The XXXIX
Report of The
BEAN IMPROVEMENT COOPERATIVE

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**BIC DIRECTORY**

**FINANCIAL STATEMENT**
THE XXXIX ANNUAL REPORT OF THE BEAN IMPROVEMENT COOPERATIVE

The Bean Improvement Cooperative enjoyed a very stimulating and productive annual meeting at East Lansing, Michigan in October of 1995. The BIC members in attendance were all appreciative of the extra efforts put forth by the local organizing committee of Drs. George Hosfield, Jim Kelly, and Mark Uebersax, in addition to their staff and Michigan State University; with support of the Michigan dry bean industry and the National Dry Bean Council. Please note the announcement regarding the next BIC Annual Meeting in November 4 - 7, 1997 at Annapolis, Maryland with our local hosts - Drs. Ed Kee and J. Rennie Stavely.

As President of the BIC, I would like to thank Mike Dickson, Steve Magnuson and Mark Uebersax for their years of dedicated service and guidance to the BIC Coordinating Committee. We welcome George Kotch, Ron Riley, Phil Miklas and Jim Myers to the Coordinating Committee. The Coordinating Committee and the BIC at large were pleased to recognize the following outstanding paper and poster presentations at the 1995 Annual Meeting:

**Outstanding Paper:** "Application of Marker Assisted Selection to Improving a Quantitative Trait in Common Bean" presented by Kristin Schneider - Michigan State University, Jim Kelly - advisor.

**Outstanding Poster:** "Pathogenic Variability of *Uromyces appendiculatus* on Dry Edible Beans in Mexico" presented by Carlos M. Araya - University of Nebraska, Jim Steadman - advisor.

We were saddened by the news that the founder of the BIC, Dr. Tex Frazier, passed away in late December at the age of 87. In addition to his visionary leadership for the BIC in 1957, Tex was also instrumental in the evolution of the American Society of Horticultural Science. Dermot Coyne summed it up best with his statement that Tex was the 'Jefferson' of the 'Bean World': "Tex was a wise and gentle man with a deep interest in society at large, and in empowering and inspiring people at all ranks to make contributions to their associations." He will be sadly missed by all who knew and worked with him.

As we enter the 40th year of the Bean Improvement Cooperative, it is apparent that our organization continues to derive strength and vitality from our founders and our dynamic membership originating in 46 countries around the bean world: Argentina, Australia, Belgium, Bolivia, Brazil, Bulgaria, Burundi, Canada, Chile, China (ROC), Colombia, Costa Rica, Dominican Republic, Egypt, England, Ethiopia, Finland, France, Germany, Honduras, India, Indonesia, Israel, Italy, Japan, Kenya, Madagascar, Malawi, Mauritius, Mexico, Netherlands, New Zealand, Niger, Philippines, Poland, Scotland, South Africa, Spain, Sudan, Switzerland, Taiwan, Tanzania, Uganda, United States, Uruguay, and Zaire.

1997 ANNUAL BIC MEETING

The 1997 Annual BIC meeting will be held from November 4 - 7, in conjunction with the NPIA from November 2 - 4 at Annapolis, Maryland at the Historic Inns of Annapolis (telephone: 800-847-8882). The hotel is in the middle of the Annapolis historic district, very near the waterfront. Tours of the Naval Academy are within walking distance of the hotel. There are plenty of restaurants and inns that offer food at all price ranges within a short walk. There are excellent shuttle connections to the Baltimore-Washington airport.

Our local hosts will be Drs. Ed Kee - University of Delaware [tel: 302-856-7303; fax: 302-856-1845] and J. Rennie Stavely - USDA/ARS [tel: 301-504-6600; fax: 301-504-5449]. Look for more information on the meetings, abstract deadlines, hotel and travel arrangements in the 1997 Annual Report and spring 1997 mailings from the local organizing committee. Please join us for an exciting meeting and the opportunity to interact more closely with the lima and snap bean industries on the east coast.
DONATION OF BIC REPORTS

Last year, I was approached by Dr. Elwyn Meader from New Hampshire who was interested in donating his collection of BIC Annual Reports Vol. 1 - 38 to someone who could continue to use them after his retirement. After contacting Shree Singh, he put us in communication with Rodolfo Araya Villalobos, Facultad de Agronomía, Alajuela, Costa Rica. The issues were shipped to CIAT - Miami, and then forwarded on to the library at the Fabio Baudrit Experiment Station for use by the members of the National Program of Bean Research and Technology Transfer, in addition to students and staff of the Agronomy Faculty. In Rodolfo's thank you letter to Elwyn & Shree, he stated that this donation will hasten the access to valuable information for our local research and the coordination with the Central American and Caribbean Region. I would like to encourage this type of donation of valuable BIC reports, and can facilitate the exchange of reports between willing partners [one or both of which who are willing to bear the cost of shipment]. I suggest that donors and recipients notify the BIC of your respective interests so that we can maintain a list to consult when these opportunities arise in the future. Thank you.

GRAIN LEGUMES PUBLICATION

The European Association for Grain Legume Research has published the proceedings of the second European Conference on grain legumes under the title: "Improving Production & Utilisation of Grain Legumes". The publication. ISBN 2.9509491.0.X, (format 21 x 30 cm; 484 pages) compiles 296 scientific contributions of the symposium which was held in Copenhagen, Denmark from July 9 - 13, 1995. Included are reports on peas, faba beans, lupins, chickpeas, Phaseolus, lentils; based on multidisciplinary approaches from economics, agronomy, crop physiology, genetics, pathology, biochemistry, animal and human nutrition. The cost is 657 French Francs. Send orders to: AEP - Conference 1995, 12 Avenue George V, 75008 Paris, FRANCE. Telephone: 33.1.40.69.49.09: Fax: 33.1.47.23.58.72.

1995 BIC MEETING SPONSORS

The 1995 BIC Annual Meeting in East Lansing, Michigan was successful due to the excellent coordination and leadership of the local organizing committee, and the generous support of the following sponsors:

- Agricultural Experiment Station - Michigan State University
- Agri Sales Inc. - Saginaw, Michigan
- Allen Canning Company - Siloam Springs, Arizona
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- Harrington Seeds Inc. - Reese, Michigan
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- Johnson's Farm Company - Pinconning, Michigan
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- Michigan Bean Shippers Assn. - Saginaw, Michigan
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- National Dry Bean Council - Washington, D.C.
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- Rogers Seed Company - Nampa, Idaho
- Sacramento Valley Milling Company - Ordbend, California
- Star of the West Milling Company - Frankenmuth, Michigan
- Trinidad/Benham Corporation - Saginaw, Michigan
- Valley Marketing Inc. - St. Johns, Michigan
KENNETH F. GRAFTON

Dr. Kenneth F. Grafton, Professor, Department of Plant Sciences, North Dakota State University, Fargo, North Dakota, is a recognized authority on the genetics and breeding of dry beans for dryland and irrigated production systems in the high plains region of the United States. His breeding program has focused on the incorporation of earlier maturing pinto and navy bean varieties for the region. His research achievements expand across a diverse array of topics which include the study and screening methods and inheritance of resistance to white mold disease. His most recent cultivar releases, ‘Norstar’ navy bean and ‘Hatton’ pinto bean, represent major contributions to the dry bean industry.

Ken is a native of Ohio. He received his B.S. in 1974 and M.S. in 1977 in Agronomy from Ohio State University, and his Ph.D. in Plant Breeding and Genetics from the University of Missouri in 1980. After graduation, Ken joined the Department of Crop and Weed Sciences at North Dakota State University as a faculty member in 1981, with a mission to develop an applied dry bean breeding program, sensitive to growers concerns and needs, with major emphasis on cultivar development. Ken successfully met this mandate as evidenced by his recent promotion to full professor, participation in 23 cultivar and germplasm releases, and publication of 40 scientific and technical papers. Ken is currently serving a second term as Associate Editor of the Agronomy Journal and has served the bean community as a member, officer and contributor to the PCAC, W-150, and BIC.

HOWARD F. SCHWARTZ

Dr. Howard F. Schwartz, Professor, Dept. of Plant Pathology & Weed Science, Colorado State University, Fort Collins, Colorado has attained international, national and state recognition for his achievements in plant pathology research and extension education. Howard has written, edited or co-edited five international and national books and bulletins on dry bean pathology, including the widely acclaimed CIAT publication "Bean Production Problems in the Tropics". In addition, Dr. Schwartz has authored 16 chapters in books, more than 25 refereed publications, 90 trade and scientific articles, and numerous extension publications. Recently, he and Research Associate Mark S. McMillan produced 5 high quality educational videotapes illustrating improved disease management practices for bean and onion production, and is now leading the way with CD-ROM product development. Howard has served as Associate and Senior Editor for the American Phytopathological Society journal 'Plant Disease', and has been President of the BIC since 1987.

Dr. Schwartz was born in Grand Island, Nebraska. He graduated from the University of Nebraska with a B.S degree in Agronomy in 1970. He then went on to earn M.S. and Ph.D. degrees from the Universities of Minnesota and Nebraska, respectively. After achieving the doctorate in Plant Pathology, he worked at CIAT as a highly productive research plant pathologist for 4 years. At CIAT, he developed germplasm and screening protocols for the principal fungal and bacterial pathogens of beans throughout Latin America and eastern Africa.

In 1980, Howard moved to Colorado to provide progressive research and extension programs to clientele and extension agents throughout the great plains. Dr. Schwartz’ leadership provided many innovative methods to better manage diseases of beans in Colorado that resulted in increased production efficiency. Some of his accomplishments include being the first to recognize the perfect stage of rust in Colorado; identify Fusarium wilt (in cooperation with Dr. M. J. Silbernagel) as a pathogen of the South Platte River Valley; develop COAGMET (in cooperation with Dr. H. R. Duke), a network of meteorological weather stations in Colorado; develop BEANET, a network of timely pest alerts to predict the outbreak of rust and other pathogens in the high plains; organize producers and researchers to form the Colorado Dry Bean Advisory Board, now called the Colorado Bean Network; develop and transmit timely information via satellite (in cooperation with Dr. R. L. Hamblen) to producers throughout the high plains region, and participate in the development of four new varieties and three germplasm sources of pinto beans.
IN MEMORY OF

Dr. William Allen 'Tex' Frazier

William Allen 'Tex' Frazier of Corvallis died Tuesday, December 26, 1995 in Portland at the age of 87. He is known locally and nationally for his significant contributions to vegetable crop breeding, production and processing, especially green beans and tomatoes. Tex founded the Bean Improvement Cooperative in 1957 with his devoted bean colleagues. He was a very successful green bean breeder and introduced the first high quality true bush blue lake lines. He was also an innovative researcher, and with Allen Stevens (one of his first graduate students) was the first to establish the inheritance patterns of different green bean types. This research team was awarded the 1965 National Food Processors Association Award in Raw Products by the American Society of Horticultural Science.

He was born the youngest of eight children to Benjamin Franklin and Ella Brown Frazier, in Carrizo Springs in the winter garden area of southwest Texas. He graduated from Carrizo Springs High School in 1926 as valedictorian, and earned his bachelor of science degree in 1930 from Texas A & M. He earned a master of science degree in 1931, and his Ph.D. degree in 1933 from the University of Maryland at College Park. There he met and married Margaret Agnes Bell in 1935. He is survived by one daughter, one son and two grandchildren.

He began his career as an assistant professor of horticulture at the University of Maryland from 1934 to 1937. From 1937 to 1939, he was an associate professor of horticulture at the University of Arizona. He then became professor and chair of the Vegetable Crops Department at the University of Hawaii from 1940 to 1949, where he initiated an intensive program of developing new strains of vegetable crops for the islands. He was assigned by the Defense Department to aid the war effort by working on various phases of food production following the attack on Pearl Harbor. One of Hawaii's most outstanding and best loved agricultural scientists, upon his departure from Hawaii the territorial legislature adopted in Special Session August 12, 1949, a resolution "recording, on behalf of the farmers and the people of the Territory, our profound gratitude to Dr. William Allen Frazier for his many abiding contributions to the well-being of the people of Hawaii..."

He was then professor of horticulture at Oregon State University from 1949 to 1973, where he organized another intensive research program on the culture and improvement of a wide variety of vegetable crops adapted to the Willamette Valley. His initial work at OSU was on improvement of the Blue Lake pole bean to meet the competition from machine-harvested bush beans in the East. He also pioneered award-winning studies on the biochemical genetic bases of flavors in beans, and developed important Oregon processing bush bean varieties including Oregon 91G, the leading processing bean in Oregon today. He also developed the "Willamette" tomato; improved carrot breeding materials; and worked on midget watermelons and rhubarb. Throughout his career, he fostered the interests and skills of his many graduate students.

After retirement, he held the rank of OSU Professor Emeritus. He was a Fellow of the American Association for the Advancement of Science and Fellow of the American Society for Horticultural Science (ASHS). As president-elect, President (1969) and Chairman of the Board of ASHS, he instituted sweeping organizational reforms to address diverse interests. The Society in 1986 initiated the "William A. (Tex) Frazier Lecture Series at Annual Meetings" to recognize distinguished scholars and encourage a holistic philosophy fostering understanding of the interrelationships of seemingly diverse disciplines.

He held numerous awards, including honors from the Northwest Food Processors Association and the National Canners Association, the Vaughan Memorial Research Award of the American Society for Horticultural Science (twice), and others. The Bean Improvement Cooperative conferred the first Meritorious Service Award to Tex in 1970 in appreciation for his vision and outstanding leadership of our organization.
NEWS FROM THE **PHASEOLUS CROP GERMPLASM COMMITTEE**

Call for proposals

Each year, the USDA entertains calls for proposals on germplasm characterization. Depending on the number of proposals, the amount of funds varies around $5,000-8,000. Recent recipients of these funds in the bean community are M. Bassett (genetic stocks), J. Nienhuis (RAPDs and core collections), and R. Stavely (rust resistance).

For 1996-1997, proposals are solicited once again. The proposals are due on June 1, 1996 (Postmark) in P. Gepts’s office (see address below). They will then be reviewed and ranked by the *Phaseolus* Crop Germplasm Committee. The reviews of the PCGC will be due in my office on August 15, 1996. I will forward the proposals with their ranking to Dr. Lawson at the USDA in Beltsville.

Request for information

Dr. Gary Nabhan, with the Arizona-Sonora Desert Museum, has sent an inquiry to all crop germplasm committees for information about insect pollinators of crops. This is part of a new project, The Forgotten Pollinators Campaign, to build a more comprehensive data base of pollinator diversity. The board of advisors of this project consists of USDA-ARS, university and museum scientists from all over North America. If you have any information of know of any information, please contact Paul Gepts (see address below) who will centralize and forward the information to Gary. Specifically, Gary asks for the following information:

1. Do pollinators vary with ____ subspecies/cultivar or with ____ region?

2. List confirmed pollinators (not just incidental visitors) by scientific name and/or common name, and source of information (cited publication; personal observation; voucher specimen, etc.)

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BIC Genetics Committee - Functions

The Genetics Committee is a subcommittee of the Bean Improvement Cooperative that organizes and coordinates activities that deal with *Phaseolus vulgaris* L genetics. The committee's primary function has been to serve as a clearinghouse for the assignment and use of gene symbols. The committee also maintains the *Guidelines for Gene Nomenclature* (last published in Annual Report of the Bean Improvement Cooperative, 31:16-19). Recently, the committee was assigned the task of evaluating genetic stocks for inclusion in the Plant Introduction Collection (see Ann. Rep. Bean Impr. Coop. 38:iv-v for those guidelines). Committee membership is internationally based to represent as many programs as possible engaged in bean research. We strongly recommend that any researcher conducting studies of new, qualitatively inherited traits of common bean submit their manuscript prior to publication to the committee. The committee will evaluate the data to determine if sufficient evidence has been presented to establish inheritance and potential allelism of the trait, and to make sure that the proposed gene symbol has not previously been assigned. Questions and comments may be addressed to the chairman, Dr. James R. Myers, University of Idaho, 3793 No. 3600 E., Kimberly, ID 83341 USA; ph: 208-423-6609, fax: 208-423-6555, email: myers@kimberly.uidaho.edu.


The BIC genetics committee met in an evening session during the BIC meetings held in East Lansing, Michigan this past October. Reported below are the highlights of that meeting.

1) **Rust and Anthracnose Gene Nomenclature**: Two proposals were presented by Dr. Jim Kelly to the committee to unify the gene nomenclature used for rust and anthracnose resistance. International input had been sought for these proposals. These were approved with modifications, and are published in this issue of the BIC. Additional discussion concerned whether general guidelines could be developed for disease resistance genes. However, it appeared that each situation would be evaluated on a case by case basis.

2) **Guidelines for nodulating mutants**: Dr. Soon Park raised the issue of lack of unity for gene symbols of nodulating mutants and the need to coordinate these. Dr. Park is to develop a proposal for unifying these gene symbols to be entertained by the committee.

3) **Revisions of the Guidelines for Gene Nomenclature**: The issue was raised as to whether the *Guidelines for Gene Nomenclature* (Ann. Rep. Bean Impr. Coop. 31:16-19) needed updating to accommodate use of molecular techniques and accompanying practices. No update is needed since classical procedures are still required to determine inheritance and allelism. Molecular markers, if on separate chromosomes, can be used to establish independence of two genes. However, if molecular marker studies indicate that two mutants on the same chromosome map within 20 cM of each other, allelism tests are strongly encouraged, and are required for mutants within 5 cM of each other. Many molecular mapping studies use recombinant inbred lines. The committee felt that with these populations, inheritance studies should still be performed in early generations (preferably F$_3$ - F$_5$).

4) **Guidelines for Submitting Genetics Stocks to Plant Introduction Collection**: Thirty-three genetic stocks have been deposited in the PI collection with flags to identify them. The PI collection will maintain well characterized material. Descriptions of material sent to the PI collection will be routed through the Genetics Committee for evaluation and approval. Further information is available in Ann. Rep. Bean Impr. Coop. 38:iv-v.

5) **Translation of Key Bean Papers**: Dr. Mark Bassett has had a limited number of the important papers on bean seed coat color genetics translated into English, and wants to make them available publicly. The committee strongly supports their publication via the BIC or by related means as well as distribution electronically from BeanGenes on the World Wide Web.

6) **Present Committee Membership**: Current committee members are Mark Bassett, Michel Dron, Paul Gepts, Jim Myers (chair), Shree Singh, Eduardo Vallejos, and Norm Weeden. Two new members were added: Phil McClean, and Phil Miklas.

By: James R. Myers, University of Idaho-Kimberly.
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