

Department of
Horticulture

MICHIGAN
STATE
UNIVERSITY

COMPACT FRUIT TREE

ROOTSTOCK BEHAVIOR

SPUR TYPES

INDUCED DWARFING

CULTURAL PRACTICES

THE INTERNATIONAL DWARF FRUIT TREE ASSOCIATION

No. 1, February, 1984 ← Prepared by Robert F. Carlson

27TH IDFTA ANNUAL CONFERENCE

Amway Grand Plaza Hotel, Grand Rapids, Michigan
March 4-7, 1984

The theme "Roots of Fruit Growing" is aimed at keeping growers aware that the part of the tree below ground is as important as the tree's top part and tree management. For this reason, we have a select group of speakers versed in root growth and development, tree behavior, soils, and orchard management.

For example, we have asked Dr. John Bukovac (Michigan State University), well known pomologist, plant physiologist, and receiver of many state, national, and international awards, to speak on "Basic factors associated with flowering and fruiting of apple." The subject is directly and indirectly associated with current types of rootstocks and varieties.

The three speakers from Poland, Germany, and England are root conscious in their research with fruit trees pertaining to nutrition, winter hardiness, fruitfulness of entire tree, and related cultural management factors.

The speakers at the Monday evening concurrent sessions will delve into timely subjects of problems and trends associated with the dependability of rootsystems and varieties of stone and pome fruits. More and more research emphasis is now placed on improving performance of peach, plum, and cherry crops. An update on breeding of rootstocks for these crops is included in the Monday evening sessions by speakers from the U.S. and Canada.

The orchard tour, Wednesday morning, will consist of seeing several types of orchards as well as actual demonstrations of how dormant pruning is done and how it may or may not influence vigor and subsequent fruiting. Tickets for bus transportation for the orchard tour are included in the pre-registration package or can be purchased at the registration desk. Coffee and doughnuts will be served mid-morning of the tour. This offers an excellent opportunity to mix and get acquainted with growers, researchers, and extension personnel from many parts of the world.

Ladies' Program, Tuesday, 10:00 a.m. to 3:30 p.m.

The program, developed by Rosemary Rasch, Michigan, and Vyanne Chandler, Indiana, appears very interesting. At the Robinette fruit farm, a variety of fruits and products will be observed, as well as antiques and natural and wild

(some dried) flower arrangements. The tour will end in Rockford, a small town of unique setting. Bus tickets are available by pre-registration or at the registration desk.

Questions?

This year, we allowed more question periods, so that persons in the audience will have a chance to ask speakers pertinent questions. Also, a question box will be placed at the registration desk and, also, one outside the Ballroom. Persons not having a chance to get his/her question answered in the meeting can write them out and place them in one of the boxes. This will give all a chance to voice and get an answer to cultural orchard problems.

Rootstock Book

The IDFTA will sponsor a book on "Fruit Tree Rootstocks". This book (about four hundred pages) will review the past history of rootstocks of major fruit crops from pome to citrus and update on current stocks for these crops as well as future trends. It is aimed at being a reference book for use in teaching, extension, libraries, fruit growing and nursery industries. There will be several professional personnel writing the various chapters. Drs. Roy Rom, Arkansas, and Robert Carlson, Michigan, are the editors. The book will be published by Wiley and Sons, Inc. Accrued royalties will go to sponsor more IDFTA rootstock research.

International Recipe Book

The ladies' group of the IDFTA have discussed assembling a book on various fruit products used in cooking recipes. Vyanne Chandler, Stilesville, Indiana, is compiling the book. To make it truly international, she is asking for recipes from members of the IDFTA. Any family member is welcome to contribute. She hopes that the recipe contributions will come from as many countries as possible. If convenient, they should be in English; however, a translation can always be obtained from any language. Please send your recipes to: Vyanne Chandler, Chandler's Farm, Box 224, Stilesville, Indiana 46180. Your full name and address should be mailed with the recipes. There are no limits as to the number of recipes submitted, but they should be original.

World Orchard Travelers Get-Together

Members of the IDFTA who have attended any of the world orchard study tours are welcome to join the group for dinner, Monday, 5:00 to 8:00 p.m., March 5, 1984. The location is the Paddington and Worthmore's Deli, 117 Monroe Center, about one block from Amway Grand Plaza Hotel. The dinner is on your own, your choice directly from the menu. Since the two concurrent sessions begin at 8:00 p.m. in the Hotel, we hope to be seated for dinner promptly at 5:00 p.m.

In order to notify the Deli of the numbers attending the dinner, we must have a count by Monday noon. Therefore, one needs to sign up either at the registration desk in the Hotel or write Becky Schmitt, 2559 Abbington, S.E., Grand Rapids, Michigan 49506, so that she will have this information by Monday noon.

IDFTA Notice

The terms of office end in March, 1984, for the following Board members: Joseph Garrett, Kentucky; Donald May, Massachusetts; Kenneth McDonald, West Virginia; Jack Pearson, New York; and Gene Stembridge, Georgia.

The Awards Committee will also appreciate suggestions for 1984 IDFTA annual awards. Mail or call in your suggestions on Board members for the next three years and for the awards to one of the following:

Robert Edwards
Rt. 1, 7061 Centerville Road
Poplar Grove, Illinois 61065
(815)765-2234

Hugh Hargrave
8603 Kail Drive
Yakima, Washington 98908
(509)966-0425

News from Here and There

Flower bud formation: While observing orchards in the Watsonville fruit area of California, January, 1983, it was called to our attention, by Ronald Tyler, that flower buds were formed on the current season's growth of apple cultivars. Similar remarks were made by Dr. Dunn at Christchurch, New Zealand, where upright current shoots from above the Lincoln Canopy formed flower buds at the lower parts of the shoots. In this way, he developed greater bearing area, yet, the top parts of the shoots could be cut to control vigor. Generally, flower bud and spur formation occur mostly in two-year shoots.

Apparently, this flower and spur formation on current shoots is more prevalent in areas with more sunlight or, perhaps, a combination of light and temperature.

Apple cultivars: It is of interest to note many new cultivars are gaining in commercial production all over the world. This is important. In New Zealand, the 'Gala' and 'Sterma' seem to be gaining in popularity, whereas, 'Granny Smith' is levelling off in plantings in Argentina, Chile, Australia, and New Zealand. It is gaining in the U.S. and Europe, where the growing season is long enough--about 180 to 200 days. 'Mutsu', a green apple of good quality and firmness, has some growing problems, but will stay around.

In Europe, there seems to be a swing toward more colored apples than in the past. For this reason, 'Gloster' ('Richard' x 'Glorkenafel') and 'Jonagold' are coming into favor for good taste, color, size, and production. In the U.S., Empire is gaining rapidly because of its excellent flavor, firmness, and color. It requires good fruit thinning for size. Other cultivars of superior quality no doubt will come from the apple breeding project at Geneva. A recent find in Washington is a golden type with blush and fine quality, called 'Criterion'.

Rootstocks: At the 27th annual meeting, there will be an update on rootstocks for many major fruit tree rootstocks, such as 'Colt' for cherry and 'Pixy' and other European rootstocks for plum. Grower tests with 'Mark' and other apple rootstocks will be discussed.

Slight Program Changes

In the Monday evening Section I stone fruit session, we have moved Tom Beckman and Dr. Ron Perry to start at 8:25 and Dr. Gus Tehrani to 9:15. There are no title changes, however. An added feature of Section II will be new cherry rootstocks from Belgium.

'Citation' Peach Rootstock

The origin is plum x peach, made by Floyd Zaiger of California. To date, it has shown varied responses, from some possible incompatibility with peach cultivars to nutritional disorders. It tends to be dwarfing, to tolerate heavier soils than peach seedlings, and to defoliate earlier in the fall . . . Dr. Ron Perry, Michigan State University.

Reports on IDFTA Funded Projects

Rootstock Identification

Enzyme extracts from shoot bark tissues of domestic apple seedling and ten dwarfing rootstock cultivars, from the University's nursery planting, were analyzed periodically for peroxidase isoenzyme patterns. Peroxidase zymograms were prepared by polyacrylamide gel electrophoretic separations.

Preliminary results have shown that the rootstock cultivars peroxidases appear to fall into no more than five groups we identified as A, B, C, D, and E. We then attempted to classify the rootstock cultivars into phenotypic groups. Peroxidase zymogram patterns appear to be distinctly different for MARK-24, EMLA-27, and OAR-1; includes one group with similar patterns for OTTAWA-3, EMLA-26, and Domestic Apple Seedling; and a second group with similar patterns for M. 7a, MM 111, MM 106, MARK-9, and EMLA-9. Defining homologous bands within the groups has proven difficult in some cases and remains to be worked out . . . Joseph F. Costante, Vermont.

Editor's note: This is basic research pertaining to quick identification of rootstocks when "mix-ups" occur. Before being practical, much basic research is often essential in solving problems.

Collar Rot Control--Final Report

Final data was taken and trees in this planting were removed in the fall of 1983. Of the MM 106 trees inoculated with oospores of the collar rot organism, 75% have died, compared to 17% of the check trees is this site known to produce collar rot. Of the inoculated interstem trees planted with the stempiece half buried, 83% have died and 67% of the trees with the interstem completely above ground. None of the uninoculated interstem trees have died.

Incorporating composted bark in the planting hole greatly reduced but did not eliminate tree loss. Both Ridomil and Difolitan treatments prevented tree death on all rootstock and interstem treatments tested.

This work was generously supported for five years by IDFTA and it served as a partial data base to acquire a 24-C label for the use of Ridomil on non-bearing trees in Ohio and several other states. . . David Ferree and Michael Ellis, Ohio.

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No. 2, April, 1984 - Prepared by Robert F. Carlson

27TH IDFTA CONFERENCE--PAST, BUT NOT FORGOTTEN

First, the Board, members, and executives wish to convey a special thanks to the many and excellent speakers who so capably presented practical and educational material to the over five hundred persons in attendance. The records show that growers and pomologists came from seven countries, including 29 of the United States, 7 Canadian provinces, Poland, China, England, Germany, and Zambia.

Secondly, the rootstock research committee agreed to fund 31 research projects with a total of \$31,306. The IDFTA directors approved and signed these research proposals. Since 1976, the Association has funded rootstock research projects with about \$180,000.

MORE FOR ROOTSTOCK RESEARCH

The following horticultural societies presented checks at the conference for rootstock research: Georgia Horticulture Society, \$1000; Wisconsin Apple and Horticulture Council, \$500; Indiana Horticulture Society, \$200.

Many IDFTA members have, during the year, contributed various amounts for rootstock research.

KLACKLE FUND

In December, 1983, Elsie Klackle contributed \$2000 to the Raymond Klackle Memorial Speakers Fund. The Board of Directors conveys their appreciation and thanks on behalf of the members and supporting fruit industry.

IDFTA WOMEN'S GROUP MEETING, MARCH 6, 1984

Forty-seven ladies were present for the touring of Jim Robinette's Apple Haus and Flower Shop. At the business meeting, at 11:15 a.m., a local program chairperson was discussed for the next year. Marie Hargrave, from Washington, was elected. Gail Milburn of Elkton, Maryland, was elected General Chairperson.

Also, discussed was putting out a nationwide cookbook and the majority was for it. A steering committee of four volunteers was formed. We left Robinette's at 1:00 and spent the next two hours at Rockford's Squires Square and the Outlet Store. We arrived back at the hotel at 4:00. . .Rosemary Rasch, Michigan Chairperson.

1984 SUMMER ORCHARD TOUR IN NEW JERSEY

Dates: Monday, June 18 - Registration and evening slide session.
Tuesday, June 19 - South Jersey orchard tour.
Wednesday, June 20 - North Jersey orchard tour.
Thursday, June 21 - Optional small fruit tour.
Friday, June 22 - Optional Atlantic City visit.

Lodging: Dormitories of Rutgers University.

Meals: See the detailed agenda for all the activities prepared by the New Jersey Cooperative Extension Service.

28TH ANNUAL CONFERENCE AT YAKIMA, WASHINGTON

The firm dates for the conference are February 24-28, 1985. Registration is Sunday, February 24. There will be full two-day meetings on Monday and Tuesday, February 25-26, and a full one-day orchard tour on Wednesday, February 27. The post-conference two-day orchard tours are on Thursday, February 28, and Friday, March 1. Plans are being finalized for charter flights from the eastern United States to the meetings.

Rooms have been blocked for IDFTA members in the following: Towne Plaza, Holiday Inn, Thunderbird, Holiday Motor Hotel, and the Red Lyon. In order to obtain conference rates, reservations must be made with the Yakima Valley Visitors Convention Bureau. A housing reservation form will be mailed with the next newsletter.

Those members interested in going to the Washington conference via charter from Chicago, leaving Saturday, February 23 and returning Saturday, March 2, please mail your name and address and the number of persons attending to 301 Horticulture Department, Michigan State University, East Lansing, Michigan 48824-1112.

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No. 3, July, 1984 - Prepared by Robert F. Carlson

WASHINGTON IN FEBRUARY, 1985

The International Dwarf Fruit Tree Association has begun rotating its annual meetings from coast to coast. With the first out-of-Michigan meeting in 1983 in Rochester, New York, and back to Michigan in 1984, the next move is Yakima, Washington, February 24-28, 1985. The leading apple producing state, indeed, is a logical place to hold a conference on rootstocks, cultivars, pruning, tree training, and general cultural orchard management practices.

The conference format will, generally, follow those of the past, with registration starting at noon, Sunday, February 24, and continuing until Tuesday at noon. Sunday evening, there will be a panel discussion of "International Fruit Growing". Monday and Tuesday will be full day speaker programs, covering topics of practical fruit culture from different states and countries. An informal banquet, Tuesday evening, with a guest speaker, will terminate the formal two day program.

Wednesday, February 27 will be a full day bus tour to visit several orchards in Yakima Valley. From experience of the past three orchard study tours to Washington, these post-conference, three-day orchard tours will truly be an "eye-opener" to all.

Three-day orchard touring is part of this Washington IDFTA conference. By touring, we do not mean three days of touring by bus, but more time roaming by foot in the various orchards, with ample explanations and detailed observations of each orchard and time for questions.

After the Wednesday orchard study in Yakima Valley, the buses will depart at 8:00 a.m., Thursday, for Grady Auvil's varied planting systems on the Columbia River basin. From there, buses will move to the Grant County area, around Quincy. The night will be spent at the Thunderbird Motel in Wenatchee.

The Wenatchee fruit area, and, no doubt, the Tree Fruit Research Station there, will take up the entire day of Friday, February 29 and allow time to return to Yakima motels and to make our departure Saturday morning on the scheduled conference flights.

The orchard study visits are being planned by the capable James Ballard and his area planning committees. Jim has arranged previous tours for the Association and other groups and is very knowledgeable about the Washington fruit industry.

This introduction to the conference and field trips is aimed at giving an overview of what to see and expect while in the great apple state of Washington. As the details of the program and tours develop, there will, no doubt, be changes, but only for the better. As details develop, they will be announced in the newsletters and fruit grower papers and magazines. The final program will be mailed in November.

Conference Rate Flights from the East are planned to depart Saturday, February 23 and return Saturday, March 2. These flights will depart from Buffalo, New York, Detroit, Michigan, and Chicago, Illinois. American Airlines has approved low conference rates to and from the conference at Yakima.

Urgent: In order to follow through on low conference flights with American Airlines, names of people going on these flights are needed now. Please send or call your intentions to Ann Allen, College Travel Office, 130 West Grand River, East Lansing, Michigan 48823; telephone (517)351-6010.

Housing reservation forms for the Yakima Conference are enclosed with this letter. They should be returned as indicated and as early as possible, in order to make adequate and complete plans for a large attendance.

Pre-registration for the conference will be mailed with the next newsletter.

1984 SUMMER ORCHARD TOUR TO NEW JERSEY

An average attendance was recorded, with people from many of the United States, Canada, England, and Uruguay. Four buses and a line of cars toured both the southern and northern fruit areas of New Jersey. Many of us know that New Jersey is the "Garden State", but all of us did not realize that it might also be called the "Peach State", judging by the many good peach plantings visited.

Several unique and interesting peach and apple plantings were observed, due to the fine organization and planning by Win Cowgill, extension agent at Rutgers University, and his working committees. We owe all of them a big thanks for their enthusiasm and performance. Also, we wish to acknowledge, with thanks, the eight or more fruit growers whose farms we visited. It was obvious that many hours of preparation had been spent in making the group welcome at each stop. The picnics each day and refreshments at each location were very much appreciated. A big THANKS to all! Yes, the weather was beautiful.

THE 'CHARGER' - A NEW SWEET CHERRY ROOTSTOCK

The National Seed Development Organization Ltd., Cambridge, England, has announced this new stock and are in the process of increasing it for commercial use. 'Charger' was bred and named at the East Malling Research Station. It is more vigorous than 'Colt', but less than F12/1. Whether 'Charger' is compatible with tart cherries and its cold tolerance are not known at this time.

MORE 'MARK' APPLE ROOTSTOCKS AVAILABLE

Fruit growers interested in trying this well tested rootstock can do so by ordering one hundred trees of any one particular variety to be budded on 'Mark'

in July/August of this year. This is the second phase of grower trials and will serve to get adaptability evaluations of the rootstock in many locations and in varied soils and climates. Contact your area extension person or horticulturist about your tree order and that person will help evaluate your test planting. Cost per tree is \$5 plus handling and shipping.

Since tree budding time is here, the order must be made soon by writing Mike Smith, Oregon Rootstock, Inc., 10906 Monitor-McKee Road, N.E., Woodburn, Oregon 97071; telephone (503)634-2209.

APPLE TREES IN RIDGE PLANTING

Apple production in Finland is restricted by the hard climate and a rather short and cool growing season. The severe winters often cause losses by injuring and killing the trees and creating fluctuations in annual yields. The choice of orchard location with a favorable microclimate and the use of hardy plant material is the first premise for controlling the injuries. However, in addition to this, using a special growing technique has greatly influenced the performance of the apple trees.

Planting the trees on a low (about 30 cm, or 12 inches, high) ridge, covered with a plastic film has proved a useful method in raising apple trees under Finnish conditions. The ridge is prepared by working two plow ridges against each other and by pushing soil from the sides onto the middle of the row. A polyethelen film, 120 cm (4 feet) wide is spread along the row and covered with soil.

Apple trees grown on a ridge covered with a plastic film have shown better growth, productivity, and winter hardiness, compared to those grown on flat soil. The growth of the trees has been more vigorous, which has led to earlier and heavier yields. The growth ceases earlier at the end of the season and, especially after wet autumns, the trees have wintered with less frost injuries than those growing on flat soil.

The better performance of the trees in ridge planting is due to a more favorable moisture condition and to the higher soil temperature as compared to planting on flat soil. The better soil moisture and temperature conditions also have an advantageous effect on the winter hardiness of the trees. Soil analyzes have revealed that the pH and level of fertilizers have been lower in ridge planting with the exception of nitrogen and magnesium. . . J. Sako and E. Laurinen, Agricultural Research Centre, Department of Horticulture, SF-21500 Piikkio, Finland.

PLANTING SYSTEMS--THE VERTICAL-AXIS

While traveling in Europe, one cannot help but to be impressed with the various tree training systems employed in apple, peach, nectarine, and pear plantings. One is, also, impressed with the enormous amount of tree support material (posts and wires) used and labor expended in establishing these systems. Once established and fruiting, the annual management cost is reduced. Also, the rather high and annual yields of quality fruit is offsetting some initial expenses. The varied planting systems now in use are complex, rather

than simple, meaning more use of skilled, well trained labor and less mechanization. However, the engineers are trying to mechanize the harvesting and some pruning of the almost ultra high density planting systems.

The vertical-axis is new and taking over, especially in the peach plantings. This system actually is a modified central leader form of tree training, the major difference being more drastic annual and/or bi-annual heading back of the numerous side branches of the central leader. Another major difference is in the start of the axis tree. One year old peach trees are planted with the graft union above the soil line. A week or so after planting (allowing time for the soil to settle), the trees are cut off about an inch or two above the graft. The most vigorous upright shoot arising from above the graft is kept and the rest of the shoots are removed. This one shoot grows rapidly to a height of five or six feet by fall. It, also, has numerous scaffold branches for starting bearing surface.

Peach and nectarine trees producing fruit on the past year's shoots lend themselves very nicely to this system, because annual stubbing of some branches will keep the fruiting area next to the vertical axis. Some trees were allowed to reach a height of ten to twelve feet. Trees, in most cases, were four feet apart in the row, with rows about fourteen feet apart, allowing ample movement between rows.

PIT-SPIT IN MICHIGAN

The eleventh annual international cherry pit spitting meet was held July 7 at Tree-Menders Fruit Farm, Eau Claire, Michigan. This is a unique summer fest, bringing people from far and wide. You have to see this to believe it. Last year, the champion pit spitter was Rick Krause, who "shot" 65.2 feet and maintained the championship in 1984 by spitting 56.1 feet.

MOTEL RATES AS OF JUNE, 1984 IDFTA Conference, Yakima, Washington February 23 to March 2, 1985

Motel	Single	Double 1 bed/1-2 persons	Double 2 beds/2-4 persons
Holiday Inn	\$35	\$40, 2 persons	\$40, 2 persons \$5 each additional
Holiday Motor Hotel	\$37	\$43, 2 persons	\$43, 2 persons \$6 each additional
Red Lion Motel	\$27 (queen)	\$36, 2 persons	\$40, 2 persons (queen) \$7 each additional
Thunderbird Motor Inn	\$38-45	\$45-59	\$45-59 \$7 each additional
Town Plaza Motor Inn	--	\$33	\$42, 2 persons \$48, 3 persons \$54, 4 persons

Note: All housing reservations should be made to Convention Housing, Yakima Valley Convention Bureau, Box 124, Yakima, Washington 98907. See Housing Reservation Form enclosed. Rates are subject to change and do not include tax. Reutrn by November 1, 1984. Do not send money. The motels may ask for deposits.

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No. 4, October, 1984 - Prepared by Robert F. Carlson

28th Annual IDFTA Conference
Yakima, Washington

A full week of meetings and orchard tours is being planned by The International Dwarf Fruit Tree Association for February 24 to March 2, 1984. The site is the Convention Center, Yakima, Washington. The theme of the conference is: "Quality rootstocks and cultivars plus good orchard management adds up to quality fruit."

Speakers covering this theme come from Italy, Holland, Australia, Canada and several states. Rootstock performance for apple, pear and peach will be discussed in detail. Training of trees on varying size controlled rootstocks as well as different pruning types and methods will be feature parts of the program. That is, the different tree training systems from free standing central leader trees to spindle forms to Tatura and Ebro forms will be described, discussed and told how these types may fit into growers particular situations.

The program with full particulars will be mailed to members of the IDFTA in December. Extra programs may be obtained from the Horticulture Department Room 301 MSU, E. Lansing, Michigan 48824-1112. Membership in IDFTA may also be obtained by sending name and address to above address, or by requesting an application form. The annual dues are \$40 for commercial growers and related industries and \$25 for educational personnel and libraries.

Pre-registration forms will be mailed in October. The cost for conference registration is \$15 per person. In the case of growers with affiliated personnel the grower pays \$15 and affiliated persons \$7.50. Pre-registration must be returned by December 15, 1984. Persons not registered by that date will pay double---\$30 and \$15.

Conference flights from Buffalo or Detroit or Chicago to Yakima and return are still available by calling Ann Allen or Don Ambrose, College Travel Office, 517-351-6010 or writing 130 W. Grand River, East Lansing, Michigan 48823. The flights will leave Saturday February 23 and return Saturday March 2. Return flight is tentatively scheduled to depart from Wenatchee rather than Yakima. See tentative flight schedule on page 15.

NC-140 Research Projects

Some questions have come up: what is this project and its purpose? It is a cooperative project of US Department of Agriculture and state experiment stations. Several of these projects on various crops are in progress. The NCR(North Central Regional) project originally was made up of eight states including Alaska. Due to its growing importance in developing durable fruit tree rootstocks, states involved in fruit production from coast to coast have requested participation in the project.

Since the inception in 1964, this rootstock project has changed in number from NCR-78 to its current NC-140, some years funded and some years not. The chairman of the committee the first three years was R. F. Carlson and since then this position is on a rotating basis. Essentially, when funded (as it currently is) experiment stations active in tree research are partially funded and the horticulture department doing rootstock research obtain project support from the station.

The purpose of NC-140, although wide in scope, is to test old and newer rootstock and breed for disease and cold tolerance in rootstock for the future. Secondly, the project is organized to avoid duplication in research; and also to test new and old rootstocks with uniform cultivars in many states under different soils, temperature and moisture conditions. In this way research data is pooled and uniformly reported to expedite results more rapidly to the fruit growing industry.

For several years IDFTA also has provided financial support to NC-140 for soil testing, publication printing and for shipping of trees from nurseries to experiment station researchers. For example, recently IDFTA paid \$968.54 for shipping of most trees for the NC-140, 1984 planting set in 32 states, 3 provinces and one in Mexico.

Nurserymen propagating rootstocks and fruit trees are supporting IDFTA rootstock research projects and NC-140. As an example, for the past two years Knowlview Nursery Inc. in Woodburn, Oregon propagated 6,813 uniform apple trees for the 1984 NC-140 spring planting. These trees with a total cost of \$40,878.00 were donated to the NC-140 project by that nursery.

Since 1976 members of IDFTA have provided support funding of rootstock related research projects which indirectly is NC-140 cooperation. Seventy percent of members annual dues for the past eight years has been allocated for research. To date this amounts to over \$150,000. Fruit growers and nurserymen are to be commended for this fine fruit industry support.

Also a reminder to pomology researchers who wish to apply for rootstock research grants from IDFTA to do so prior to December 17, 1984. See pages 179-181 of Compact Fruit Tree, Vol. 17, 1984 for more information and project form---R.F.C.

Compact Fruit Tree--Vol. 17, 1984

Volume 17, as well as 7, 11, 13, 14, 15 and 16 are available. These publications contain valuable growing hints for both new and old orchardists and nurserymen. Membership roster is listed in 1984 issue. Members of the Association receive these free. The cost of Vol. 17 to non-members is \$20. It pays to be a member.

A NEW DWARFING APPLE ROOTSTOCK FROM WEST GERMANY

'Jork 9' (hereafter J. 9) was introduced in 1981 by Tiemann and Dammann at the Fruit Growing Research Station at Jork in the estuary of the Elbe in Northern Germany. Selected from a population of open-pollinated seedlings of Malling 9, J. 9 has been tested for about 20 years at Jork. Production efficiency of trees on J. 9 is high - nearly as high as M. 9. Trees on J. 9 are slightly larger than trees on virus-free M. 9. Gloster/M. 9, for example, appeared to me somewhat too vigorous to hold as slender spindles, but Jonagold/J. 9 can be held with summer pruning.

It performs well in the stoolbed and nursery, often producing stool-shoots similar to MM 106. Rooting percentage is higher than MM 106 and superior to M. 9. Liners are straight and clean-shanked and establish very well. J. 9 has not been tested with 'Jonagold', 'Gloster', 'Jamba', 'Boskoop', 'Cox's Orange Pippin' and 'Golden Delicious'. Stock overgrowth of J. 9 is similar to overgrowth of M. 9 and M. 26.

'Jork 9' is more tolerant than M. 9 of low winter temperatures in Northern Germany. At Geneva, J. 9 is the most susceptible to fire blight of any apple we have tested under greenhouse conditions. J. 9 produces more burrknots than M. 9. It is susceptible to wooly apple aphids, and to date has not been tested for susceptibility to the collar rot pathogens.

'Jork 9' appears to be of limited value in the slot between M. 9 and M. 26 vigor; but could be attractive for the nurseryman. The orchardist should be aware of the extreme fire blight susceptibility....J.N. Cummins, NYSAES, Geneva, New York.

More About Yakima Conference

A map showing location of the Yakima Conference Center and Motels is on the back page. Please keep this to assist you in Yakima.

Motels 2, 3 and 4 on the map are within walking of the meeting center. Motels 5 to 10 are served by city bus routes direct to Convention Center. Bus schedules will be available at the registration desk at the center.

Motels 11 and 12 are located farther away at the Union Gap and can be used by those who have their own transportation.

Pruning Pointers

In the past quarter of a century dormant pruning has changed drastically when comparing to the old standard method of growing trees. Today dormant pruning varies according to how the trees were planted and trained. That is, free standing versus tree support systems.

Furthermore with more use of summer or pre-harvest pruning, dormant pruning has been minimized. Hence dormant pruning will vary according to tree spacing, tree training system, rootstock and variety, overall vigor of trees, summer pruning done in past seasons and according to pruning time available.

With apple, the type of rootstock used for the variety will most influence how and how much to prune. Generally, the more dwarfing the rootstock the less pruning is required.

One chief aim in pruning, whether summer or dormant pruning is to make and keep all trees efficient to manage and to produce quality fruit. This means maintaining tree size according to adopted planting plan and to allow sunshine into the trees, but yet keeping them compact and productive.

Also pruning involves knowing how the trees will respond to each cut made. Some knowledge of fruit buds versus vegetative buds helps in making the different cuts. A little time spent in teaching new pruning techniques is important and useful. Certain pruning patterns can be established and followed for each planting system and tree training type. Also keep in mind that dormant pruning tends to invigorate the trees so do not over prune, but use moderation.

Winter injury to tree trunks and scaffold branches often occur in fall and January. In some areas fall and January pruning has contributed to certain amounts of injury to the trees. Of course many factors are involved which cause trees to be damaged by low temperatures. For example, nutritional vigor of young vs old trees, amount of crop and perhaps pruning---all these and other factors may contribute to degrees of injury. In such cases, the bulk of pruning should best be held off until February, March and April. Stone fruits are notably more tender than the pome fruits...R.F.C.

Tree Training and Pruning

Charles Russell Appleton NY writes: "All our trees are trained to a central leader. The first 5 years are the most important years. Many papers have been written on tree training, so my comments will be short. With the inter-stem tree, it is important to have a straight tree and to get it off to a fast start because in the first 5 years, a frame must be built that will support the 700-1000 bushels we would like to have by years 7, 8 and 9. We spread all scaffold limbs that need it, starting in the second to third year, depending on the growth we obtain. We have found that extra time spent during the first years of a tree's life will save many dollars during the production period of an orchard. By having all trees trained to the central leader, it is much easier to train people to prune trees during the productive years. The main thing we try to emphasize in pruning a producing orchard is the need for sunlight and to remove the largest limbs possible to achieve this--in other words, a few larger cuts rather than many small ones." -Abstract from Newsletter N.Y. State Horticulture Society.



college travel office

130 WEST GRAND RIVER EAST LANSING, MICHIGAN 48823 PHONE: 351-6010 CODE 517 CABLE: WALDO

27 September 1984

INTERNATIONAL DWARF FRUIT TREE ASSOCIATION

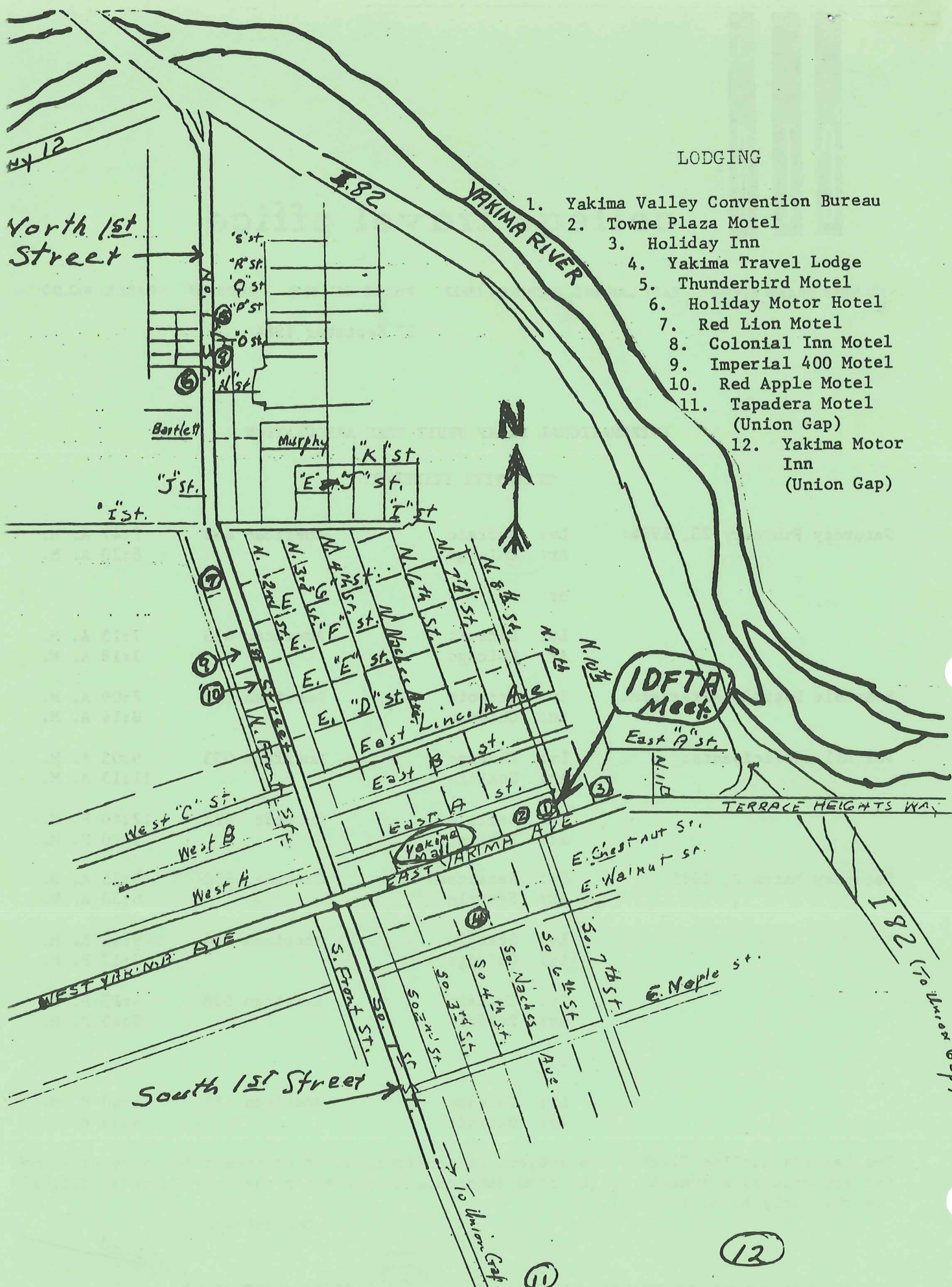
TENTATIVE ITINERARY

Saturday February 23, 1985:	Lv: Buffalo	American 643	7:47 A. M.
	Ar: Chicago		8:20 A. M.
	or		
	Lv: Detroit	American 413	7:13 A. M.
	Ar: Chicago		7:18 A. M.
Possible Detroit Alternate:	Lv: Detroit	American 265	8:09 A. M.
	Ar: Chicago		8:14 A. M.
For All participants:	Lv: Chicago	American 053	9:05 A. M.
	Ar: Seattle		11:13 A. M.
	Lv: Seattle	Cascade 625	12:40 P. M.
	Ar: Yakima		1:20 P. M.
Saturday March 2, 1985	Lv: Wenatchee	Cascade 652	5:55 A. M.
	Ar: Seattle		6:30 A. M.
	Lv: Seattle	American 024	9:40 A. M.
	Ar: Chicago		3:17 P. M.
	Lv: Chicago	American 528	4:15 P. M.
	Ar: Buffalo		6:43 P. M.
	or		
	Lv: Chicago	American 182	4:00 P. M.
	Ar: Detroit		5:59 P. M.

The Cascade Airline Flights are subject to confirmation of equipment for size of group. (We are seeking a special flight from Wenatchee as presently the only Saturday flight is the early A. M. flight.)

Don Ambrose





LODGING

1. Yakima Valley Convention Bureau
2. Towne Plaza Motel
3. Holiday Inn
4. Yakima Travel Lodge
5. Thunderbird Motel
6. Holiday Motor Hotel
7. Red Lion Motel
8. Colonial Inn Motel
9. Imperial 400 Motel
10. Red Apple Motel
11. Tapadera Motel (Union Gap)
12. Yakima Motor Inn (Union Gap)

North 1st Street

South 1st Street

IDFTA Meet.

Yakima Mall