperson: Joseph E. Wentzler — IDFTA board member, Muncy, Pennsylvania

- 1:00 Don Elfving — Simcoe, Ontario, Canada
6-benzyladenine as a Chemical Thinner for Apples
- 1:30 Liz Hisaw — Simcoe, Ontario, Canada
Calcium Spray Influence on Apple Fruit Quality and Storage Life
- 2:00 Dick Unrath — Fletcher, North Carolina
North Carolina Apple Industry and Summer Tour Plans
- 2:30 From 2:30 thru 4:30
Additional speakers and subjects to be announced.

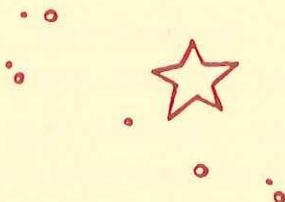
Stone Fruit Session

Chairperson: Walter D. Krause — IDFTA board member, Squaw Valley, California

- 1:00 Ron Perry — East Lansing, Michigan
Peaches on Raised Beds
- 1:30 From 1:30 thru 4:30
The remainder of the session will be devoted to stone fruit topics and will be listed in the final program.

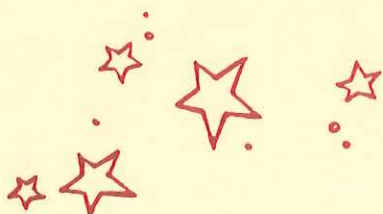
TUESDAY EVENING

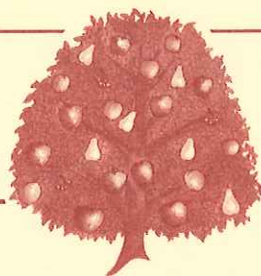
Banquet



WEDNESDAY, FEBRUARY 27

Michigan Area Orchard Tours
In late February low temperatures and snow may prevail in Michigan orchards. Come prepared with warm clothing and boots.





EDUCATIONAL DIRECTOR
Dr. Howard "Jack" Rollins
1290 Cherry Valley Road
Gilford, NH 03246

(603) 293-0008 (office)
(603) 293-0008 (home)
(603) 293-2638 (FAX)

BUSINESS DIRECTOR
Charles J. Ax, Jr.
14 South Main Street
Middleburg, PA 17842

(office) (717) 837-1551
(home) (717) 539-8300
(FAX) (717) 837-0090

COMPACT NEWS

A Periodic Newsletter of the International Dwarf Fruit Tree Association

No. 2

October 1991

A MESSAGE FROM THE EDUCATIONAL DIRECTOR

The 1991 Summer Tour, held in North Carolina June 9-11, was very successful and provided participants much "Food for Thought." Dick Unrath, Eric Young, Mike Parker and other members of the North Carolina host team are to be commended for a job well done. IDFTA thanks you.

Program plans for the 35th Annual Conference to be held in Niagara Falls, NY, February 23-27, 1992, are approaching completion and details will soon be published. The schedule will include two full days of educational sessions Monday, February 24, and Wednesday, February 26. A tour of Niagara County, New York, area orchards is being scheduled for Tuesday, February 25, and a tour of nearby Canadian orchards is being organized for Thursday, February 26. The Annual Banquet will be held Wednesday night and a Poster Session will be featured Tuesday night. Mark your calendars. This upcoming conference on the theme of "High Density – Does It Make Cents?" is shaping up well.

H.A. (Jack) Rollins, Jr.

35th Annual Conference

The 35th Annual IDFTA Conference will be held February 23-27, 1992 in Niagara Falls, New York. The conference headquarters will be at the Radisson Hotel and the meetings will be in the nearby Niagara Falls International Convention Center. The theme of the conference will be *High Density – Does It Make "Cents?"*

The program will blend in two full days of educational sessions, Monday and Wednesday, with two days of orchard tours, Tuesday and Thursday. The tours will include nearby orchards in both Canada and the U.S. A poster session will be featured Tuesday night.

The 24 educational presentations will be delivered by 20 individual speakers. The emphasis will tend to concentrate on areas related to high density and production economics. Such topics as, "Making a Profit Growing Fruit" by Dan Neuteboom, a grower from England, and "Challenges and Opportunities for the Fruit Grower Going into the 21st Century" by John Proctor from the University of Guelph, are expected to stimulate audience imagination.

Complete details on the program and hotel accommodations will be mailed shortly.

1992 Summer Tour

The Province of Quebec will host the 1992 Orchard Tour to be held June 14, 15, and 16. Pierre Phillion, Huntingdon, Quebec, Canada, and his committee members of growers and researchers are proceeding to arrange details for next summer's Orchard Tour.

Ten years ago the Summer Tour was also held in the Province of Quebec and was very successful. One day of the '92 Tour will likely include some of the same orchard areas, north of Montreal, visited in '82 to review changes. The other day will concentrate on the area east of Montreal that was not included in the '82 Tour. More complete plans will be included in a future "Compact News" and also presented at the Niagara Falls 35th Annual Conference.

Also in this issue of Compact News. . .

BOOK REVIEW — "Rootstocks for Fruit Crops," edited by Roy C. Rom and Robert F. Carlson

INFORMATIVE READING — "Hybridizing the Axe and the Slender Spindle," by R.L. Perry • "The Use of Elastics in Training High Density Trees," by R.L. Perry and J.L. Runkel

IMPORTANT INFORMATION — Rootstock Research Grants and Application for Research Funding

**BOOK
REVIEW . . .****ROOTSTOCKS FOR FRUIT CROPS***Edited by Roy C. Rom and Robert F. Carlson***BOOK
REVIEW . . .**

It is now commonly accepted among pomologists that a deep understanding of the nature, uses and availability of rootstocks is essential to fertile fruit and vinegrowing systems. *Rootstocks for Fruit Crops* provides all the information needed to understand rootstocks as they are utilized in temperate tree fruit crops, as well as in citrus and grapes. As such, it is the only available compendium of the latest information on the subject.

Covering the specific characteristics and uses of each rootstock, *Rootstocks for Fruit Crops* brings together the latest information on root systems, function in general, propagation procedures used to produce rootstocks and trees, and specific compatibilities and stock-scion interactions. For every rootstock application covered, the text outlines the pros and cons of its use on each fruit crop.

Rootstocks for Fruit Crops contains 14 essays covering every aspect and type of tree fruit crops, written by some of the world's leading authorities in the field. Coverage includes roots as well as the rootstocks of apples, pears, peaches, cherries, almonds, apricots, plums, citrus, pecans, juglans and vitis.

Featuring end-of-chapter tables that briefly summarize key characteristics of the rootstock covered, plus references to additional reading, *Rootstock for Fruit Crops* is essential reading for anyone involved in the fields of horticulture and pomology.

Contributors: J.M. Audergon; Robert F. Carlson; William S. Castle; Peter B. Catlin; P. Crossa-Raynaud; David C. Ferree; Charles Grasselly; J. Dan Hanna; Brian H. Howard; Gordon S. Howell; Dale E. Kester; Richard E.C. Layne; Porter B. Lombard; Gale H. McGranahan; William R. Okie; Ronald L. Perry; Roy C. Rom; Roy K. Simons; and Melvin N. Westwood.

This reference book is well done and contains 480 pages. It was published in 1986 by John Wiley and Sons, Inc. (US \$54.95). All royalties from the sale of the book are contributed by the authors to the IDFTA Research Fund. Mail correspondence to:

Wiley-Interscience
a division of John Wiley & Sons, Inc.
605 Third Avenue, New York, NY 10158
Att: Jules Kazimir, Dept. 092.

ROOTSTOCK RESEARCH GRANTS

Monies that have been contributed to IDFTA and designated for the support of Rootstock Research are maintained in a separate IDFTA account for use in funding research grants. The IDFTA Board of Directors, at their December meeting, determines the amount of these monies that will be available for allocation the following year. The Rootstock Research Committee will be notified of monies available and will meet at the time of the annual conference to review submitted proposals. They will recommend action to be taken and the support to be allocated.

The IDFTA Board will have modest monies for the support of 1992 Research Proposals. Researchers are encouraged to review the following proposal guidelines and where practical and appropriate submit application for research funding.

Please note: The deadline for requesting IDFTA grants is December 16, 1991. Mail your application to H.A. "Jack" Rollins, Educational Director IDFTA, 1290 Cherry Valley Road, Gilford, New Hampshire 03246. Please be brief, but specific and try to use only space allocated on the application form for research funding. To save time and mailing cost, use the attached form in this issue of "Compact News" or make a copy of it. Projects not received by December 16 will not be included for 1992 evaluation. Please enclose 22 copies of the proposal.

Rootstock Research Proposal Guidelines

The following outlines the major criteria used by the Rootstock Research Committee for evaluating proposals.

	Percent
Will the research results be useful and/or of value to the tree fruit industry? Does the project support the guidelines established by the IDFTA? What are the implications for advancing industry knowledge?	40
Will the results of the research apply to the whole fruit industry or a limited segment?	10
Is the research justified?	10
Are the project objectives clearly stated and soundly developed with enough detail to determine credibility?	10
Does the present status of the research enhance its possibility of success?	10
Is the use to which the grant will be put practical?	10
To what degree would the grant facilities the research?	10

HYBRIDIZING THE AXE AND THE SLENDER SPINDLE

R.L. Perry • Department of Horticulture • Michigan State University

Two European systems — the Slender Spindle and the Vertical Axe — have gained much attention in recent years as being commercially viable systems for growing high density apples. Principally, the difference between the two systems is that trees in the Vertical Axe are tall, at ten-to-twelve feet, and grown on a wire trellis compared to the shorter statured Slender Spindle trees grown at seven-to-eight feet on a single post for support. Other differences separate the original protocols for developing trees in both systems.

Vertical Axe, as described by J.M. Lespinase (1981):

1. Apical bud on leader remains intact.
2. Rigidly support developing leader during the growing season with frequent ties.
3. Suppress competing laterals from number one-to-four node positions on developing leader of acrotonic cultivars.
4. Suppress strong basal growth in basitonic cultivars.
5. Remove upright, vegetative growth.
6. Recycle all branches after bearing fruit for two years.
7. Tail tree, reaching ten-to-twelve feet in heights, with wire support.

Slender Spindle, as described by H. Oberhofer (1987):

1. Head leader, remove up to 50% of previous seasons growth to force laterals.
2. Replace leader with weak lateral ("zig-zag") after reaching two meters or six feet in height.
3. Bend woody limbs in late growing season to horizontal position.
4. Train to a wooden post or single wire-supported stake.
5. Establish permanent set of branches in basal portion (production table) of tree.
6. Prune and form to a cone-shaped tree.
7. Canopy height should not reach above two-and-a-half meters or eight feet.
8. Recycle upper and lower canopy branches as it becomes necessary.

In the past few years, commercial apple growers in Europe have modified both systems to adapt to their needs. As we learn more about these systems, researchers, advisors, and growers have found that marrying the two systems yields beneficial results. Rather than defining a particular system, a combination of practices and knowledge gained from this exercise presents the type of flexibility that growers seek in customizing a system to the individual operation.

Table One describes various practices and characteristics of these two systems, giving credit to their origin and noting how this knowledge has been borrowed. Sharing of this information between systems has been positive.

Table One

A X E	x	S P I N D L E
		Table of production branches, permanent and shortened annually
Retain apical or lead shoot		
		Recycle only upper canopy branches
Retain all weak branches (feathers)		
Increased canopy height = greater canopy and fruit volume (increased harvest costs)		
		Decreased canopy height = less canopy and fruit volume (decreased harvest costs)
		Allow fruiting to discourage vegetative growth; reach equilibrium
		Bend upper branches below horizontal
		Bend leader to force laterals
		Use top wire to support tall trees
		Retain cone tree shape
		Treat according to cultivar characteristics and requirements

THE USE OF ELASTICS IN TRAINING HIGH DENSITY TREES

R.L. Perry and J.L. Runkel • Department of Horticultural • Michigan State University

Introduction

Several Michigan apple growers experimented with the use of elastics or rubber bands during the 1990 growing season for training branches on dwarf trees. We found that elastics had multiple uses and that they were effective and inexpensive in accomplishing a desired goal. The most effective elastics were the office equipment industry standard #117. We found other size rubber bands to be too weak or the loop to be too small for efficient use. The #117 rubber band is approximately 1/8" x 7" (loop length).

Depending upon the stress applied, the bands will last from two to four weeks in place. For this reason, elastics work better in training succulent branches. Other elastics are appearing on the commercial market. Ghent Supply of Belgium is marketing a similar product. The blue-colored rubber band from Belgium is 1/8" x 5-1/2". Suppliers are claiming that this band is more u-light resistant and lasts longer (up to seven weeks) than the #117.

Application

A rubber band is attached to the central leader or affixed to other rigid support. Wrap the rubber band around the support some four-to-six inches below the intended branch and push the loop through itself. Pull the loop open and insert the terminal section of the shoot until the desired branch angle is achieved. Excessive stress placed on the elastic will cause it to chafe and break early (perhaps within one week).

Usage First Year Trees

Elastics may be used to bend small woody branches no greater than approximately 3/8" diameter at the desired angle. While elastics are a little weak to bend woody branches, they can be used to set lower production table branches at a horizontal angle on slender spindle and axe trained trees. New succulent shoots, at least ten-to-twelve inches in length, are flexible and more willing subjects for using elastics.

Beyond Year One

After the first year, elastics are quite effective in training new succulent shoots at desired angles, depending upon location in the tree (Figure One). This practice, originally accomplished with weights and string, has been applied on trees trained to spindle systems in northern Europe. J. DeCoster of Belgium has found that when succulent shoots in the upper zone of spindle trees (Figure One) are positioned below the horizontal plane, shoot growth declines and floral differentiation is enhanced. This practice appears to be most effective when accomplished in Belgium between June 15 and July 15 and on shoots ten-to-twelve inches in length. As described in

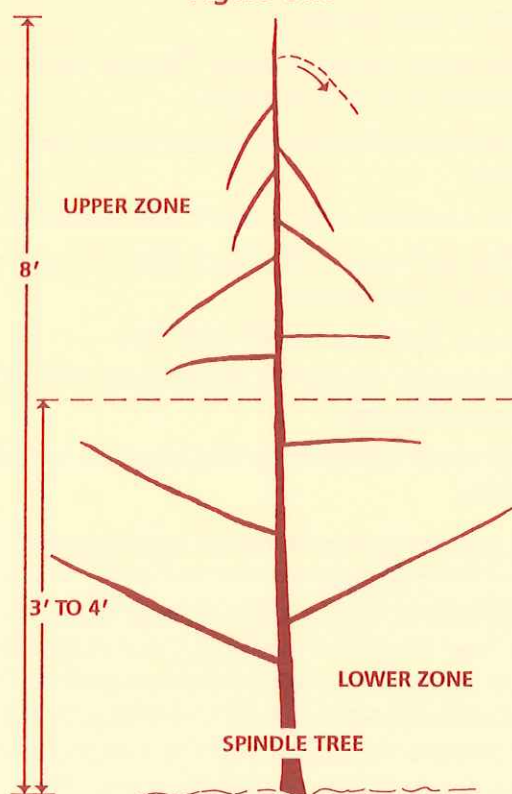
Figure One, shoots higher in the canopy are positioned at a more severe angle than those shoots lower in the canopy. Fruit production on these branches is enhanced during the following growing season. Preliminary trials in Michigan have thus far indicated that this practice is effective and worthy of trial. Studies need to be conducted which can define optimum timing for North American locations and cultivars. Elastics can also be applied in efforts to bend succulent leaders in the summer to reduce vegetative vigor and induce floral initiation. Woody leaders bent in the winter below horizontal can be effective in altering apical dominance and forcing laterals without pruning.

Summary

Elastics are quite effective in manipulating young branches for trees trained in slender spindle and vertical axe systems. Benefits in using elastics include:

1. Inexpensive to purchase (1/2 to 1 cent each).
2. Quick and easy to apply.
3. Non-injurious to succulent shoots and tissue.
4. Elastics bind readily to smooth surface supports.
5. Ultraviolet light breaks down rubber following necessary 2-4 week holding period.
6. No follow-up attention necessary.

Figure One





CONFERENCE BULLETIN

35th Annual IDFTA Conference • February 23-27, 1992 • Niagara Falls, New York

I D F T A I D F T A I D F T A I D F T A I D F T A

Preparations have been finalized for one of the finest conferences ever presented by the IDFTA. We've developed an outstanding educational program combined with two tours to provide the latest information on how you can be a more productive, profitable grower. And, while you're learning, you'll be pampered with luxurious accommodations at a world-class hotel.

from the University of Guelph, are sure to stimulate audience imagination.

ACCOMMODATIONS

The Conference will be headquartered in Niagara's largest and most renowned facility, the Radisson Hotel. The meetings will be held at the Niagara Falls Convention Center, located next to the Radisson and connected by a covered walkway.

RATES AND RESERVATIONS

Rooms are available at convention rates: both single and double occupancy rates are \$70.00 per day.

A block of rooms has been reserved by the IDFTA, but a prompt response in making reservations

is necessary to ensure you have a room.

All reservations should be made by returning the form on page seven. If you have questions regarding reservations, please contact the Radisson Hotel at 716-285-3361. Be sure to tell them you're with the IDFTA.

BANQUET

The annual conference banquet will be held Wednesday evening, February 26, at the Radisson's elegant Rainbow Ballroom.

The sumptuous meal begins with Fruit Cup and Radisson Tossed Salad. The main course is fabulously ▶

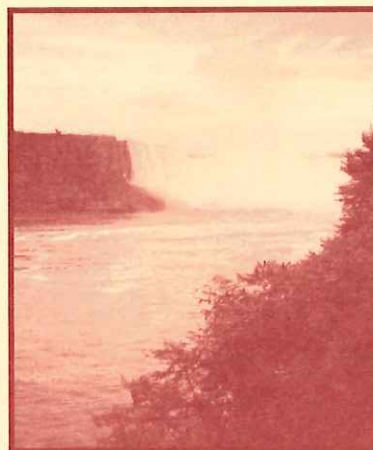
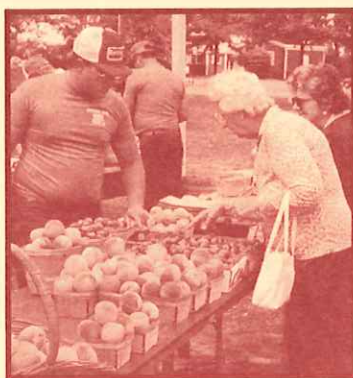


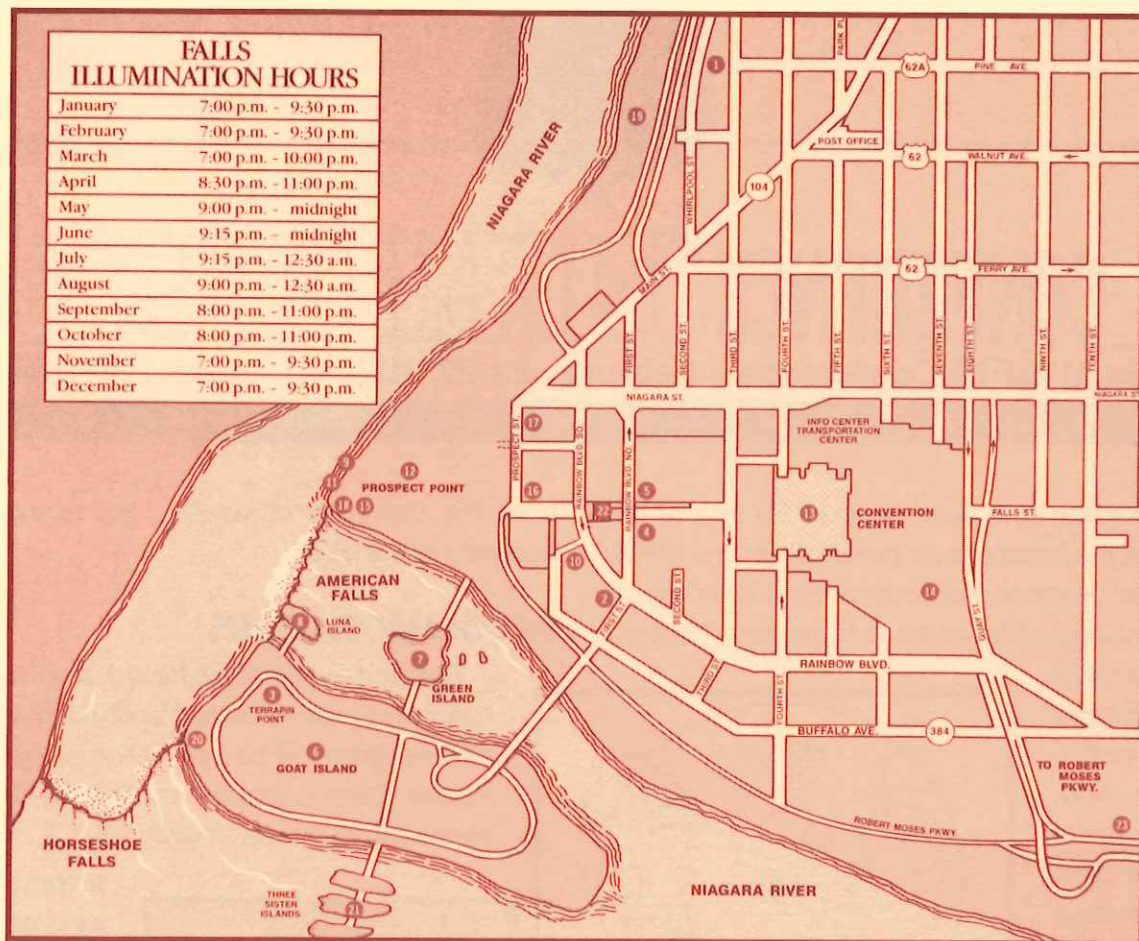
PROGRAM & TOURS IN BRIEF

The 35th Annual Conference will be held February 23-27, 1992 in Niagara Falls, New York. The theme of the conference will be *High Density — Does It Make "Cents?"*.

The program will blend in two full days of educational sessions on Monday and Wednesday, with two full days of orchard tours on Tuesday and Thursday. The tours will include nearby orchards in both Canada and the United States. A poster session will be featured Tuesday night.

The 27 educational presentations will be delivered by 23 individual speakers. The emphasis will tend to concentrate on areas related to high density plantings and production economics. Such topics as: *Making a Profit Growing Fruit* by Dan Neuteboom, a grower from England, and *Challenges and Opportunities for the Fruit Grower Going into the 21st Century* by John Proctor





Downtown Niagara Falls Points of Interest

- | | | |
|--|---|---|
| 1. Aquarium of Niagara Falls | 9. Maid of the Mist Boat Tour | 16. Niagara's Wax Museum of History |
| 2. Artisan's Alley | 10. Native American Center for Living Arts ("The Turtle") | 17. Occidental Chemical Center |
| 3. Cave of the Winds Trip | 11. New York State Observation Tower | 18. Prospect Point |
| 4. Falls Street Faire (Opening Soon) | 12. New York State Parks Visitor Center | 19. Schoellkopf Geological Museum |
| 5. Falls Street Station (Opening Soon) | 13. Niagara Falls Convention & Civic Center | 20. Terrapin Point |
| 6. Goat Island Park | 14. Niagara Splash Water Park | 21. Three Sister Islands |
| 7. Green Island | 15. Niagara Viewmobiles | 22. Wintergarden |
| 8. Luna Island | | 23. To I-190 — Exits 21 and 22 to Rte. 62 |

prepared Breast of Chicken Supreme, with Oriental Stir-Fried Vegetables and Baked Potato. And for dessert, Peach Melba.

The cost is \$22.00 per person. Banquet seating is limited to 400 and reserved according to the postmark date of your registration, so mail your form today.

The banquet is a wonderful time to meet other growers and renew old friendships — come join us!

OTHER POINTS OF INTEREST

The Falls is located within a two-minute walk from the Radisson: if you haven't seen Niagara Falls in the winter, you're in for a very special treat!

Other outstanding attractions include:

Old Fort Niagara, preserved as it stood before the American Revolution;

Niagara Power Project Visitors' Center, where water is transformed into energy before your eyes;

Aquarium of Niagara Falls, the world's first inland oceanarium, with 2,000 aquatic creatures;

Wintergarden, a seven-story glass enclosed tropical park with thousands of plants and flowers.

For you shoppers, Niagara Falls offers a wonderful selection of boutiques and stores, including the Niagara Factory Outlet mall, home of over 70 different manufacturers. Take home a unique gift for someone special or pick up a little something for yourself!

If you plan to spend additional time at Niagara Falls and would like more information, contact: Niagara County Tourism, 59 Park Avenue, Lockport, NY 14094 — or call Toll-Free 1-800-338-7890.

IDFTA CONFERENCE TOUR

Niagara County – February 25, 1992

BUSES DEPARTING CONVENTION CENTER 8 A.M. AND RETURNING 4 P.M.

TOUR STOPS AND DESCRIPTIONS

TOM TOWER'S FARM MARKET **YOUNGSTOWN, NY**

Tom is a seventh generation farmer in Niagara County. His diversified operation and farm market is typical of many growers in the area who market directly to the public. The crops grown include apples, pears, stone fruits, raspberries, and wine grapes. Tom has traveled extensively abroad to study planting systems and is experimenting with a block of Empire on IX/MM 111 interstem trees planted at a spacing of 9 ft. by 9 ft. He plans to develop a continuous tree canopy for maximum light interception in this unique system. The planting was established in 1990.

RUSSELL FARMS, INC. **APPLETON, NY**

Russell Farms is a family held corporation operating 300 acres of apples on size controlling rootstocks along with over 200 acres of vegetable crops. The farm has long been recognized as one of the most efficient and progressive in the area. Apples are produced for the wholesale fresh market. Peter Russell will share the farm's experiences with establishing and training interstem planting systems. The farm regularly uses heavy summer pruning to control vigor and improve quality. This tour stop will also demonstrate the results of chain saw ringing as a method of controlling tree vigor.

STAPLES FARMS **APPLETON, NY**

Staples Farms is a family partnership currently operating 100 acres of apples to supply the wholesale fresh market. The tour will include a stop at a planting begun in 1988 consisting of Empire, Marshall McIntosh, Gala, Crispin (Mutsu), Jonagold, and other varieties in different planting systems. The systems at this stop include high density central leader, three wire trellis, slender spindle, and v-slender spindle. In addition, Tom Staples will discuss his experiences with fall planting apple trees.

NEW ROYAL FARMS **GASPORT, NY**

New Royal Farms is a family partnership producing apples for the wholesale fresh market. The farm operates 260 acres of

apples in addition to pears and sweet cherries. Alan Buhr will explain why the farm has elected to specialize in interstem planting systems which currently total approximately 150 acres. He will describe the keys to the successful use of the system and its limitations. This stop will provide the opportunity to view plantings of Marshall McIntosh, Spartan, Empire, Golden Delicious, and Law Spur Rome in an interstem system begun in 1986. In addition, the stop will include an opportunity to view a new planting of Asian pear varieties on OH x F 97. The varieties include Shinseiki, Twentieth Century, and Hosui.

NIAGARA COUNTY

The IDFTA tour of Western New York will focus on the fruit industry of Niagara County. The county has a long history of fruit production beginning with the introduction of apples in about 1700 by French missionaries who planted seeds in the land along the Niagara River. Early settlers disseminated apples throughout the state in the 18th and early 19th centuries. The completion of the Erie Barge Canal in 1825 along with the development of the railroad system later in the century allowed for the early development of a commercial fruit industry to supply eastern markets.

Currently, the industry strikes a balance between supplying both processing and fresh markets. Several important apple processing firms are located in Western New York State. At the same time, the region is certain to become a more important player in the fresh apple industry. Growers are increasing the proportion of the apple crop produced for the fresh market by expanded modern planting systems of fresh apple varieties. In recent years, local apple packers have increased storage facilities and installed efficient grading lines.

The leading fresh apple varieties include McIntosh, Red Delicious, Rome, Idared, Cortland, Empire, Crispin (Mutsu), and Jonagold. Since its release by the NYS Agricultural Experiment Station at Geneva in 1966, Empire has rapidly increased in importance. Although currently only the seventh most important NY variety in production with an annual crop of 1.3 million bushels, Empire has become the third ranking variety in tree numbers. Clearly, the future success of the industry will depend in large part on the continued market development of Empire.

Among NYS counties, Niagara is probably the most diverse in fruit crop production and marketing. The county benefits from the moderating influence of both Lake Ontario to the north and the Niagara River on the west. The nearby population centers of Niagara Falls and Buffalo have allowed many growers to develop successful roadside markets. As a result, Niagara County ranks first among counties in the production of peaches, sweet cherries, and plums. It is

the third most important county in tart cherry production and second in pears. The leading fruit crop of the county however, is apples with a total of 6,200 acres and an estimated annual crop of 2.7 million bushels.

The tour of the Niagara County fruit industry will provide a unique opportunity to visit a region rich in both history and scenery. Participants will hear some of our most progressive growers describe their efforts to meet the challenges of the future.

IDFTA CONFERENCE TOUR

Niagara Peninsula, Ontario – February 27, 1992

NOTE: TWO TOURS WILL BE CONDUCTED SIMULTANEOUSLY

TOUR ONE

- 8:00 A.M. Board buses
- 9:15 A.M. Horticultural Research Institute of Ontario/
Horticultural Research Station, Vineland
 - 1. Pear Ultra Density Planting & Training Systems — Dr. G. Tehrani
 - 2. Peach High Density Planting & Training Systems — Dr. N. Miles
- 11:00 A.M. Tart Cherry Training System — H. W. Smith Holdings, Ltd. Orchards, Vineland — John Smith
- 11:45 A.M. Buffet Luncheon (Cost included in tour ticket)
Beacon Motor Inn, Jordan Station
- 12:45 P.M. Board buses
- 1:30 P.M. Dwarf Pear Plantings — Froese Farms Ltd.,
Niagara-on-the-Lake — Dave & Jamie Froese
- 2:15 P.M. High Density Peach Planting —
Hunter Farms Ltd. — Ken Hunter
- 3:00 P.M. Pear and Apple High Density Planting & Training
Systems — Deiter & Herdith Janus
- 4:00 P.M. Buses return

TOUR TWO

- 8:00 A.M. Board buses
- 9:15 A.M. Pear and Apple High Density Planting & Training
Systems — Deiter & Herdith Janus
- 10:15 A.M. High Density Peach Planting —
Hunter Farms Ltd. — Ken Hunter
- 11:15 A.M. Dwarf Pear Plantings — Froese Farms Ltd.,
Niagara-on-the-Lake — Dave & Jamie Froese
- 1:00 P.M. Buffet Luncheon (Cost included in tour ticket)
Beacon Motor Inn, Jordan Station
- 2:00 P.M. Horticultural Research Institute of Ontario/
Horticultural Research Station, Vineland
 - 1. Pear Ultra Density Planting & Training Systems — Dr. G. Tehrani
 - 2. Peach High Density Planting & Training Systems — Dr. N. Miles
- 3:15 P.M. Tart Cherry Training System — H. W. Smith Holdings, Ltd. Orchards, Vineland — John Smith
- 4:00 P.M. Buses return

NIAGARA PENINSULA, ONTARIO TOUR — TOUR STOPS AND DESCRIPTIONS

JOESE FARMS LTD.

This family farm is operated by Jake Froese and his sons David and Jamie. The farm operation is mostly peaches, but in the past five years they have been diversifying and have added several pear plantings. The plantings we will visit have all been planted in the last three years. The original plantings were planted 8 ft. by 10 ft. and the plan was to train the trees on wire. This plan was changed in the second year to modified central leader system. Varieties planted in this planting are Swiss Bartlett and Bosc. The 1991 planting is Bosc, Anjou and Flemish Beauty on Quince C at 6 ft. by 10 ft. spacing. These trees will be post supported.

DIETER & HERDITH JANUS

The Janus' purchased this farm in 1984 which was planted to cling peaches. They decided early to switch to pears and apples and have been replanting since then. The farm is very close to Lake Ontario and is ideal for growing Mutsu (Crispin). Jonagold, Gala and Elstar have been added this spring. The original plantings have been trained to the Penn State Low Spindler System and are planted 6 ft. by 11 ft. and trained on four wires. The new plantings are to be trained to a slender spindle system supported by a stake and two wires at a spacing of 4 ft. by 11 ft. The pear plantings have all been trained on wire with Quince A, Quince C and Provence Quince as the rootstocks. All plantings, apples and pears, are irrigated by trickle irrigation. This is a small orchard which is exceptionally well kept.

HUNTER FARMS LTD.

The main crops of this family operated farm are peaches and tart cherries. The planting that will be visited is peaches planted in a double row system at densities up to 300 trees per acre. These trees are approximately 10 years old and the Hunters will be discussing the pros and cons of this system of peach production.

H. W. SMITH HOLDINGS LTD.

The Smith family operate a large farm in the Vineland area of the peninsula growing mainly peaches, sweet and tart cherries and pears. In addition they also process tart cherries and sweet cherries for maraschino production.

The tart cherry planting we are going to visit is approximately eight years old and is just reaching maturity and full production. The planting spacing and the training system used on this farm has been developed for mechanical harvesting.

PEACH HIGH DENSITY PLANTING AND TRAINING HORTICULTURAL EXPERIMENT STATION VINELAND — NEIL MILES

This experiment was initiated in 1985 in search of a more efficient method for producing peaches — both productivity and economic efficiency being considered. Veeglow/Bailey trees trained to five trellis systems are compared to our standard modified central leader free standing trees. The spacings are: modified central leader - 4 x 6 metres (417 trees/hectare), one-scaffold Tatura trellis - 1.5 x 5 metres (1,334 trees/ha), two-scaffold Tatura trellis - 1.5 x 5 metres (1,334 trees/ha), four-scaffold Tatura trellis - 4 x 5 metres (500 trees/ha), early palmette - 3 x 5 metres (667 trees/ha) and central leader - 2.4 x 5 metres (834 trees/ha). The trees have received cultural practices standard for the area including trickle irrigation and permanent sod ground cover. Yields from the central leader trained trees were greater than the standard trees and this system shows promise for commercial adaptation.

PEAR ULTRA AND HIGH DENSITY PLANTING AND TRAINING SYSTEMS HORTICULTURAL EXPERIMENT STATION VINELAND, ONTARIO — GUS TEHRANI

This experiment was initiated in 1987 to compare the effect of three training systems, *Modified Leader*, *Free Palmette* and *Mini-Tatura* on a fine sandy loam soil. Trees of Anjou, Bartlett (compatible strain) and Flemish Beauty were planted on Quince A and C from England and Provence C131 from France. The spacing for *Free Palmette* and *Modified Leader* 2.5 x 3.5 m (1,143 trees/ha) and for *Mini-Tatura* 0.6 x 3.5 (4,572 trees/ha). The trees were managed in a sod-mulch culture from the year of planting. In the fifth leaves after planting (1991), the trees trained to *Mini-Tatura* cropped about three times higher than those on *Free Palmette* and *Modified Leader* systems.

SHOPPING TOUR FOR CONVENTION GUESTS

Guests at the 1992 Annual Meeting can participate in a shopping tour to Walden Galleria, a mall with over one million square feet of shopping area and more than 200 stores. Buses will depart from the Niagara Falls Convention Center, Wednesday February 26 at 9:30 a.m. and return to the Convention Center at approximately 4:00 p.m. Lunch is on your own — there are several good restaurants within the mall.

OVERSEAS SPEAKERS **to share a wealth of information and experience** **at the 35th Annual IDFTA Conference**

Dan Neuteboom, an English fruit grower, will be a major speaker at this year's conference. He had been scheduled to participate in last year's conference, but due to a family illness could not attend.

Dan received four years of formal horticultural education in Holland and gained two years of practical experience in Western European orchards before returning to England to start a seven-acre tree fruit planting.

The orchard gradually was expanded to a 200-acre, one-half million tree, high density diversified operation. Included in his operation is what Dan refers to as a Leisure Center, consisting of a golf course, restaurant, garden center and plantings of strawberries and other fruits.

Dan Neuteboom has also served as chairman of the National Fruit Grower Organization and Chairman of a National Marketing Organization. He has given up these responsibilities to concentrate on his own business as a "Fruit Grower." One of his presentations will focus on "Making a Profit Growing Fruit."

Another overseas speaker at the 35th Annual Conference will be Hideo Bessho. He is at The Apple Breeding Lab., Morioka Branch, Fruit Tree Research Station, MAFF Shimokuriyagawa, Morioka, 020-01 Japan. He will share his involvements in the

Apple Breeding and the Apple Rootstock Breeding programs at the Fruit Tree Research Station. The emphasis of his phase of the apple rootstock breeding program has been orientated toward disease resistance such as violet root rot, crown rot and valsa canker.

Another major speaker on the program this year will be Ignacio A. Gonzalez Cepeda from Saltillo, Coahuila, Mexico. Ignacio grows 500 acres of apples on M.M. 106. He is also a nurseryman and an industry leader in the Saltillo area. He travels throughout the industry and has a good idea of what's actually going on in Mexico.

Following his undergraduate degree in Agricultural Engineering in Mexico, he earned a Master of Science degree in Horticulture from the Davis Pomology Department at the University of California. Since 1977 he has been managing and operating the family Agri Businesses. He is currently also president of the Coahuila State Research Committee.

At the 35th Annual Conference, Ignacio will present two talks: "The Mexican Apple Industry as it Exists Today" and "What Will be the Impact of Free Trade on the U.S. and Mexican Apple Industries?"

JOHN PROCTOR TO PRESENT **ANNUAL ROBERT F. CARLSON LECTURE**

Dr. John T. A. Proctor will present the Robert F. Carlson Distinguished Lecture at the 35th Annual Conference. John was born in Northern Ireland. He earned his B.S. degree in 1964 at the University of Reading, England, his M.S. in 1967 and PhD. in 1969 from Cornell University. He joined the Horticultural Research Center of Ontario at Simcoe in 1969 where he served as Research Scientist and Assistant Director until 1978. He then resigned and joined the faculty of Horticultural Science at the University of Guelph where he became Chairman in 1986.

Dr. Proctor's research emphasis has included variety selection, plant spacing and arrangements, precocious small tree orchards and integrated pest management. He is recognized worldwide as a leader in research on tree fruit physiology. The title of his lecture at the Annual Conference will be: "Challenges and Opportunities for the Fruit Grower in the 21st Century."

CONFERENCE PROGRAM

SUNDAY – FEBRUARY 23

Registration at Convention Center 1:30 - 5:00 p.m.

Registration and an evening get acquainted orientation and informal presentations. (Held in Greek Theatre.)

Evening:

- 7:30 APPLE GROWING PAST AND FUTURE
Program will be conducted by "Jack" Rollins and Steve Blizzard and will include 16mm movies taken over 50 years ago in Connecticut by Howard A. Rollins, Sr., Extension Fruit Specialist.

MONDAY – FEBRUARY 24

Registration at Convention Center 8:00 a.m. - 5:00 p.m.

Morning:

Chairperson Jack Pheasant — IDFTA Board Member, E. Wenatchee, Washington

- 8:30 WELCOME TO THE 35th ANNUAL CONFERENCE
Harold Schooley — President, IDFTA, Windham Center, Ontario, Canada
- 8:45 MAKING A PROFIT GROWING FRUIT
Dan Neuteboom — Grower, Stoneham, Ipswich Suffolk, England
- 9:30 *Robert F. Carlson Distinguished Lecture*
CHALLENGES AND OPPORTUNITIES FOR THE FRUIT GROWER GOING INTO THE 21st CENTURY
John Proctor — University of Guelph, Ontario, Canada

10:15 Break

Chairperson Darrel Oakes — IDFTA Board Member, Lyndonville, New York

- 10:30 APPLE TREE SUPPORT — REVISITED
Don Elfving — Vineland Sta., Ontario, Canada
- 10:50 THE MEXICAN APPLE INDUSTRY AS IT EXISTS TODAY
Ignacio Gonzalez Cepeda — Grower, Saltillo, Coahuila, Mexico
- 11:30 Questions and open discussion
- 11:45 Lunch

Afternoon:

Chairperson Joseph Wentzler — IDFTA Board Member, Muncy, Pennsylvania

- 1:15 APPLE ROOTSTOCK BREEDING FOR DISEASE RESISTANCE
Hideo Bessho — Fruit Tree Res. Sta., Morioka, Japan
- 1:35 GENEVA 65 — A SUPERDWARF RESISTANT ROOTSTOCK
Jim Cummins — Geneva, New York
- 1:55 Panel — GROWER EXPERIENCES AND PRACTICES WITH HIGH DENSITY PRODUCTION
- 2:45 REVIEWING THE PENN STATE LOW HEDGEROW SYSTEM
Loren Tukey — Penn State University
- 3:15 Break

Chairperson Harold Thome — IDFTA Board Member, Comstock Park, Michigan

- 3:30 ECONOMICS OF DIFFERENT ORCHARD DENSITIES AND TRAINING SYSTEMS
Dick Funt — Columbus, Ohio
- 4:00 PHYSIOLOGICAL BASIS FOR HIGH DENSITY SYSTEMS
Terence Robinson — Geneva, New York
- 4:30 HIGH DENSITY EXPERIENCES
Jim Hughes — Picton, Ontario, Canada
- 4:50 Questions and open discussion

TUESDAY – FEBRUARY 25

All Day:

Niagara County, New York Area Orchard Tours

Evening:

- 7:30 POSTER SESSION at Convention Center
Informal opportunity to interact with other growers, researchers and poster presenters.

HOTEL REGISTRATION FORM

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____

If sharing room
please state name _____

Date of Arrival _____ Time of Arrival _____

Date of Departure _____ Check In — 3:00 p.m.
Check Out — 12 noon

**NOTE: All reservations must be made with this form.
Cut off date is January 31, 1992. Please make your
reservations promptly.**

NAME OF GROUP: **INTERNATIONAL DWARF FRUIT TREE ASSOCIATION
FEBRUARY 22-28, 1992**

CIRCLE RATE DESIRED	Single/Double	DeLuxe Parlor	Junior & Star Suites
	\$70.00 flat	\$225.00	\$125.00

(If not available, next rate will apply.)

Your organization has reserved a block of rooms to be held until four weeks prior to the opening of your convention. We will then accept reservations on a first come basis at regular rates. Please make reservations promptly. Cut off is January 31, 1992. **ALL RESERVATIONS MUST BE MADE WITH THIS FORM. PLEASE ENCLOSE YOUR CHECK FOR THE FIRST NIGHT'S LODGING AND THIS FORM IN AN ENVELOPE AND MAIL TO:**



Radisson Hotel

At the International Convention Center

Third & Old Falls Street • PO Box 845 • Falls Station

Niagara Falls, NY 14303-9988

CONFIRMATION WILL BE SENT TO YOU UPON RECEIPT. THANK YOU!

WEDNESDAY – FEBRUARY 26

Registration at Convention Center 8:00 a.m. - 5:00 p.m.

Morning:

Chairperson Fritz Wafler — IDFTA Board Member, Wolcott, New York

- 8:30 DEVELOPING FRUIT GROWING IN WESTERN EUROPE
Dan Neuteboom — Grower, Stoneham, Ipswich Suffolk, England

- 9:05 WHAT WILL BE THE IMPACT OF FREE TRADE ON THE U.S. AND MEXICAN APPLE INDUSTRIES?
Ignacio Gonzalez Cepeda — Grower, Saltillo, Coahuila, Mexico

- 9:40 APPLE BREEDING IN B.C.
David Lane — Summerland, B.C.

10:00 Break

Chairperson Mitch Lynd — IDFTA Board Member, Pataskala, Ohio

- 10:15 TEN-YEAR SUMMARY OF THE PERFORMANCE OF THE 9 ROOTSTOCKS IN THE N.C. 140 TRIALS
David C. Ferree — Wooster, Ohio

- 10:45 COST AND RETURNS IN REPLANTING ORCHARDS
Allison DeMarree — Extension, Alton, New York

- 11:15 ECONOMIC CONSIDERATIONS OF HIGH DENSITY APPLE PLANTING
Jerry White — Ithaca, New York

11:45 Lunch

Afternoon:

Chairperson Paul Rood — IDFTA Board Member, Covert, Michigan

- 1:15 APPLES IN JAPAN
Hideo Bessho — Fruit Res. Sta., Morioka, Japan

- 1:35 NEW APPLE VARIETIES WITH GREATER CONSUMER APPEAL
Bob Stebbins — Corvallis, Oregon

- 2:05 EFFECTS OF TREE TRAINING ON PEAR CULTIVARS ON QUINCE ROOTSTOCKS
Ghassem Tehrani — Vineland Sta., Ontario, Canada

- 2:25 PROCESSING APPLES IN THE '90s — WHERE HAVE WE COME FROM? WHERE ARE WE GOING?
Ward Cooper — Knouse Foods Inc.

2:55 Break

Chairperson Jim Eckert — IDFTA Board Member, Belleville, Illinois

- 3:15 PRODUCTION EFFICIENCY OF PEACHES ON TRELLISES
Niel Miles — Vineland Sta., Ontario, Canada

- 3:35 USING INTERSTEMS TO DELAY BLOOM IN PEACH
Gregory Reighard — Sandhill Res. and Ed. Center, Columbia, South Carolina

- 3:55 UTILIZATION OF LIGHT IN HIGH DENSITY STONE FRUIT ORCHARDS
Walter Krause — Squaw Valley, California

- 4:35 BREEDING NEW AND BETTER CHERRIES
David Lane — Summerland, B.C.

- 4:55 THE APPLE INDUSTRY OF QUEBEC AND SUMMER TOUR PLANS
Pierre Phillion — Huntingdon, Canada

5:10 Questions and open discussion

Evening:

ANNUAL BANQUET - Rainbow Ballroom - Radisson Hotel
Master of Ceremonies: Steve Blizzard, Kerrville, Texas

6:30 Social Hour

7:30 Banquet

THURSDAY – FEBRUARY 27

All Day:

Niagara Peninsula Grower Orchards and Vineland Station Tours



The Niagara Falls Convention and Civic Center