ANNUAL REPORT OF THE
BEAN IMPROVEMENT
COOPERATIVE

A VOLUNTARY AND INFORMAL ORGANIZATION
TO EFFECT THE EXCHANGE OF INFORMATION AND MATERIALS

Volume 30
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The XXX
Report of the
BEAN IMPROVEMENT COOPERATIVE

No. 30 March 1987

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TABLE OF CONTENTS

ANNUAL REPORT OF THE BEAN IMPROVEMENT COOPERATIVE........................ 1
Call for Nominations for the BIC Meritorious Service Award................. 1
1987 BIC/NPIA Meeting Information.................................................. II
CIAT Bean Book Update - Bean Production Problems.......................... III
Handbook of Bean Diseases............................................................. III
Retirement of Dr. Douglas W. Burke.................................................. IV
In Preparation – Compendium of Bean Diseases.................................. V
Phaseolus Crop Advisory Committee Summary of Minutes...................... VI

PROCEEDINGS OF THE BEAN IMPROVEMENT COOPERATIVE AND NATIONAL DRY BEAN COUNCIL

List of genes in *Phaseolus vulgaris* for resistance to viruses -- R. Provvidenti................................................. 1
Recurrent selection for increased nodule number in black bean -- B.D. Miranda, Pedro Arreas A. Pereira and F. A. Bliss.................................................. 5
Breeding value of bean lines for increased nitrogen fixation -- Baldwin D. Miranda and Fred A. Bliss........ 7
Analysis of carbohydrates in the common bean plant
(*Phaseolus vulgaris* L.) under drought conditions -- Jorge Alberto Osuna Garcia, Maria Luisa Ortega Delgado, and Abel Munoz Orozco.................................................. 9
Effect of polyculture system on Mexican Bean Beetle Leafhopper and Corn Earworm populations -- T. Mebrahtu, M. Rangappa, and P.S. Benepal.................. 10
Inducing early flowering in Andean cultivars adapted to low temperature -- J.W. White, J.H.C. Davis and J. Castillo.................................................. 12
Resistance to Black Root -- J.H.C. Davis, F. Morales, M. Castano.......................... 14
Six bean populations developed in Puerto Rico from interspecific crosses (*Phaseolus vulgaris* x *P. coccineus*) -- G.F. Freytag, M. J. Bassett, and J. Lopez-Rosa.......................... 16
Aconitase variation in *Phaseolus vulgaris* -- David F. Garvin and J. G. Waines.......................... 17
Aspects of nodule function and plant development in *Phaseolus vulgaris* L. -- Gautam Sarath and Barbara D. Webster................................................. 18
Bean planting systems in Brazil -- Itamar Pereira de Oliveira.......................... 19
Bean plant spacing and density in the Brazilian cerrado -- Itamar Pereira de Oliveira.......................... 21
Determining the bean root rot potential of fields in Ontario -- R. Hall and W. McFadden.................. 22
Prediction of white mold in white beans in Ontario -- R. Hall and C. Mwiindilila.......................... 24
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification of methionine-protein and quantitation of their methionine contents --- Benito O. de Lumen and Choon-Joo Kho</td>
<td>26</td>
</tr>
<tr>
<td>Socio-economic aspects of bean (Phaseolus vulgaris) research in Africa --- Jean M. Due</td>
<td>28</td>
</tr>
<tr>
<td>Seed coatings to reduce imbibitional chilling injury --- A.G. Taylor</td>
<td>30</td>
</tr>
<tr>
<td>Survey of U.S. bean breeding priorities for the 1990's --- M.J. Silbernagel</td>
<td>32</td>
</tr>
<tr>
<td>Development of a Phaseolus crop simulation model --- Gerrit Hoogenboom, J.W. Jones, J.W. White, and K.J. Boote</td>
<td>34</td>
</tr>
<tr>
<td>Water management effects on biomass production and seed yield of Phaseolus vulgaris (L) --- Sacko Mahamadou, Gerrit Hoogenboom, J.M. Bennett, K.J. Boote and J. W. Jones</td>
<td>36</td>
</tr>
<tr>
<td>Chemical and enzymatic stability of Phytohemagglutinin (PHA) purified from kidney beans --- D.G. Coffey, M.A. Uebersax and G.L. Hosfield</td>
<td>38</td>
</tr>
<tr>
<td>Evaluation of food quality characteristics for selected dry beans (Phaseolus vulgaris L.) --- D.G. Coffey, M.A. Uebersax, and G.L. Hosfield</td>
<td>40</td>
</tr>
<tr>
<td>Use of a commercial organic acid blend as a storage treatment for high moisture dry nasey beans --- M.A. Uebersax, J.A. Machiorlatti, J.G. Wilson, and G.L. Hosfield</td>
<td>42</td>
</tr>
<tr>
<td>Breeding beans resistant to Bruchids --- Rhea Harmsen, F.A. Bliss, and T.C. Osborn</td>
<td>44</td>
</tr>
<tr>
<td>Studies on bacterial blight resistance --- A.W. Saettler and R.B. Mabagala</td>
<td>46</td>
</tr>
<tr>
<td>Evaluation for a new fungicide for control of bean rust --- D.T. Lindgren and J.R. Steadman</td>
<td>48</td>
</tr>
<tr>
<td>Genetic suppression of phaseolin and lectin proteins in seeds of the common bean (Phaseolus vulgaris L.) --- Mark Burow, Donna Delaney, and F.A. Bliss</td>
<td>52</td>
</tr>
<tr>
<td>Response for row width of white bean lines selected for upright plant types --- T.W. Welacky and S.J. Park</td>
<td>54</td>
</tr>
<tr>
<td>Breadmaking with wheat and flour made from long-stored common bean seeds and its nutritional value --- M.G. Vazquez-Carrillo, M.L. Ortega-Delgado, H. Cejudo-Gomez, and E. Estrada-Lugo</td>
<td>55</td>
</tr>
<tr>
<td>Studies in an allopolyploid population of an interspecific combination between Phaseolus vulgaris and Phaseolus filiformis --- M.R. Weilennmann de Tau, J.P. Baudoin and R. Marechal</td>
<td>56</td>
</tr>
<tr>
<td>Inheritance of resistance to common bacterial blight in Tepary bean --- E. Drijfhout</td>
<td>57</td>
</tr>
<tr>
<td>Water absorption and cooking time in long stored common bean seeds (Phaseolus vulgaris L.) --- Haydee Y. Hernandex-Unzon and Ma. Luisa Ortega-Delgado</td>
<td>58</td>
</tr>
</tbody>
</table>
| Genetic variation and inheritance of resistance of leaf iron deficiency chlorosis in dry bean (Phaseolus
Genetic variation and genotype x environment interaction for leaf iron-deficiency chlorosis in dry beans
(Phaseolus vulgaris L.) — Haytham Z. Zaiter, D.P. Coyne and R.B. Clark

60

Temperature, grafting method, and rootstock influence on iron deficiency induced chlorosis of beans (Phaseolus vulgaris L.) — Haytham Z. Zaiter, D.P. Coyne and R.B. Clark

61

New records of arthropod pests of grain legumes in Ethiopia — Tsedeke Abate

62

Effects of tillage and spacing on snap bean production — Charles A. Mullins and David L. Coffey

64

Effect of harvest date on yield and quality of several snap bean cultivars — Charles A. Mullins and David L. Coffey

65

Bean rust in the United States in 1986 — J.R. Stavely

67

Recovering mapped marker genes from the remains of Lampricht’s seed collection — M. J. Bassett

69

Studies in F2 reciprocal populations of an interspecific hybrid Phaseolus vulgaris L. x Phaseolus polyanthus Grenm — F. Camerena, J.P. Baudoin and R. Marechal

71


72

Comparison of ozone symptom expression among plant introductions of Phaseolus vulgaris L. between laboratory and field studies — A.H. Chappelka, M. Rangappa, E. Robbins and P.S. Benepal

74

Seed moisture and development of early planted cowpea — Lurline Marsh and Rufus Jones

76

Effect of seed size and depth of planting on seedling emergence and yield of two pinto bean cultivars — Phillip N. Miklas and Calvin H. Pearson

77

Changes overtime in the proportion of beans in a varietal mixture — J. Michael Dessert

79

Evaluations of Ascochyta resistance in Phaseolus coccineus germplasm collection at C.I.A.T. (Centro Internacional de Agricultura Tropical, Cali, Colombia) — V. Schmit and J.P. Baudoin

81

Ontogenetic changes and assimilate partitioning in aborting and nonaborting seeds of Phaseolus vulgaris L. — Tammy L. Sage and Barbara D. Webster

82

Effect of temperature on root length under water-limited conditions for Phaseolus acutifolius and P. vulgaris — S.J. Bouscaren, T. Lazcano, F., and J.G. Waines

83

The physiological nature of snap bean semi-hard seeds — R. Holubowicz, A.G. Taylor, M.C. Goffinet, M.H. Dickson

85

A severe isolate of bean common Mosaic Virus NY 15 — M.M. Kyle and R. Provvidenti

87

"Bronceado" of beans, an abnormal condition of dry beans (Phaseolus vulgaris L.) — Andres France, Juan Tay
Effect of removal of flowers and pods on the yield and its components in Phaseolus vulgaris L. — Luis Enrique Escalante Estrada, Salvador Miranda Colin, Josue Kohashi Shibata and Jose Alberto Escalante Estrada

Yield and its components in Phaseolus vulgaris L. as influenced by planting dates -- Manuel Aviles Camarena, Luis Enrique Escalante Estrada, J. Alberto S. Escalante Estrada and Josue Kohashi Shibata

Effect of water stress on the ovules of Phaseolus vulgaris L. — Petra Yanez-Jimeinez and Josue Kohashi-Shibata

Interspecific hybridization of Phaseolus vulgaris with P. angustissumus, P. filiformis and P. ritensis. — Rixana Petzoldt and M.H. Dickson

Preliminary indication of Grey Mold (Botrytis cinerea) resistance in beans -- M.H. Dickson and J.M. Hunter


Yield in a pole snap bean (Phaseolus vulgaris) in two types of trellises and two planting distances -- J. Alberto S. Escalante-Estrada and Josue Kohashi-Shibata

The role of transgression in the resistance to Xanthomonas phaseoli -- Velich, I. - Szarka, J. - Horvath, I.

RELEASE NOTES:

Notice of naming and release of Cardinal, a new cranberry bean for Michigan and the Great Lakes Region -- United States Department of Agriculture and Michigan Agricultural Experiment Station

Release of Wis (MDR) 147 bean breeding line -- D.J. Hagedorn and R. E. Rand

Release of Pinto GH-196 and JM-126, Pink UNS-117 and 6R-42, and Great Northern JM-24 dry bean germplasm -- D. W. Burke

Release of 'Kardinal' and 'Kamikasi' light red kidney beans -- D.W. Burke

Release of 'Othello' Pinto bean -- D.W. Burke


Snap bean germplasm line: VR-Romano -- M.J. Silbernagel

MEMBERSHIP LIST

FINANCIAL STATEMENT
The XXX Annual Report
of the
Bean Improvement Cooperative

This year the biennial meeting will be held in Denver, and hosted by Dr. Howard Schwartz and his cohorts. We look forward to seeing the city of Denver, and I am told very good facilities will be available. I hope we do not get lost in an early snow storm.

I have had the pleasure of being your chairman for the past eleven years and I think it is time I passed that responsibility onto someone else. Dr. Howard Schwartz has agreed to become chairman after the biennial meeting in Denver. I am sure with his international background and experience he will bring new enthusiasm to this responsibility. I will miss the opportunity to have the last paper submitted to the annual report, also the opportunity to read all your reports and get the information early. I think the BIG is in good financial shape, and we have membership from most areas of the world, where there is active bean research. We have back issues available for the past 6 years for those who need them. Please after November 1, 1987 send all correspondence to Dr. Schwartz in regard the BIG.

Michael H. Dickson
for the Coordinating Committee

Call for Nominations for the BIC Meritorious Service Award

The BIC membership is reminded that they should make nomination for the meritorious service award not later than July 1, 1987-- to be sent to Dr. Donald Hagedorn, Department of Plant Pathology, University of Wisconsin, Madison, WI 54706. Awards are made for “an outstanding single accomplishment or substantial high performance over a period of years”. The nominations should be accompanied by a summary statement of approximately one typewritten page giving place of birth, academic background, and accomplishments. Various people have suggested that it would be helpful if those who have received the awards be listed. The following is the list of those who have received the Meritorious Service Award:- W.Burkholder, H. Gentry, C. Hungerford, M. Parker, F. Smith, R. Wester, J. Natti, J. Douglass, H. Lamprecht, L. Dean, N. Hubbeling, W. Adams, D. Coyne, S. Honma, M. Shuster, C. Viera, D. Burke, R. Prakken, B. Ballantyne, D. Hagedorn, M. LeBaron, D. Wallace, E. Dryfhout, D. Wood and R. Sandsted.

BIC Awards Committee
George Emery
Roger Sandsted
Donald Hagedorn, Chairman
1987 BIC/NPIA MEETING INFORMATION

The 1987 BIC/NPIA meetings will be held at the Sheraton Denver Tech Center (303-778-1100), 4900 DTC Parkway, Denver, CO 80237. The prices are $63 (single/double) per night, and limousine service is available from the airport for a fee. Additional information on room reservations will be distributed later with the request for program speakers and topics. Arrangements are being handled by Dr. Howard F. Schwartz (303-491-6987), Dept. of Plant Pathology & Weed Science, CSU; Dr. Mark A. Brick (303-491-6551), Dept. of Agronomy, CSU; and Dr. Eric E. Roos (303-484-0402), National Seed Storage Lab, Fort Collins, CO 80523.

The tentative program schedule is as follows:

Oct. 26 - National Pea Improvement Assn. (NPIA)
  8:30 am to 5:30 pm
  - NPIA Luncheon
  - Phaseolus Crop Advisory Committee
    1:30 pm to 5:30 pm

Oct. 27 - NPIA  8:30 am to noon
  - National Dry Bean Council  8:30 am to 12:00
  - Bean Improvement Cooperative  1:30 pm to 5:30 pm
  - Pisum Crop Advisory Committee
    7:00 pm to 10:00 pm

Oct. 28 - BIC  8:30 am to 5:30 pm
  - BIC Awards Banquet

Oct. 29 - BIC  8:30 am to 12:00
  - Regional W-150  1:30 pm to 5:30 pm

Oct. 30 - Regional W-150  6:30 am to 12:00
CIAT Bean Book Update - Bean Production Problems

CIAT is preparing to print the updated version of its 1980 review (English and Spanish) entitled, "Bean Production Problems: Disease, Insect, Soil and Climatic Constraints of Phaseolus vulgaris." Drs. H. F. Schwartz (Colorado State University) and M. Pastor Corrales (CIAT) have edited this version with extensive input by numerous authors and reviewers from Latin America, Africa, Europe, Canada and the United States. This version continues to emphasize the international scope of bean production problems and their management, and relies upon comprehensive literature compilations. This edition will be very useful for all dry bean workers, and should be available soon.

***

HANDBOOK OF BEAN DISEASES

D. J. Hagedorn and D. A. Inglis
Dept. of Plant Pathology, University of Wisconsin-Madison

This newly-published handbook is a very useful presentation of pertinent information on 24 bean disease problems. Four bacterial diseases are considered as well as 7 fungus-incited foliage diseases, 5 root and stem diseases, 4 virus diseases, and 5 non-parasitic problems. Information on occurrence-importance, symptoms, cause-spread, environmental factors, cultivar reaction, and control is given for individual diseases. A few selected literature references are also included for each disease. Forty-seven excellent color photographs are an important feature of the handbook.

The Handbook of Bean Diseases is very helpful for bean disease identification and brief but critical information on most of the important bean diseases. This 25 page publication sells for $3.75 plus postage and is available from:

Agriculture Bulletin
Room 245
30 N. Murray Street
Madison, WI  53715

Phone 608/262-3346
Dr. Douglas W. Burke was born on April 27, 1920, and raised in Lovell, Wyoming. He received his B.S. and M.S. degrees from the University of Wyoming in 1947 and 1948, respectively, and his Ph.D. degree in Plant Pathology from Washington State University in 1955. Dr. Burke has been a Research Plant Pathologist with USDA-ARS since 1954. He was first stationed at Greeley, Colorado, and in 1956 moved to the Irrigated Agriculture Research and Extension Center in Prosser, Washington, until his retirement in June of 1984.

Dr. Burke developed a productive research program during his career with USDA. This is evidenced by his publication record which lists 173 publications. Dr. Burke's most important contributions have been the defining of the Fusarium root rot problem of beans under field conditions, and his ecological and cultural control studies of Fusarium root rot of beans. Under his leadership, it has been shown that even in fields severely infested with Fusarium root rot, near normal dry bean yields can be obtained by the use of Fusarium-resistant cultivars and minimizing plant stress from low temperatures, temporary poor aeration, and root impedance. He has contributed more than anyone else to the knowledge of the ecology of Fusarium root rot of beans, and the effects on the disease due to various cultural practices. His elucidation of the ecological factors in the development of bean root rot has promoted new approaches to root disease research and more effective methods for selecting beans, peas, and other crops for resistance to root rots.

Dr. Burke has been a major contributor to the dry bean industry through his variety development program, from which he has developed 26 new dry bean varieties and 12 germplasm releases with multiple disease resistance. Twelve of these varieties are currently used extensively over large acreages by the dry bean industry. Eight of these varieties are the only commercial cultivars developed with quantifiable levels of resistance to Fusarium root rot. The varieties released in Dr. Burke's program also include the first curly top virus resistant red kidney and pea bean types, and combine early-maturing short vines with high-yielding ability. His Red Mexican and pink bean releases have replaced older varieties throughout the Northwest. Two new pinto bean varieties are gaining in popularity in the West, and two new ones 'Pindak' and 'Nodak' are destined for production on large acreages in North Dakota. In 1981 alone, varieties developed by Dr. Burke were grown on an estimated 100,000 acres.

Dr. Burke is a member of the following professional societies: American Phytopathological Society, Bean Improvement Cooperative, International Fusarium Workers Committee, American Society of Agronomy, and Crop Science Society of America. Dr. Burke has served on a number of technical committees such as the APS Committee on Soil Microbiology, Western Regional Project W-38 and W-150, and the Coordinating Committee of the Bean Improvement Cooperative.

In recognition of his work on ecology and control of soilborne pathogens, he was invited for a year (1967-68) to conduct similar studies on Aphanomyces root rot of peas as a Visiting Professor at the University of Wisconsin. In 1977, he received the Meritorious Service Award of the International Bean Improvement Cooperative. In 1978, he received the U. A. Vogel Washington State Crop Improvement Faculty Award.
Since official retirement in June 1984, Doug has spent 6 months in Botswana as a pathologist-breeder consultant for the University of Colorado Cowpea Collaborative Research Support Program (see reports in BIC vol. 29); and the summers of 1985 and 1986 at Prosser completing the final evaluations and releases of a number of cultivars and germplasm releases (BIC vol. 30).

Doug and his wife Rachel have recently embarked on an 18-month mission to Malaysia and India for the LDS Church.

***************
IN PREPARATION
***************

COMPENDIUM OF BEAN DISEASES

The American Phytopathological Society (APS) is planning to publish a Compendium of Bean Diseases. The compendium will consider biotic and abiotic diseases of all forms of Phaseolus vulgaris. It is expected that the completed manuscript will be submitted by December 1, 1987. The project is being guided by an editorial committee chaired by R. Hall, University of Guelph. Other members of the committee include H.F. Schwartz, G.S. Abawi, A.W. Saettler, M.J. Silbernagel, J.R. Steadman, and D.J. Hagedorn.

There are numerous publications dealing with diseases of beans, each with a specific purpose and approach. However, the APS is keenly aware that beans are missing from the list of crops covered by its compendium series, and wishes to fill this gap. Particular attention will be given to producing a book with unique characteristics to meet special needs. It is planned to produce a document comprehensive in content and international in scope. In addition, since an important use for the book will be to aid diagnosis of diseases, special emphasis will be given to providing clear descriptions and illustrations of causal organisms as well as of symptoms.

The compendium will follow the format of others in the series published by APS. Sections on diseases caused by nematodes, bacteria and viruses (and related pathogens) will be coordinated by G.S. Abawi, A.W. Saettler, and M.J. Silbernagel, respectively. Other members of the committee will share responsibilities for sections on diseases caused by fungi and diseases caused by abiotic agents. Over 100 pathogens will be treated. In addition, there will be sections that consider the growth and production of beans, general aspects of diseases of beans, identification of diseases in the field, and disease control.

In order to produce an authoritative document, the editorial committee is inviting input from the international community of scholars who have special knowledge of bean diseases. This is an open invitation to you to participate in this project. We welcome and need your comments and assistance. We would be pleased to send an outline of the contents to anyone interested in contributing to the compendium. If you have slides we could borrow, if you would like to help to write specific portions of the compendium, if you know of people who have special knowledge, of if you can help in any other way, please contact Dr. R. Hall, Department of Environmental Biology, University of Guelph, Guelph, Ontario, Canada N1G 2W1, telephone (519) 824 4120, extension 3631.
The Phaseolus Crop Advisory Committee met for the seventh time on January 5, 1987, on the campus of Michigan State University, East Lansing, MI. Members attending were M. Dickson, R. Hannan, H. Schwartz, M. Silbernagel, R. Stavely, G. Varner, G. Waines, D. Webster, and M. Bohning from PGGI as facilitator.

Important agenda items discussed were:

1. The Phaseolus descriptor list was found too comprehensive for evaluations to be done at the Plant Introduction Station, Pullman, WA. Nineteen characters were selected as priority targets for the preliminary evaluations conducted by the P.I. curator. The complete descriptor list, as established several years ago, will be maintained in GRIN and data will be entered into the system when the evaluations are done.

2. The GRIN system of NPGS will adopt the CIAT coding for the plant habit character. For other descriptors, the coding system of 1-9 (M for mix) will be used when applicable.

3. High priority was given to the integration of data from CIAT into GRIN, and also reciprocal data exchange was endorsed.

4. It was recommended by the committee that special genetic stock collections, heirloom varieties, breeder collections, selected CIAT material, and selected Cooperative Dry Bean Nursery material be incorporated into the Plant Introduction Phaseolus collection.

5. The PCAC has, in the past three years, submitted proposals for evaluation of Phaseolus germplasm. Evaluation of the collection for seedborne BCMV, rust resistance, and physiological adaptation and photosensitivity were established as priority objectives. These past proposals were discussed and proposal revisions projected. In January 1987, funding was administered for a BCMV cleanup program, evaluation of rust resistance, and plant character evaluations. This funding is for FY 87 and FY 88. These programs are now under way.

6. A report was given on R. Klein's project to determine methods of freeing bean germplasm of seedborne diseases without loss of genetic diversity. The PCAC endorsed the continuation of this program.

7. D. Webster was elected as the new PCAC Chair and new members were nominated. The 1987 PCAC members include E. Roos, M. Silbernagel, R. Stavely, G. Waines, H. Schwartz, M. Basset, G. Varner, D. Webster (chair), R. Shellenberger and R. Hannan. Two positions remain to be filled.

8. The next PCAC meeting will be held in conjunction with the BIC meeting in Denver, CO, October 1987.
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<td>Lincoln, NE 68528</td>
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<td>A. J. Liebenberg Dept. of Agriculture P. Bag X1251 Potchefstroom 2520 REPUBLIC OF SOUTH AFRICA</td>
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<td>Library, Acquisitions Division Cornell University Ithaca, NY 14853</td>
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<td>Librarian</td>
<td>Ferry Morse Seed Co. PO Box 1010 San Juan Bautista, CA 95045</td>
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<tr>
<td>Peter Mattusch Gartenhan, Messegweg 11/12 3300 Braunschweig FEDERAL REPUBLIC OF GERMANY Tel. 0049-2233-42856</td>
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<tr>
<td>Randy J. McCoy Ferry Morse Seed Co. PO Box 1010 San Juan Bautista, CA 95045</td>
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<tr>
<td>Jeffrey McElroy Dept. Horticulture University of Nebraska Lincoln, NE 68583-0724 Tel. 402-472-1126</td>
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<tr>
<td>E. M. Meader 43 Meaderboro Rd. Rochester, NH 03867 Tel. 603-332-5666</td>
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Garnet Radebaugh  
309 N. 2nd Street  
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Irv Rand  
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PO Box 3111  
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Robert E. Wilkinson  
421 Plant Science Building  
Cornell University  
Ithaca, NY 14853  
Tel. 607-256-4562
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