ANNUAL REPORT

Calendar Year, 1954

1. PROJECT: NORTH CENTRAL REGIONAL PROJECT NC-7.

The Introduction, Testing, Multiplication and Preservation of New and Useful Plants of Potential Value for Industrial and Other Uses and for the Preservation of Valuable Germplasm of Economic Plants.

2. COOPERATING AGENCIES AND PRINCIPAL LEADERS

State Agricultural Experiment Stations	Representative
Illinois	C. M. Woodworth
Indiana	E. C. Stevenson
Iowa	I. J. Johnson
Kansas	R. C. Pickett
Michigan	C. M. Harrison
Minnesota	F. A. Krantz
Missouri	J. D. Baldridge, Secretary
Nebraska	L. C. Newell
North Dakota	T. E. Stoa
Ohio	F. S. Howlett
South Dakota	S. A. McCrory
Wisconsin	D. C. Smith, Chairman
U. S. Department of Agriculture	
Office of Experiment Stations	F. D. Fromme
	C. L. Lefebvre
Soil Conservation Service	A. D. Stoesz
Agricultural Research Service	
Plant Introduction Section	C. O. Erlanson
	W. H. Hodge
Primary Plant Introduction Station, Ames, Iowa	
Regional Coordinator	Max M. Hoover
	Albert F. Dodge
Administrative Adviser	W. V. Lambert

3. NATURE OF WORK AND PRINCIPAL RESULTS OF THE YEAR.

Regional Project NC-7 is cooperative between the state agricultural experiment stations of the North Central Region and the Plant Introduction Section, Agricultural Research Service, United States Department of Agriculture. The Primary Plant Introduction Station at Ames, Iowa, serves as the regional center for assembling all incoming plant materials for initial evaluation, seed increase, maintenance and for further re-distribution to research workers.

Agricultural experiment stations of the North Central Region assist in the screening, evaluation and use of these plant materials in their respective research programs concerned with crop improvement. Performance data reported by research workers are prepared by the Primary Station and made available to all interested research workers.

The Plant Introduction Section obtains plant materials through domestic and foreign exploration, exchange with foreign governments and collaborators and direct purchase. The headquarters staff of the Section contributes technical services as required for the identification and placement of plant materials as they are released from plant quarantine, provides certain office supplies and equipment and pays a portion of the salary of technical staff of the Regional Primary Station.

The Regional Technical Committee is comprised of 12 representatives appointed by Experiment Station Directors of the North Central Region, one committee member representing each state. The Technical Committee meets annually, prepares and recommends a budget, recommends regional projects, provides technical and administrative guidance for the work of the Primary Station, and established priority classes for plant materials requested for research study.

Regional funds are used for conducting the operations program of the Primary Station and also in partial support for the operation of Regional projects at selected experiment stations in the North Central Region.

Primary Station: Land, Buildings and Equipment

The Primary Station conducts field work on approximately 40 acres of land owned by the Iowa Agricultural Experiment Station. Primary Station buildings include a greenhouse and headhouse that also provides office space located on the Iowa State College campus, and seed cleaning, field equipment and seed storage buildings at the Field Headquarters of the project located approximately one mile from the campus.

During the past year progress has been made with the renovation of a cement block building suitable for seed storage. With the completion of this seed storage unit equipped with controlled humidity and temperature the Primary Station should adequately supply the needs of the North Central Region for active seed storage.

Field equipment for the cultivation, harvesting, cleaning and storage of seed are adequate and well suited to the needs of the project.

Primary Station Seed Production and Distribution

The Primary Plant Introduction Station was activated at Ames, Iowa, December 1, 1947. The 1954 season was the most unfavorable of the seven crop years since the Primary Station was started. Low moisture and high temperatures caused difficulty in the establishment of grass and legume accessions during the early part of the season, whereas heavy rains in late season resulted in poor quality and low seed yield for many of the vegetable crops.

Two thousand three hundred thirteen accessions were planted in 1954. One third of these were grown for replacement of stocks previously grown and 882 new items were added to the seed inventory. The new additions consist of 299 corn and grass accessions, 30 legumes, 437 vegetables and 116 woody and special crop species giving a cumulative total of 6009 items on the Regional Seed list. To this should be added 169 open-pollinated varieties of corn that are maintained by five states of the North Central Region, thus making a grand total of 6178 accessions on the seed inventory of the Region.

Field plantings to evaluate woody ornamental and shelter plants for the North Central Region were made on selected sites in seven states in the spring of 1954. Twenty-one woody species obtained by purchase or donation were included in these field plantings. Twelve additional species purchased as liner stock or propagated by the Primary Station were grown to planting size and will be available for field plantings in 1955.

The statistical summary of the plant accessions received by the Primary Station, cumulative total of accessions produced that are on the 1954 seed list, the accessions to be grown in 1955 and number of accessions distributed during 1954 are given in Table I. (Appendix A).

Regional Technical Committee

The NC-7 Technical Committee held its annual meeting at Lincoln, Nebraska June 16-17, 1954 with all states of the North Central Region represented except North Dakota.

Helpful suggestions for increasing evaluation and screening of new plant introductions based on the experience of research workers in the Southern Region were given by the Coordinator for Regional Project S-9 who attended the meeting. Representatives from the Soil Conservation Service also were present.

The NC-7 Technical Committee made the following recommendations that directly concern the Primary Station program of work.

First. The budget for the operations program of the Primary Station and maintenance of germplasm preservation projects at the several state experiment stations was recommended, including the renovation of the regional seed storage and development of capital improvement facilities at the Primary Station.

Second. The report of the sub-committee for Woody Ornamental and Shelter Plants for the North Central Region was approved. The Technical Committee expressed satisfaction with the progress of field work started in the spring

of 1954 and suggested that exploration for woody plants in the Western Plains should be undertaken to give emphasis to new ecotypes that may be obtained in this manner rather than evaluate woody species that are now available from commercial nurseries. It was further suggested that Technical Committee members inform nurserymen in their states of the Woody Ornamental and Shelter Plants project and seek their assistance in procuring suitable plant materials for evaluation. The sub-committee for Woody Ornamental and Shelter Plants was invited to attend the meeting of the Technical Committee scheduled to meet at Ames in 1955. Woody plant species now being grown to size by the Primary Station for future field use are available for study by sub-committee members and others.

Third. The Executive Committee for NC-7 in an attempt to activate local state committees and to stimulate participation in evaluation studies and utilization of available plant materials recommended the appointment of sub-committees as follows, and the chairmen were designated:

Fruit Crops:	F. S. Howlett, chairman
Woody Plants:	S. A. McCrory, chairman
Forage Crops:	L. C. Newell, chairman
Cereals, including Corn:	I. J. Johnson, chairman
Vegetable Crops:	F. A. Krantz, chairman

It is intended that the sub-committees include workers in the respective crop fields and that they consider specific problems, develop better coordination and seek greater interest of workers among the respective crop groups. The respective sub-committee crop chairmen have completed their selection of research personnel for most of these groups and in certain states plans have been made by the NC-7 Technical Committee representative to consult with the crop sub-committee representatives in matters pertaining to plant introduction activities that concern the agricultural experiment stations.

Fourth. The Technical Committee concurred in the expansion of the Primary Station production program to include the germplasm preservation of open-pollinated varieties of maize.

Four hundred seventeen accessions of named corn varieties have been added to the seed inventory of the Primary Station during the past year. Two hundred forty-eight of these old open-pollinated varieties obtained from India Tribes, experiment stations and commercial seed companies in the United States and Canada were grown at the Primary Station or in cooperation with the Northeastern Region, Geneva, New York during 1954 and will be maintained permanently as a source of germplasm.

In addition, North Dakota will maintain 53, Missouri 34, Nebraska 10, Michigan 31 and Kansas 41 for a total of 169 open-pollinated varieties adapted to their respective areas. These accessions have been assigned Plant Introduction numbers and will be stored at the Primary Station but the renewal of seed stocks will be made by the respective states through the assistance of Regional funds on a per accession cost basis. It should be noted that some other open-pollinated varieties are being maintained independently by corn workers of the several states.

Section C of the Appendix shows the plant introduction number and origin of each of the open-pollinated varieties of corn on this inventory.

Coordinators' Conference - Beltsville, Maryland

A conference of Coordinators from each of the four Plant Introduction Regions was held with the staff of the Plant Introduction Section at Beltsville, Maryland, February 11-12, 1954. The Northeastern Region was activated in October 1953 when Dr. Desmond Dolan was employed as Coordinator with headquarters at the Geneva, New York, Experiment Station.

Many questions concerning Regional and inter-regional phases of the Plant Introduction program were clarified at this conference. Two were of particular significance, namely (a) Special Inventories and (b) Regional assignment of crop species for maintenance of germplasm.

(a) The Special Inventory Series, prepared and distributed by the Plant Introduction Section beginning with Volume 1, April 1948 was given careful study concerning purpose, need, content and use. The decision was reached that the Special Inventory series should be discontinued following the distribution of Volume 38 and the issuance of an index volume covering Special Inventories 26 through 38. This action was thought desirable since the establishment of the last of the four Regional Primary Stations would perform the services to research workers in the respective regions formerly served by the Special Inventory Series.

(b) The assignment of crop species to the respective Plant Introduction Regions for maintenance was a logical development following the activation of the last of the four Regional Primary Stations. Experience had also indicated that there were a number of plant introductions for which there had been few requests from research workers. Storage facilities at the Glenn Dale, Maryland Station were available for holding such plant materials under controlled humidity and temperature until such time as they could be utilized by research workers or discarded if no requests were forthcoming.

The listing of crop species (Appendix B) shows the distribution to Regions for maintenance of germ plasm or to the Glenn Dale station for permanent storage of all plant introductions received by the Plant Introduction Section that are concerned with the cooperative program. The figures following a plant species indicate the priority of seed distribution to Regions in the event the original seed sample is not of sufficient size to be divided and sent to all regions that may wish to receive the seed.

Report of Progress on Regional Projects Receiving NC-7 Assistance

Illinois: The assembly, evaluation, seed increase and distribution of new introductions and chromosomal tester stocks in maize. $2500 annually starting 7-1-53.

The 1954 season at Urbana was reported as unfavorable for making many of the pollinations planned, hence some of the field work planned for 1954 was delayed until 1955.

A complete listing of the genetic tester stocks assembled under this cooperative project by the Illinois Agricultural Experiment Station are reported in Section II. Maize Genetics Cooperation News Letter No. 28, March 17, 1954.

Indiana:

Although the Indiana Agricultural Experiment Station has no formal cooperative project receiving NC-7 assistance at the present time, members of the staff are actively cooperating in the screening and evaluation of plant introductions. Accessions of Dactylis, Phleum and Poa species are being grown under a per accession cost contract arranged between the Primary Station and the Indiana Agricultural Experiment Station.

Iowa:

The Iowa Agricultural Experiment Station has no formal project receiving assistance from NC-7 funds except the arrangements for the Primary Plant Introduction Station discussed previously in this report. Members of the Experiment Station staff cooperate informally in screening and evaluation of crop plants. Members of the Horticulture Department of the Experiment Station have been active in the evaluation and field testing of Woody Ornamental and Shelter plants.

Kansas: Multiplication, preservation and determination of potential value of forage grasses and legumes.
$2000 annually since 7-1-49.

The domestic collection of native grasses and legumes made in Kansas, Oklahoma and Texas in the fall of 1953 assembled more than 1200 new accessions for screening and evaluation under this project. Greenhouse germination of these materials resulted in more than 30,000 individual plants for field evaluation during 1954. Following the first year of screening in the field the number of accessions will be reduced to the place where those of greatest promise may be used directly in the Experiment Station grass breeding program.

Kansas: Maintenance of viable seed of open-pollinated corn varieties.
$500 annually since July 1, 1950.

This formal project for maintaining open-pollinated varieties of corn was terminated June 30, 1954. At the present time 41 open-pollinated varieties of corn from the Kansas Agricultural Experiment Station have been assigned plant introduction numbers and stored at the Primary Station at Ames. When necessary to renew the seed stocks now in storage, Regional funds will be used on a per accession contract basis between the Primary Station and the Kansas Agricultural Experiment Station.

Michigan:

There are no formal cooperative projects of the Michigan Agricultural Experiment Station that receive NC-7 assistance at the present time.

Members of the Agricultural Experiment Station staff are cooperating actively in the evaluation and testing of woody ornamental plants and new introductions of other crop species.

The Michigan Agricultural Experiment Station is also maintaining and increasing seed of 31 open-pollinated varieties of corn under a per accession contract basis as agreed upon with the Primary Plant Introduction Station. These corn varieties have been assigned plant introduction numbers and are in storage at the Primary Station.

Minnesota: Testing newly introduced plants for susceptibility or resistance to disease. (Wheat).
$1000 annually since July 1, 1947.

The work under this project has continued as in past years and consists of growing new cereal introductions in the "Disease Garden" under conditions of optimum infestation. Evaluations for scab, root-rot and other plant diseases are reported annually. This information of susceptibility or resistance to disease is made available to cereal crop breeders as a basis of selection in the development of new strains and varieties.

The NC-7 Technical Committee has recommended that formal NC-7 assistance for this project will be discontinued at the close of the present fiscal year June 30, 1955, but, if needed in the future, support for this type of work may be provided on a contract basis. Under this procedure such arrangements would be made between the project leader of the Minnesota Agricultural Experiment Station and the Primary Station on a per accession cost contract basis.

Minnesota: Introduction, preservation and evaluation of stone fruits of probable value in the North Central Region.
$1000 annually since July 1, 1950.

The present inventory of stocks includes the following species:

Plums 378
Cherry-plums 75
Apricots 115
Cherries 81
Peach and almond 98

These stocks of horticultural species are maintained for research study at the University of Minnesota and requests for propagating wood have been supplied to research workers within and outside the region. Research workers on stone fruit viruses have received a list of the species and varieties available in the Minnesota collection.

Missouri: Preservation of viable seed stocks of open-pollinated varieties of corn adapted to Missouri and adjoining states.
$500 annually since July 1, 1952.

The work under this formal project was completed June 30, 1954. At the present time 34 open-pollinated varieties of corn have been assigned plant introduction numbers and are in storage at the Primary Station at Ames. Seed renewal when required will make use of Regional funds on a per accession cost basis.

Nebraska: Preservation of alfalfa clones and seed stocks needed in alfalfa improvement.
$500 annually since July 1, 1949.

One hundred seventy-nine foreign accessions have been received during the period 1949-54. Limited populations of these materials have been established in a Plant Introduction nursery. Timely observations have been summarized annually and included in the annual report. From materials established prior to 1953, 19 individual plants, 6 of the prostrate or pasture type, and 13 of an erect or semi-erect habit of growth were chosen for further detailed studies.

Nebraska: Preservation and preliminary evaluation of important native and introduced grasses considered valuable in improvement for forage and conservation purposes.
$1200 annually since July 1, 1949.

The objectives of this project are the introduction of new grasses, thei maintenance and preliminary evaluation in nurseries, and the determination of their value for specific purposes by supplementary studies.

In August 1953 five men spent 16 man weeks and traveled over 12,000 mile collecting over 1000 items. Thirty species of wild legumes and over 30 speci of grasses were collected, in some cases as vegetative clones, in other cases as seed. Over 30,000 seedlings have been planted, each item in duplicate 20-plant rows for observation during 1954.

The procedure for screening and evaluation of these introductions has been similar to that of former years. There is a considerable volume of exchange of plant materials between states which are conducting research with the native species.

Nebraska: Preservation of viable seed stocks of open-pollinated regional strains of corn varieties.
$600 annually since July 1, 1950.

This formal project for the maintenance of open-pollinated varieties of corn was terminated June 30, 1954. Ten open-pollinated varieties of Nebraska corn have been assigned plant introduction numbers and are stored at the Primary Station at Ames. Renewal of seed when required will be made on a per accession cost basis between the Nebraska Agricultural Experiment Station and the Primary Plant Introduction Station at Ames.

North Dakota: Preservation of certain physiologic races of flax rust Melampsora lini.
$500 annually since July 1, 1950.

The 50 physiologic races of flax rust that identify the rust conditionin genes in flax were maintained by propagation on their selective hosts, during the winter months, storing the uredospores in cork stopped glass vials at controlled low temperatures during the summer.

Seed increases of 32 lines of flax, each of which apparently possesses a single gene conditioning reaction to North American races of flax rust, were tested for purity of rust reaction.

The rust conditioning genes in 54 lines of flax, derived from resistant plants found in introductions from Ethiopia and Japan are being identified by the use of selected races. Preliminary tests suggest that 1 or 2 new genes may be present in these lines.

The races were used to identify the F_1 plants carrying the resistant genes in backcrosses to Bison of 36 varieties and lines of flax. These F_1 plants are in from the second to eighth backcrosses. The objective is to secure lines (isogenic) possessing each of the rust conditioning genes found in flax and which have the agronomic type and disease reaction (other than rust) of Bison.

Work planned for next year includes further backcrossing and development of isogenic lines; further check and identification of the genes in the

Ethiopian introductions.

North Dakota: Preservation of viable seed stocks of open-pollinated strains or varieties of corn grown in Northern Plains Region.
$500 annually since July 1, 1949.

The formal project for maintenance of open-pollinated corn varieties in North Dakota was completed June 30, 1954. During the growing season of 1954 three plots of hand-pollinated and five isolation plots were grown under contract arrangements. At the present time 53 accessions of open-pollinated varieties of North Dakota corn have been assigned plant introduction numbers and are stored at the Primary Station. Replacement of this seed when require will make use of Regional funds on a per accession cost basis.

Ohio: The multiplication, preservation and determination of potential value of pear varieties for North Central States introduced into and collected within the United States.
$500 annually since July 1, 1949.

The evaluation of varieties, particularly for fruit characteristics is being continued as such varieties come into bearing. Earliness of bearing is being effectively produced by topworking the variety to be evaluated on Old Home trees established on dwarfing quince roots.

The possible utilization of antibiotics in controlling pear blight may make it possible to produce some of the high quality varieties over a wider commercial range in the North Central States than had previously been possible Furthermore, there should be initiated several pear breeding programs for this area in light of the fact that some of these better dessert varieties show more blight resistance than Bartlett.

Work planned for next year:
1. Continuation of evaluation of varieties bearing for the first time.
2. Continued establishment of new acquisitions in Old Home planting.
Under a new state-supported project, pear breeding program of a limited nature will be established in Ohio.

Ohio: The evaluation of the collection of domestic and wild species of tomato and the maintenance of the desirable accessions and valuable breeding stocks.
$1000 annually since July 1, 1949.

The major work represented by this project is nearing completion with the classification and horticultural descriptions of 1159 accessions of tomato. This report is now being prepared for publication.

The future work of this project will concern the classification and horticultural description of new tomato introductions as currently received. Further studies are contemplated on the specific disease reaction of these new introductions.

South Dakota: The collecting, preserving, cataloging, propagating and testing of fruit plants having potential genetic value.
$2500 annually since July 1, 1947.

This project primarily concerns the propagation, establishment and maintenance of a collection of horticultural species from Siberia, Russia and North China originally assembled by the late Dr. N. E. Hansen.

The assembling phase of the work has been largely completed with the establishment of a four-acre Memorial Orchard on the Brookings, South Dakota, campus.

In addition to maintenance of a foundation orchard of exotic fruit plants, evaluation of this material for its genetic use has received major attention. Three selections from this material are used as root stocks. Apple varieties grafted on these roots are beginning to bear fruit. A marked difference in shape of tree is to be observed on these different root stocks. Scions, root stocks and seedlings have been supplied to agricultural experiment stations desiring them.

On several occasions some characteristic of this material has been calle to the attention of those working with such plants and they have responded by requesting stock. Refrigeration now available may result also in wider use of the pollen from trees now coming into production. Seedlings of sand cherr Prunus besseyi, appear to be free of stone fruit virus diseases which may make it possible to use this species more widely as a root stock for which it appears to be well suited.

Wisconsin:

The Wisconsin Agricultural Experiment Station does not have formal co-operative projects that receive NC-7 assistance at the present time. However, members of the Experiment Station staff are assisting with the screening and evaluation of many new introductions. The Woody Ornamental plant project that was started in the spring of 1954 is receiving assistance from Experiment Station staff members.

4. APPLICATION OF RESULTS AND BENEFITS REALIZED.

Plant materials made available to research workers through Project NC-7 have contributed in many ways to plant breeding and crop improvement program Just how much this contribution has been is very difficult to measure while the plant materials are in the process of evaluation.

This may be illustrated by a sweet clover introduction PI 200355 receiv about two years ago from Israel. Observations from some 20 research workers have been unanimous in reporting the exceptional vigor, foliar production, and late maturity of this introduction. Hence, this appears to be a very valuable plant for use in the corn belt and other sweet clover producing areas except that seed has not been produced successfully in the corn belt where a plant of this type should find general use as a pasture, hay and green manure plant.

At least six active phases of research have been stimulated by the discovery and observation of this unusual sweet clover, namely:

(a) A search for areas where a dependable seed supply may be produced.

(b) Examination of the chromosome number.

(c) Crosses with low coumarin sweet clover to transfer the vigor of the new introduction to existing stocks having known coumarin values.

(d) Hybridization with early maturing strains to improve the lateness of the new introduction.

(e) Evaluation of the new introduction for disease and insect resistance, particularly for resistance to the sweet clover weevil.

(f) Evaluation for the general agronomic characteristics of yield of top and root growth in response to rate, date and method of seeding on

different types of soil and in different climatic areas.

Needless to say all of these research objectives are important and questions concerning them must be answered before this new introduction can be recommended and become a secure addition of usefulness in our agriculture. This illustration is used to point up the many phases of research that must be conducted before a justified and substantial recommendation can be made. A conservative estimate would be five years and perhaps 10 years would be a much better estimate of the time required.

Perhaps it is even more important, however, that a single introduction has been the focal point of this intensive study and this may be symbolic of much of the research activity that is now taking place with many of the new introductions that have been assembled through the NC-7 program.

5. WORK PLANNED FOR NEXT YEAR.

The seed increase and initial evaluation program at the Primary Station will be continued at approximately the same volume of production as that of the past seven crop seasons. The increase of seed of certain accessions including locally adapted open-pollinated varieties of corn with agricultural experiment stations on a contract basis will be continued.

Every effort will be made to further complete the Regional seed storage facility at the Primary Station. Humidity and temperature control equipment is planned for this unit and when completed the seed storage facility should be adequate to meet the needs of the NC-7 project for regional and active storage.

During the coming year the Primary Station plans to work closely with the crop sub-committees and make every effort to stimulate the interest of crop research workers of the Region in the screening and evaluation of the plant materials now available under Project NC-7.

6. PUBLICATIONS ISSUED OR MANUSCRIPTS PREPARED DURING THE YEAR.

1. The Seed List for 1954 has been mimeographed and will be distributed February 1, 1955.

2. A regional research bulletin entitled "Disease Resistance in the Wild Species of Tomato" by L. J. Alexander and M. M. Hoover has been completed and will be distributed as Special Circular 92 by the Ohio Agricultural Experiment Station.

The research data reported concerns the cooperative research of 60 research workers and plant pathologists working with approximately 20 of the major diseases of the tomato.

3. A second publication entitled, "Classification, Description of Horticultural Characters and Reaction to Two Diseases of Five Species of the Genus Lycopersicon" by Hoover, Alexander, Paddock, Crum and Dodge is nearly completed

This publication classifies and describes 1159 tomato introductions and 65 gene marker stocks that have been assembled and maintained at the Primary Station.

7. APPROVED:

H. L. Smith
Chairman, Technical Committee

W. V. Lambert
Regional Administrative Adviser

Table I.
Number of accessions received, number of accessions on 1954 seed list, number to be grown 1955 and number of accessions distributed in 1954.

Genera	No. accessions (cumulative): Received	1954 Seed List	To be grown: 1955	Distributed 1954
Group I. Grasses and Field Crops				
Aegilops	83	58	25	37
Agropyron	95	34	61	14
Agrostis	28	4	24	0
Alopecurus	4	0	4	0
Arrhenatherum	2	2	0	1
Brachypodium	6	5	1	0
Bromus	172	46	126	25
Calamagrostis	8	0	8	0
Cynosurus	1	0	1	0
Dactylis	120	67	53	111
Danthonia	1	0	1	0
Echinochloa	8	2	6	0
Elymus	4	0	4	0
Euchlenea	1	1	0	1
Festuca	41	25	16	21
Helianthus	132	128	4	270
Helianthus (Sunchoke)	3	0	3	0
Hordeum	7	2	5	0
Lolium	42	29	13	0
Panicum	106	72	34	6
Phalaris	51	36	15	9
Phleum	33	8	25	42
Poa	32	7	25	16
Rottboellia	1	1	0	0
Setaria	52	26	26	6
Zea	1312*	1061	82	1516
Genera 25 Totals	2345	1614	562	2075

* This figure includes 169 open-pollinated varieties maintained by states of the Region.

Table I. Continued.

Genera	No. accessions (cumulative): Received	1954 Seed List	To be grown 1955	Distributed 1954
Group I. Legumes				
Astragalus	10	4	6	6
Coronilla	5	0	5	1
Glycine	1	1	0	0
Lathyrus	59	46	13	36
Lotus	32	10	22	20
Medicago	224	131	93	473
Melilotus	112	60	52	111
Onobrychis	15	7	8	8
Scorpiurus	1	1	0	0
Trifolium	100	60	40	72
Trigonella	80	50	30	8
Genera 11	639	370	269	735
Group II. Fruits and Vegetables				
Allium	152	69	83	171
Apium	47	32	15	39
Asparagus	12	0	12	0
Beta	163	134	29	19
Cucumis	284	256	28	289
Cucurbita	438	406	32	80
Daucus	133	101	32	7
Fragaria	3	0	3	0
Lactuca	137	121	16	1
Lycopersicon	1233	1224	9	170
Malus	5	0	5	0
Phaseolus	1069	990	79	70
Pisum	596	572	24	385
Pyrus	3	0	3	0
Rubus	18	0	18	0
Spinacea	143	113	30	114
Genera 16	4436	4018	418	1345
Group III. Ornamental, Oil, and Special Crops				
Coccinea	1	0	1	0
Helianthus sp.	1	1	0	0
Lallemantia	1	0	1	0
Mentha	10	6	4	0
Genera (Herbaceous) 4	13	7	6	0

B. Woody plants.

Species for observation and species (*) for field test plantings	Source
Abelia PI 205643	Glenn Dale, Maryland
*Abeliophyllum disticum	Morton Arboretum, Lisle, Ill.
*Acanthopanax sessiliflorus	Skinners' Nurseries, Morden, Man.
*Acer capillipes	Mo.Bot.Garden, St. Louis, Mo.
Acer carpinifolium	" " "
*Acer ginnala	Skinners', Morden, Man.
*Acer glabrum	Moran, Stanford, Montana
*Acer grandidentatum	" " "
*Acer griseum	Schumacher, Mass.
*Acer mono	Rochester, N.Y. Parks
Acer truncatum PI 18578	Glenn Dale, Md.
*Amorpha brachycarpa	Kohankie, Ohio
*Amorpha nana	Schumacher, Mass.
*Atraphaxis buxifolia	Skinner's, Morden, Man.
*Berberis julianae	Siebenthaler, Ohio
*Berberis Sargentiana	Kohankie, Ohio
*Betula davurica PI 73057	Glenn Dale, Maryland
Betula mandshurica PI 102740	Headquarters, Beltsville, Md.
Betula platyphylla PI 190607	" " "
*Buxus microphylla Koreana	Kohankie, Ohio
Callicarpa dichotoma PI 159903	Glenn Dale, Md.
Callicarpa japonica	Mo. Bot. Garden
*Calycanthus fertilis	Crayton, North Carolina
Calycanthus florida	Mo. Bot. Garden
Caragana arborescens (7 accessions)	5- S. Dak.; 1 Mo.Bot.Gard.;1 Iowa.
*Caragana aurantica nana	U.S. Hort. Sta., Cheyenne, Wyoming
Caragana Boisii	Mo. Bot. Garden
*Caragana frutex globosa	Skinners', Morden, Manitoba
Caragana maximowicziana	Rochester (N.Y.) Parks
Caragana octyana	Mo. Bot. Garden
*Caragana pygmaea	Oscar Will & Co., N. Dak.
Caragana senica	Mo. Bot. Garden
Caragana siberica	" " "
Caragana sp. PI 107663	Mandan Station, N. Dak.
*Caryopteris clandonensis	Heard's, Des Moines, Iowa
*Caryopteris incana	Kohankie, Ohio
*Caryopteris mongolica	Kroh Bros., Loveland, Colo.
Clethra alnifolia PI 190213	Glenn Dale, Md.
*Colutea arborescens	Schumacher, Mass.
*Cornus pumila	Morton Arboretum, Lisle, Ill.
Cornus stolonifera coloradensis	" "
*Cornus stolonifera nana	" "
Corylopsis spicata	" "
*Cotoneaster adpressa	Siebenthaler, Ohio
*Cotoneaster lucida	Kohankie, Ohio
Cotoneaster nitens	Arnold Arboretum, Mass.
Cotoneaster obscura	" "
Cotoneaster racemiflora	" "
*Cotoneaster racemiflora soongorica	Kohankie, Ohio
Cyrilla racemiflora PI 102244	Glenn Dale, Md.
Deutzia sp. PI 131948	" "

B. Woody plants, continued

Species for observation and species (*) for field test plantings	Source
*Euonymus bungeana	Kohankie, Ohio
Euonymus bungeana pendula	Rochester (N.Y.) Parks
*Euonymus kiautschovica	Kans. State College, Manhattan
*Euonymus Maackii	Skinners', Manitoba
*Euonymus nana Turkestanica	Morton Arboretum, Ill.
Evodia Daniellii	Rochester (N.Y.) Parks
*Forsythia Arnold's Dwarf	Morton Arboretum, Ill.
*Forsythia ovata	Iowa
*Fraxinus mandshurica	Schumacher, Mass.
Gleditsia japonica	Mo. Bot. Garden, Mo.
Hamamelis vernalis	Mo. Bot. Garden
Hedera colchica	Morton Arboretum, Ill.
Hibiscus syriacus	Iowa
*Hypericum prolificum	Kohankie, Ohio
*Larix siberica	Manitoba, Canada
*Ligustrum vulgare PI 107630	Hort. Sta., Cheyenne, Wyo.
Liriope graminifolia PI 82105	N. Platte Nebr. Exp. Sta.
*Lonicera bella albida	Peters', Sherburn, Minn.
Lonicera microphylla	Morton Arboretum, Ill.
Lonicera syringantha	Rochester (N.Y.) Parks
Magnolia Kobus	Mo. Bot. Garden, Mo.
*Mahonia aquifolium	Schumacher, Mass.
*Malus baccata mandshurica PI 213351	Manitoba, Canada
Nyssa sylvatica	Mo. Bot. Garden, Mo.
*Pachystima Canbyi	Morton Arboretum, Ill.
Peroploca sepium	" "
Photinia villosa	" "
*Physocarpus monogynus	Kallay Bros, Ohio
Pieris floribunda	Mo. Bot. Garden, Mo.
*Platanus acerifolia	Kallay Bros, Ohio
Platanus orientalis	Mo. Bot. Garden, Mo.
Populus berolinensis PI 26614	Headquarters, Beltsville, Md.
Populus generosa PI 62111	" " "
Populus grandidentata	Iowa
*Populus robusta	Minn.
Prinsepia sinensis PI 217916	Manitoba, Canada
*Pyrus ussuriensis	Agr. Exp. Station, Brookings, S.D.
Rhododendron ponticum	Mo. Bot. Garden, Mo.
*Rhus trilobata	Kohankie, Ohio
*Ribes diacanthum	Skinners', Manitoba
Rosa canina PI 170695	Turkey
*Rosa rugosa Hansa	Oscar Will, N. Dakota
*Rosa spinosissima altaica	Kohankie, Ohio
*Rubus deliciosus	N. Platte Nebr. Exp. Sta.
Salix irrorata	Cheyenne Hort. Sta.
Salix matsudana tortuosa	Morton Arboretum, Ill.
Sapindus Drummondii	Mo. Bot. Garden
Securinegia suffruticosa	Morton Arboretum, Ill.
Sheperdia argentea PI 213354	Manitoba, Canada
*Spirea VanHouttei	Iowa
Staphylea Bumalda	Mo. Bot. Garden, Mo.
*Styrax japonica	New Jersey

B. Woody Plants, continued

Species for observation and species (*) for field test plantings	Source
Tripterygium Regelii	Mo. Bot. Garden, Mo.
*Ulmus pumila chinkota	S. Dak. Agr. Exp. Sta.
*Viburnum opulus compactum PI 211847	Glenn Dale, Maryland
Vitex negundo incisa	Morton Arboretum, Ill.
Vitis amurensis	Mo. Bot. Garden, Mo.

Summary of Woody Plants	Number of Accessions							
	Total		Hold-over	Propagate	Liners	Finished plants	Discard	Dead
	No.	Genera						
Regional Testing Project	55	36	10	28	10	7	0	0
Miscellaneous testing	62	39	38	10	0	0	10	4
Total	117	65	48	38	10	7	10	4

Summary of Table I. Number of genera and accessions received, number of accessions on the 1954 seed list, accessions to be grown in 1955 and number of accessions distributed in 1954.

Group	Number of genera	Accessions: Total received	Total 1954 seed list	To be grown 1955	Distributed 1954
I. Grasses and field crops	25	2345	1614	562	2075
I. Legumes	11	639	370	269	735
II. Fruits and vegetables	16	4436	4018	418	1345
III. Ornamental, Oil and Special					
A. Herbaceous	4	13	7	6	0
Total	56	7433*	6009	1255	4155

*This figure includes 169 open-pollinated varieties maintained by states of the Region.

Table II. Assignment of Plant Introductions to Regions for germplasm maintenance and to Glenn Dale for permanent storage.*

Plant Introduction	Glenn Dale storage	Northeastern Region	Southern Region	North Central Region	Western Region
Group I. Field Crops, Grasses and Legumes					
Aegilops				1	
Aeluropus			1		
Agropyron				1	
Agrostis		4	3	1	2
Alopecurus				2	1
Andropogon			1		2
Aristida	x				
Arrhenatherum				2	1
Astragalus				2	1
Astrebla			1		
Avena			1		
Bothriochloa			1		
Brachypodium				1	
Briza			1		
Bromus		3	4	1	2
Cajanus			1		
Calamagrostis				1	2
Canavalia			1		
Cassia			1		
Cenchrus			1		
Chloris			1		
Chrysopogon			1		
Coronilla		3		2	1
Crotalaria			1		
Cymbopogon			1		
Cynodon			1		
Cynosurus				1	
Dactylis		3		2	1
Dactylotenium	x				
Desmodium			1		
Dichanthium			1		
Digitaria			1		2
Dolichos			1		
Echinochloa				1	
Ehrharta			2		1
Elymus				2	1
Euchlaena				1	
Festuca		3	2	4	1
Haynaldia			1		
Hedysarum	x				
Holcus	x				
Hordeum				2	1
Hyparrhenia			1		2
Indigofera			1		
Kochia			1	3	2
Lathyrus		4	3	1	2
Lens	x				

* The numbers 1,2,3,4 indicate order of preference in which Regions receive plant introductions.

Table II. Continued.

Plant Introduction	Glenn Dale storage	Northeastern Region	Southern Region	North Central Region	Western Region
Group I. Field Crops, grasses and legumes, continued.					
Leptochloa			1		2
Leucaena			1		2
Lolium		3	4	2	1
Lotus		1		3	2
Lupinus			1		2
Medicago		2	4	1	3
Melica			1		2
Melilotus		2	4	1	3
Onobrychis			2	3	1
Ornithopus			1		
Oryzopsis					1
Panicum			2	1	3
Paspalum			1		
Pennisetum			1		2
Phalaris			2	3	1
Phleum		1		2	
Poa		2		3	1
Pueraria			1		2
Rottboellia				1	
Scorpiurus				1	
Setaria				1	2
Sorghastrum			1		
Sorghum			1		2
Spartium					1
Sporobolus	x				
Stipa					1
Stizolobium			1		
Tephrosia			1		
Themeda			1		
Thermopsis	x				
Tragapogon					1
Trifolium		1	3	2	4
Trigonella				1	2
Trisetum					1
Vicia			2		1
Vigna			1		
Zea				1	

Table II. Continued.

Plant Introduction	Glenn Dale Storage	Northeastern Region	Southern Region	North Central Region	Western Region
Group II. Fruits and Vegetables (Tree and small fruits of general interest assigned to all Regions).					
Allium ascolonicum			1		
Allium cepa		2		1	
Allium porrum	x				
Apium		2		1	
Arachis hypoyaea			1		
Asparagus	x				
Beta				1	2
Brassica botrytis			1		
Brassica capitata			1		
Brassica caulorapa	x				
Brassica gemmifera			1		
Brassica juncea			1		
Brassica rapa			1		
Brassica sativus	x				
Capsicum		2	1		3
Citrullus			1		
Cucumis melo			1		
Cucumis sativus		2	3	1	
Cucurbita				1	
Daucus				1	2
Hibiscus (Okra)			1		
Lactuca				1	2
Lycopersicon				1	
Pastinaca	x				
Petroselinum	x				
Phaseolus		N-3	S-1	N-1	N-2
Pisum		2		1	
Raphanus	x				
Solanum (eggplant)		1	2		
Spinacea				1	2

Table II, concluded.

Plant Introduction	Glenn Dale Storage	Northeastern Region	Southern Region	North Central Region	Western Region
Group III. Ornamental, Oil and Special Crops					
Amaranthus	x				
Ammi	x				
Anethum	x				
Anthemis	x				
Antirrhinum	x				
Asclepias	x				
Atriplex	x				
Barbarea	x				
Calendula	x				
Camelina	x				
Carthamnus					1
Cichorium	x				
Chrysanthemum	x				
Coriandrum	x				
Cuminum	x				
Cyamopsis			1		
Eruca	x				
Foeniculum	x				
Glycorrhiza	x				
Guizotia	x				
Helianthus				1	2
Heliopsis	x				
Impatiens	x				
Ipomoea	x				
Lepidium	x				
Luffa	x				
Mentha				2	1
Momordica	x				
Nigella	x				
Ocimum	x				
Perilla			1		
Petunia	x				
Phlox	x				
Physalis	x				
Picris	x				
Pimpinella	x				
Plantago	x				
Portulacea	x				
Rheum	x				
Ricinus			1		
Rumex	x				
Satureja	x				
Sesame			1		
Stachys	x				
Tagetes	x				
Zinnia	x				

OPEN-POLLINATED CORN VARIETIES - 1954

Plant Introduction number and source of open-pollinated varieties and Indian types of maize collected within the United States and Canada, and grown at the Primary Plant Introduction Station, Ames, Iowa, 1954.

PI number	Source	Description
40262	Spain	Yellow flint. Introduced from Cuenca, Spain, 1917. Presented by Washington Experiment Station, 1953.
213695	Indiana	Leaming x Gold Standard (dent) BR520 from Indiana. Seeds presented by the Pioneer Hi-Bred Corn Co.
213696	Illinois	Funk's Yellow Dent. BR521 from Lynden, Illinois. Presented by the Pioneer Hi-Bred Corn Co.
213697	Pennsylvania	Lancaster Sure Crop (dent). BR522 from Lancaster, Penna. Presented by the Pioneer Hi-Bred Corn Co.
213698	Indiana	Reid's Yellow Dent. BR523 from Springport, Indiana. Presented by the Pioneer Hi-Bred Corn Co.
213699	Iowa	Krug Yellow Dent. BR524 from Steamboat Rock, Iowa. Presented by the Pioneer Hi-Bred Corn Co.
213700	Indiana	Reid's Yellow Dent. BR525 from Lacton, Indiana. Presented by the Pioneer Hi-Bred Corn Co.
213701	Canada	Tom Thumb pop corn. BR526 from Canada. Presented by the Pioneer Hi-Bred Corn Co.
213702	Iowa	Burl York (dent). BR527 from Waukee, Iowa. Presented by the Pioneer Hi-Bred Corn Co.
213703	Tennessee	Yellow Dent. BR528 from Tennessee. Presented by the Pioneer Hi-Bred Corn Co.
213704	Iowa	Yellow dent. BR529 from Iowa. Presented by the Pioneer Hi-Bred Corn Co.
213705	Illinois	Reid's Yellow Dent. BR530 from Buffalo, Ill. Presented by the Pioneer Hi-Bred Corn Co.
213706	Iowa	Yellow Dent. BR531 from Iowa. Presented by the Pioneer Hi-Bred Corn Co.
213707	Wisconsin	Yellow Dent. BR532. From Mt. Horeb, Wis. Presented by the Pioneer Hi-Bred Corn Co.
213708	Iowa	Krug Yellow Dent. BR533 Newlin, from Iowa. Presented by the Pioneer Hi-Bred Corn Co.

PI number	Source	Description
213709	Iowa	Reid's Yellow Dent. BR534 from Clear Lake, Iowa. Presented by the Pioneer Hi-Bred Corn Co.
213710	Tennessee	St. Charles Yellow Dent. From Woodland Mills, Tenn. Presented by the Pioneer Hi-Bred Corn Co.
213711	Iowa	Yellow Dent. BR536 from Iowa. Presented by the Pioneer Hi-Bred Corn Co.
213712	Kansas	Midland Yellow. BR537 from Kansas. Presented by the Pioneer Hi-Bred Corn Co.
213713	Missouri	Yellow Dent. BR538. Schrock, from Missouri. Presented by the Pioneer Hi-Bred Corn Co.
213714	Arizona	Papago Flour. BR539. From Arizona. Presented by the Pioneer Hi-Bred Corn Co.
213715	Texas	Gourdseed Dent. BR540 from Texas. Presented by the Pioneer Hi-Bred Corn Co. Typical gourdseed, seeds white, rare.
213716	Iowa	Yellow Dent. BR541. From Iowa. Presented by the Pioneer Hi-Bred Corn Co.
213717	Illinois	Krug Yellow Dent. BR542. From Illinois. Presented by the Pioneer Hi-Bred Corn Co.
213718	Iowa	Smith Yellow Dent. From Iowa. Presented by the Pioneer Hi-Bred Corn Co.
213719	Missouri	Yellow Dent. BR544. From Elsberry, Mo. Presented by the Pioneer Hi-Bred Corn Co.
213720	Nebraska	Yellow Dent. BR545. From Nebraska. Presented by the Pioneer Hi-Bred Corn Co.
213721	Iowa	Osterland Yellow Dent. BR546. From Iowa. Presented by the Pioneer Hi-Bred Corn Co.
213722	Minnesota	Golden Glow. BR547, from Minnesota. Presented by the Pioneer Hi-Bred Corn Co.
213723	S. Dakota	Falconer. BR548. From South Dakota. Presented by the Pioneer Hi-Bred Corn Co.
213724	Iowa	Black's Yellow Dent. BR549. From Iowa. Presented by the Pioneer Hi-Bred Corn Co.
213725	Kansas	Midland Yellow Dent. BR550. From Eldorado, Kansas. Presented by the Pioneer Hi-Bred Corn Co.
213726	S. Dakota	Miller Yellow Dent. From South Dakota. Presented by the Pioneer Hi-Bred Corn Co.

PI number	Source	Description
213727	Illinois	Clive Corn. From Illinois. Presented by the Pioneer Hi-Bred Corn Co.
213728	Arizona	Apache White. Apache Tribe, Arizona, A425. Presented by the Pioneer Hi-Bred Corn Co.
213729	Arizona	Apache Red Cob. Seeds white and blue. Apache Tribe, Arizona, A423. Presented by the Pioneer Hi-Bred Corn Co.
213730	Arizona	Strain of 213729. Seeds colored cherry pericarp. Flour type. Apache Tribe. A423a, Arizona. Presented by the Pioneer Hi-Bred Corn Co.
213731	Arizona	Apache Red. Seeds white and yellow. Flour type. Apache tribe. A420. Arizona. Presented by the Pioneer Hi-Bred Corn Co.
213732	Arizona	May be Hopi. Flour type. Cheyenne Tribe. A558. Arizona. Presented by the Pioneer Hi-Bred Corn Co.
213733	Arizona	Kokoma. Seeds cherry colored. Hotevilla Village, Flour type. Hopi tribe, Arizona. BR500. Presented by the Pioneer Hi-Bred Corn Co.
213734	Arizona	Seeds blue. Hotevilla Village, Hopi Tribe. BR501. Arizona. Presented by the Pioneer Hi-Bred Corn Co.
213735	Arizona	Flour type. Hopi Tribe, Arizona. BR502. Presented by the Pioneer Hi-Bred Corn Co.
213736	Arizona	Seeds blue. Flour type. Mescalero Tribe, Arizona. A539. Presented by the Pioneer Hi-Bred Corn Co.
213737	Arizona	Seeds red. Navajo Tribe, Arizona. A619. Presented by the Pioneer Hi-Bred Corn Co.
213738	Arizona	Seeds white, yellow and blue. A621. Navajo Tribe, Arizona. Presented by the Pioneer Hi-Bred Corn Co.
213739	Arizona	Dent type. Navajo Tribe, Arizona. A622. Presented by the Pioneer Hi-Bred Corn Co.
213740	Arizona	Navajo Tribe, Arizona. A468. Presented by the Pioneer Hi-Bred Corn Co.
213741	Arizona	Seeds white and blue. Flour type. Wallapi Tribe. Arizona. A476. Presented by the Pioneer Hi-Bred Corn Co.
213742	Oklahoma	Seeds red. Arikara Tribe, Oklahoma. A376. Presented by the Pioneer Hi-Bred Corn Co.

PI number	Source	Description
213743	Oklahoma	Seeds white and blue. Cherokee Tribe, Oklahoma. A 563. Presented by the Pioneer Hi-Bred Corn Co.
213744	Oklahoma	Flour type. Cherokee Tribe, Oklahoma. A564. Presented by the Pioneer Hi-Bred Corn Co.
213745	Oklahoma	Flour type. Cheyenne Tribe, Oklahoma. A559. Presented by the Pioneer Hi-Bred Corn Co.
213746	Oklahoma	Seeds white and blue. Flour type. Cheyenne Tribe, Oklahoma. A565-4. Presented by the Pioneer Hi-Bred Corn Co.
213747	Oklahoma	Flour type. Cheyenne Tribe, Oklahoma. A565. Presented by the Pioneer Hi-Bred Corn Co.
213748	Oklahoma	Seeds red. Flour type. Cheyenne Tribe, Oklahoma, A56 Presented by the Pioneer Hi-Bred Corn Co.
213749	Oklahoma	Seeds blue. Cheyenne Tribe, Oklahoma. A567. Presented by the Pioneer Hi-Bred Corn Co.
213750	Oklahoma	Seeds white and blue. Five Tribes, Oklahoma. A562. Presented by the Pioneer Hi-Bred Corn Co.
213751	Oklahoma	Seeds red. Flour type. Five Tribes, Oklahoma. A562a. Presented by the Pioneer Hi-Bred Corn Co.
213752	Oklahoma	Five Tribes, Oklahoma. A560. Presented by the Pioneer Hi-Bred Corn Co.
213753	Oklahoma	Arapaho White. Kiowa Tribe, Oklahoma. A432. Presented by the Pioneer Hi-Bred Corn Co.
213754	Oklahoma.	Seeds blue. Flour type. Kiowa Tribe, Oklahoma. A427. Presented by the Pioneer Hi-Bred Corn Co.
213755	Oklahoma.	Seeds violet. Flour type. Osage Tribe, Oklahoma. A435. Presented by the Pioneer Hi-Bred Corn Co.
213756	Oklahoma	Seeds brown. Osage Tribe, Oklahoma. A440. Presented by the Pioneer Hi-Bred Corn Co.
213757	Oklahoma	Seeds red. Quapaw Tribe. Oklahoma. A584. Presented by the Pioneer Hi-Bred Corn Co.
213758	Oklahoma	Seeds white and purple. Flour type. Shawnee Tribe, Oklahoma, A561. Presented by the Pioneer Hi-Bred Corn Co.
213759	N. Dakota	Flour type. Blackfeet Tribe, North Dakota. A592. Presented by the Pioneer Hi-Bred Corn Co.

PI number	Source	Description
213760	North Dakota	Seeds white and yellow. Blackfeet Tribe, North Dakota, A593.
213761	N. Dakota	Seeds violet. Blackfeet Tribe, North Dakota. A593a. Presented by the Pioneer Hi-Bred Corn Co.
213762	N. Dakota	Seeds yellow. Blackfeet Tribe, North Dakota, A594. Presented by the Pioneer Hi-Bred Corn Co.
213763	N. Dakota	Seeds blue. Blackfeet Tribe. North Dakota, A595. Presented by the Pioneer Hi-Bred Corn Co.
213764	N. Dakota	Rhee Flint. Blackfeet Tribe, North Dakota. A597. Presented by the Pioneer Hi-Bred Corn Co.
213765	Kansas	Flour type. Potawatomi Tribe, Kansas. A553. Presented by the Pioneer Hi-Bred Corn Co.
213766	Kansas	Potawatomi Tribe, Kansas. A555. Presented by the Pioneer Hi-Bred Corn Co.
213767	N. Mexico	Albuquerque Pink. Seeds red. Pueblo Tribe, New Mexico. A482. Presented by the Pioneer Hi-Bred Corn Co.
213768	Iowa	Seeds white and purple. Flour type. Sac and Fox Tribe, Iowa. A456. Presented by Pioneer Hi-Bred Corn Co.
213769	Idaho	Seeds white and yellow. Shoshoni Tribe, Idaho. A571. Presented by the Pioneer Hi-Bred Corn Co.
213770	S. Dakota	Seeds blue. Flour type. Sioux Tribe, South Dakota. A514. Presented by the Pioneer Hi-Bred Corn Co.
213771	Nebraska	Flour type. Winnebago Tribe. Nebraska, A499. Presented by the Pioneer Hi-Bred Corn Co.
213772	Nebraska	Seeds purple. Flour type. Winnebago Tribe, Nebraska. A500. Presented by the Pioneer Hi-Bred Corn Co.
213773	Nebraska	Winnebago Flint. A503. Nebraska. Presented by the Pioneer Hi-Bred Corn Co.
213774	Nebraska	Seeds blue. Flour type. Winnebago Tribe, Nebraska. A 504. Presented by the Pioneer Hi-Bred Corn Co.
213775	N. Dakota	Rainbow Flint. 5 ears from Mandan, N.Dakota, through Mr. Clark of the National Research Council. Oscar H. Will Seed Co.
213776	N. Dakota	5 ears Northwestern Dent from Mandan, North Dakota, through Mr. Clark of the National Research Council. Oscar H. Will Seed Co.

PI number	Source	Description
213777	South Dakota	Golden Jewel From Agronomy Department, South Dakota Experiment Station, Brookings, South Dakota.
213778	South Dakota	Gehu From Agronomy Department, South Dakota Experiment Station, Brookings, South Dakota.
213779	South Dakota	Blue Flour. From Agronomy Department, South Dakota Experiment Station, Brookings, South Dakota.
213780	South Dakota	Fulton Yellow Dent. From Agronomy Department, South Dakota Experiment Station, Brookings, South Dakota.
213781	South Dakota	Falconer From Agronomy Department, South Dakota Experiment Station, Brookings, South Dakota
213782	South Dakota	Brookings #86 From Agronomy Department, South Dakota Experiment Station, Brookings, South Dakota.
213783	South Dakota	Brown County Yellow Dent. From Agronomy Department, South Dakota Experiment Station, Brookings, South Dakota.
213784	South Dakota	Dakota White From Agronomy Department, South Dakota Experiment Station, Brookings, South Dakota.
213785	South Dakota	Black Hill Special From Agronomy Department, South Dakota Experiment Station, Brookings, South Dakota.
213786	South Dakota	Early Murdock From Agronomy Department, South Dakota Experiment Station, Brookings, South Dakota.
213787	South Dakota	Rainbow Flint. From Agronomy Department, South Dakota Experiment Station, Brookings, South Dakota.
213788	South Dakota	Northwestern Dent. From Agronomy Department, South Dakota Experiment Station, Brookings, South Dakota.
213789	South Dakota	Wimples Yellow Dent. From Agronomy Department, South Dakota Agricultural Experiment Station, Brookings, South Dakota.
213790	North Dakota	Dakota White Flint. From O. H. Will Co., Bismarck, North Dakota.

PI number	Source	Description
213791	North Dakota	South Dakota Rainbow From O. H. Will Co., Bismarck, North Dakota.
213792	North Dakota	Gehu From O. H. Will Co., Bismarck, North Dakota.
213793	North Dakota	Assiniboine From O. H. Will & Co., Bismarck, North Dakota, for National Research Council.
213794	North Dakota	Mandan Yellow Flour From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213795	North Dakota	Great Plains Rainbow. From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213796	North Dakota	Nuette Sweet Corn From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213797	North Dakota	Cheyenne Agency Striped Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213798	North Dakota	Mater Chief Speckled Mandan From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213799	North Dakota	Zuni Blue From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213800	North Dakota	Mandan Yellow Flint. From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213801	North Dakota	Bear Island Chippewa. From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213802	North Dakota	Mandan White Flint. From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213803	North Dakota	Gaspe Flint (Eastern Canada) From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213804	North Dakota	Pipestone Flint From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213805	North Dakota	Wild Goose From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.

213806	North Dakota	Mandan Black From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213807	North Dakota	Mandan Clay Red From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213808	North Dakota	Mandan Red Flour From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213809	North Dakota	Polish Bydgolgaskaya From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213810	North Dakota	Bezenkchonskaya Siberian Flint From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
213811	North Dakota	Mandan Blue From Oscar H. Will & Co., Bismarck, North Dakota, for National Research Council.
214186	Canada	Bailey Presented by S.B. Helgason, Univ. of Manitoba, Winnipeg Manitoba. From Dominion Experiment Station, Harrow, Ont
214187	Canada	Beacon Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Manitoba. From Division of Forage Plants, Central Experimental Farm, Ottawa, Ontario.
214188	Canada	Compton's Early. Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Man. From Ontario Agr. College, Guelph, Ontario.
214189	Canada	Falconer Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Manitoba. From Agronomy Department, Manitoba Agricultural College, Winnipeg, Manitoba.
214190	Canada	Gehu Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Manitoba. From Agron. Dept., Manitoba Agr. College, Winnipeg, Manitoba.
214191	Canada	Golden Glow (early) Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Manitoba, From Dominion Exp. Station, Harrow, Ontario.
214192	Canada	Golden Glow (medium) Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Manitoba. From Dominion Exp. Station, Harrow,Ont.

PI number	Source	Description
214193	Canada	Golden Glow (late) Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Manitoba. From Dominion Exp. Sta., Harrow, Ont.
214194	Canada	Howe's Alberta Flint Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Manitoba. From Agron. Dept., University of Alberta, Edmonton, Alberta.
214195	Canada	Longfellow Presented by S. B. Helgason, University of Manitoba, Winnipeg, Manitoba. From Field Husbandry Department, Agricultural College, Guelph, Ontario.
214196	Canada	Manalta Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Manitoba. From Agron. Dept., Manitoba Agr. College, Winnipeg, Manitoba.
214197	Canada	Minnesota #13 Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Manitoba. From Ont. Agr. College, Guelph, Ont.
214198	Canada	Northwestern Dent (Brandon Strain) Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Manitoba. From Dominion Exp. Farm, Brandon, Man.
214199	Canada	Rainbow Flint Presented by S. B. Helgason, Univ. of Man., Winnipeg, Man. From Dom. Exp. Station, Morden, Manitoba.
214200	Canada	Rutherford Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Man. From Agron. Dept., Univ. of Saskatchewan, Saskatoon, Saskatchewan.
214201	Canada	Salzer's White Flint Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg. From D. H. Laird, Blenheim, Ontario.
214202	Canada	Saskatchewan White Flint Presented by S. B. Helgason, University of Manitoba, Winnipeg, Manitoba. From Dominion Experimental Station, Swift Current, Saskatchewan.
214203	Canada	Twitchell's Pride Presented by S. B. Helgason, University of Manitoba, Winnipeg, Manitoba. From Dominion Experimental Station, Fredericton, New Brunswick.
214204	Canada	Wisconsin #7 Presented by S. B. Helgason, Univ. of Manitoba, Winnipeg, Man. From Dom. Exp. Station, Harrow, Ontario.
214273	Canada (Quebec)	Northwestern Dent. Type: Reddish dent. History: Unknown. Grown in this region as an open pollinated corn for many years.

PI number	Source	Description
214274	Canada (Quebec)	Quebec 28. Type: Yellow flint, 12-rowed. History: On Reed Farm, Ulverton, Quebec, for 100 years prior to 1907. 1907-1920 ear to row selection. 1920-53 open-pollinated with mass selection by Macdonald College, Province of Quebec.
214275	Canada (Quebec)	Name: None. Collected 11/3/53. Type: Yellow flint. History: On Florent Locas Farm, St. Alexis, Montcalm Co., Province of Quebec for 35 years. No pericarp color and no white kernels.
214276	Canada (Quebec)	Name: None. Collected 11/3/53. Type: Yellow flint, bronze hue to pericarp. History: On Alfred Migue Farm, St. Jacques, Montcalm Co., Province of Quebec for 35 years. No red pericarp or white kernels.
214277	Canada (Quebec)	Name: None. Collected 11/3/53. Type: Large-eared white flint. History: On H. Payette Farm, l'Epiphanie, Province of Quebec, for more than 12 years; in neighborhood as long as oldest memory. Very distinct type, no recent contamination, though some yellow seeds present.
214278	Canada (Quebec)	Name: None. Collected 10/24/53. Type: 8-rowed yellow flint. History: On George A. Booth farm, West Shefford, Province of Quebec, for more than 40 years. Some red pericarp.
214279	Canada (Quebec)	Name: Gaspe Yellow Flint. Type: 8-rowed yellow flint. History: Unknown. Collected originally from farmers around Gaspe Village, Province of Quebec. Open-pollinated with mass selection at Macdonald College for four years. Earliest corn known. (See Amer. Soc. Agron. Jour. 25: 688-700. 1933).
214280	Canada (Quebec)	Name: None. Collected 11/3/53. Type: Very large-eared flint. History: M. Lafortune farm, St. Gerare, Province of Quebec for two years. Mr. Omer Beaudoin, St. Paul de l'Industrie 5 years, and he from another grower. Probably very mixed but still distinct. Deep red to colorless pericarp, flint, sweet, yellow to white.
214281	Canada (Quebec)	Name: None. Type: 8-rowed yellow flint. History: On Arthur Montague farm, Stanbridge Ridge, Provi nce of Quebec for at least 45 years. Collected by A. Rousseau, Agronome. Feb. 1954.
214287	Kansas	Cassell White From Kansas State College. Presented by the Pioneer Hi-Bred Seed co.

PI number	Source	Description
214288	Indiana	Cottrell's Best White Presented by the Pioneer Hi-Bred Corn Co. Collector or owner: Marion Ross, Poseyville, Indiana.
214289	Iowa	Early White From C. H. Miller, Clarion, Iowa. Presented by the Pioneer Hi-Bred Corn Co.
214290	Indiana	Emges White From Marion Ross, Poseyville, India.a Presented by the Pioneer Hi-Bred Corn Co.
214291	Iowa	Havel Long Ear (composite of S_1 seed) From James Havel, Ainsworth, Iowa. Presented by the Pioneer Hi-Bred Corn Co.
214292	Kansas	Kansas Sunflower From Kansas State College, New Cambria, Kansas. Presented by the Pioneer Hi-Bred Corn Co.
214293	Pennsylvania	Lancaster Sure Cropper From Charles Ricedorf, Lancaster, Penna. Presented by the Pioneer Hi-Bred Corn Co.
214294	Ohio	Leaming From Hershel Long, Yellow Springs, Ohio. Presented by the Pioneer Hi-Bred Corn Co.
214295	Kansas	Pride of Saline From Kansas State College Agronomy Farm. Presented by the Pioneer Hi-Bred Corn Co.
214296	S. Dakota	Rainbow Flint From J.C. Hooker, Fulton, South Dakota. Presented by the Pioneer Hi-Bred Corn Co.
214297	Illinois	Thomas Utility White Corn From Don Thomas, Newman, Ill. Presented by the Pioneer Hi-Bred Seed Co.
217404	Argentina	Argentine Pop From Brown of the Pioneer Hi-Bred Corn Co. A small-eared, tiny kernelled, prolific variety from the Argentine. Red pericarp. Similar to the grave popcorns of Argentina. (A "Standard Exotic").
217405	Texas	Gourdseed The extreme white dent corn from the southern United States, which is one of the ancestors of modern U.S. varieties. This collection from Texas. (A "Standard Exotic.") From Dr. Brown of the Pioneer Hi-Bred Corn Co.

PI number	Source	Description
217406	Mexico	Japanese Hull-less Neither Japanese nor hull-less. High quality rice popcorn very similar to the ancient popcorns of Mexico City. Low knob numbers. Difficult to smear. High row number, ears more or less fasciated. (A "Standard Exotic"). From Dr. Brown of the Pioneer Hi-Bred Corn Co.
217407	Peru	Ladyfinger A late-maturing, prolific, high quality popcorn, very similar to the ancient popcorns of Peruvian graves. (A "Standard Exotic"). From Dr. Brown of the Pioneer Hi-Bred Corn Co.
217408	Iowa	Longfellow Flint A typical yellow 8-rowed Northern Flint. Can be grown as far south as St. Louis. (A "Standard Exotic" From Dr. Brown of the Pioneer Hi-Bred Corn Co.
217409	Mexico	Maiz Chapolote Primitive popcorn from western Mexico. Shows close similarity to teosinte in various characters. Narrow cob, irregular kernel shape, brown pericarp. Large knobs, variable in number from plant to plant. (A "Standard Exotic"). From Dr. Brown of the Pioneer Hi-Bred Corn Co.
217410	Arizona	Papago Flour Corn Obtained from the Papago Indians in the desert south of Tucson, Arizona. A yellow flour corn of high quality for human food. Drought resistant. Early maturing in late plantings. Slender leaves, long mesocotyl. (A "Standard Exotic"). From Dr. Brown of the Pioneer Hi-Bred Corn Co.
217411	Iowa	Tama Flint Essentially a northern flint variety from the Sac and Fox Indians in Iowa. Slightly mixed with Great Plains maize. Does better in the Corn Belt than most other northern flints. ("A Standard Exotic"). From the Pioneer Hi-Bred Corn Co.
217412	Canada	Tom Thumb Very early and small-eared. Does well only in the north. Excellent for greenhouse experiments in the winter time. (A "Standard Exotic". From Dr. Brown of the Pioneer Hi-Bred Corn Co.
217413	Mexico	Zapalote Chico. From southern Mexico, but easy to grow as far north as Minnesota because it is comparatively independent of length of day. 8 to 10 rowed. Very short ears. Very dented kernels (A "Standard Exotic"). From Dr. Brown of the Pioneer Hi-Bred Corn Co.

PI number	Source	Description
217414	W. Virginia	Drought Proof Yellow Dent Owner: Julian Hovermale, Route 3, Berkeley Springs, West Virginia. Collector: H. C. C. Wiley, County Agent.
217415	W. Virginia	Drought Proof Yellow Dent Owner: Boyd Kesecker, Cherry Run, West Virginia Collector: H. C. C. Wiley, County Agent
217480	Washington	Northwestern Dent 1918 This accession of corn received from the Western Region December 1953. This is an open-pollinated variety of corn known to hav been grown in 1917-1918.
217481	Washington	Windus White Dent 1918 This accession of corn received from the Western Region, December 1953. An open-pollinated variety of corn known to have been grown in 1917-1918.
217482	Washington	Amber Flint 1918 This accession of corn received from the Western Region, December 1953. An open-pollinated variety of corn known to have been grown in 1917-1918.
217483	Washington	Gehu Flint 1918 This accession of corn received from the Western Region, December 1953. An open-pollinated variety of corn known to have been grown in 1917-1918.
217484	Washington	Windus Red Cob 1918 This accession of corn received from the Western Region, December 1953. An open-pollinated variety of corn known to have been grown in 1917-1918.
217485	Washington	Thayer Yellow Dent 1918 An accession of corn received from the Western Region, December 1953. An open-pollinated variety of corn known to have been grown in 1917-1918.
217486	Washington	Dakota Flint 1918 This accession of corn received from the Western Region, December 1953. An open-pollinated variety of corn known to have been grown in 1917-1918.
217487	Washington	Squaw Corn 1918 This accession of corn received from the Western Region, December 1953. An open-pollinated variety of corn known to have been grown in 1917-1918.

PI number	Source	Description
217488	Washington	Row 6 1918 This accession of corn received from the Western Region, December 1953. An open-pollinated variety of corn known to have been grown in 1917-1918.
217489	Washington	Row 8, 1918 This accession of corn received from the Western Region, December 1953. An open-pollinated variety of corn known to have been grown in 1917-1918.
217490	Washington	Row 13 1918 This accession of corn received from the Western Region, December 1953. An open pollinated variety of corn known to have been grown in 1917-1918.
217491	Washington	Row 14 1918 White Flint This accession of corn received from the Western Region December 1953. An open-pollinated variety of corn known to have been grown in 1917-1918.
217492	Washington	Flint 1918 This accession of corn received from the Western Region, December 1953. An open-pollinated variety of corn known to have been grown in 1917-1918.
217493	Washington	Yellow Dent 1918 This accession of corn received from the Western Region, December 1953. An open-pollinated variety of corn known to have been grown in 1917-1918.
218005	W. Virginia	Clarage Seed obtained from R. W. Loudermilk, Willow Bend, Monroe Co., West Virginia. This corn is adapted to the high altitudes of West Virginia.
218129	W. Virginia	Seed obtained from Virgil R. Sisler, Route 2, Terra Alta, W. Virginia. The altitude at Terra Alta is 2559 and the climate is comparable to that of New England.
218130	New Mexico	P1. Santo Domingo Pueblo, New Mexico. Altitude 5200 ft. White corn. Used for parching and boiling. Occasionally for cornmeal cakes. Received from Cutler of the National Research Council.
218131	New Mexico	P2. Cochiti Pueblo, New Mexico. Altitude 5300 ft. White corn. Used for parching and boiling. Occasionally for cornmeal cakes. Received from Cutler of the National Research Council.

PI number	Source	Description
218132	New Mexico	P3. Mesita Pueblo, New Mexico. Altitude 5700 ft. White corn. Used for boiling and cornmeal. Received from Cutler of the National Research Council.
218133	New Mexico	P3D. Mesita Pueblo, New Mexico. Altitude 5700 ft. White corn. Used for boiling and cornmeal. Received from Cutler of the National Research Council.
218134	New Mexico	P4. Tesuque Pueblo, New Mexico. Altitude 6800 ft. Sweet corn. The almost mature grains parched or boiled. Entire ears sometimes boiled, and grains toasted later in the year after they are dried. Received from Cutler of the National Research Council.
218135	New Mexico	P5. San Lorenzo Pueblo, New Mexico. Altitude 6900 ft White corn. Used for boiling, parching and for cornmeal. Received from Cutler of the National Research Council.
218136	New Mexico	P6. Tesuque Pueblo, New Mexico. Altitude 6800 ft. Yellow flour, for parching and cornmeal. Received from Cutler of the National Research Council.
218137	New Mexico	P7. Tesuque Pueblo, New Mexico. Altitude 6800 ft. White corn. Used for boiling whole or cracked kernels and for cornmeal for bread. Received from Cutler of the National Research Council.
218138	New Mexico	P8. Isleta Pueblo, New Mexico. Altitude 4950 ft. White corn. Used for boiling, parching and for cornmeal. Received from Cutler of the National Research Council.
218139	New Mexico	P9. Zia Pueblo, New Mexico. Altitude 6000 ft. White flour corn, usually boiled or parched or for cornmeal cakes. Received from Cutler of the National Research Council.
218140	New Mexico	P10. Acoma Pueblo, New Mexico. Altitude 6800 ft. Pop corn. Popped dry in pan but used to be popped in clay pot--no oil used. Received from Cutler of the National Research Council.
218141	New Mexico	P11. Acoma, New Mexico. Altitude 6000 ft. Yellow corn, mixed flour and flint. Used for boiling and for cornmeal. Received from Cutler of the National Research Council.
218142	New Mexico	P12. San Lorenzo Pueblo, New Mexico. Altitude 7000 ft Yellow flint. Received from Cutler of the National Research Council.
218143	New Mexico	P13. Santo Domingo Pueblo, New Mexico. Altitude 5200 ft. Blue corn for cornmeal to be made into thin cakes. Received from Cutler of the National Research Council.

PI number	Source	Description
218144	New Mexico	P14. Isleta Pueblo, New Mexico. Altitude 4950 ft. Rust colored dent, usually soaked in ashes or lye ar. then boiled after washing, but also used some for cornmeal bread. Received from Cutler of the Nationa Research Council.
218145	New Mexico	P15. Siles, New Mexico. Altitude 5200 ft. Blue corn, used for making cornmeal used in porridge, but especially esteemed for cornmeal cakes and bread. Fr Cutler of the National Research Council.
218146	New Mexico	P16. Mesita Pueblo, New Mexico. Altitude 5700 ft. Blue corn used for cornmeal and porridge. Received from Cutler of the National Research Council.
218147	New Mexico	P17. Mesita Pueblo, New Mexico. Altitude 5700 ft. Rust dent corn, for cornmeal or treated with alkali and boiled similar to hominy. Received from Cutler of the National Research Council.
218148	New Mexico	P18. Isleta Pueblo, New Mexico. Altitude 4950 ft. Blue corn used for cornmeal cakes and for porridge and bread. Received from Cutler of the National Research Council.
218149	New Mexico	P19. Taos Pueblo, New Mexico. Altitude 7000 ft. Yellow flint used for feed for chickens and for some cornmeal. Received from Cutler of the National Research Council.
218150	New Mexico	P21. Cochiti Pueblo, New Mexico. Altitude 5300 ft. Variegated red corn, sold to tourists and eaten toasted or in cornmeal. Received from Cutler of th National Research Council.
218151	New Mexico	P22. Cochiti Pueblo, New Mexico. Altitude 5300 ft. Cherry colored corn, used for porridge. Received fr Cutler of the National Research Council.
218152	New Mexico	P23. Taos Pueblo, New Mexico. Altitude 7000 ft. Yellow flint corn, used for cornmeal. Received fror Cutler of the National Research Council.
218153	New Mexico	P24. San Felipe Pueblo, New Mexico. Altitude 5200 ft. Cherry and blue corn used for cornmeal cakes. Received from Cutler of the National Research Counci
218154	New Mexico	P25. San Felipe Pueblo, New Mexico. Altitude 5200 ft. Yellow dent corn mixed with local corns, used for chicken feed and for cornmeal used at home. Received from Cutler of the National Research Council.
218155	New Mexico	P26. Santo Domingo Pueblo, New Mexico. Altitude 5200 ft. Mixture of yellow dents from corn belt wit native varieties including whites, blues and yellows. Received from Cutler of the National Research Counc
218156	New Mexico	P27. Santo Domingo, New Mexico. Altitude 5200 ft. Blue corn used for corn bread or cakes. Received from Cutler of the National Research Council.

PI number	Source	Description
218157	New Mexico	P28. Santa Clara Pueblo, New Mexico. Altitude 5200 ft. Blue corn, some of it with blue mainly at the tip, used for cornmeal cakes. Received from Cutler of the National Research Council.
218158	New Mexico	P29. Zia Pueblo, New Mexico. Altitude 6000 ft. Extremely long blue and mixed ears used for cornmeal cakes and breads. Received from Cutler of the National Research Council.
218159	New Mexico	P30. Zia Pueblo, New Mexico. Altitude 6000 ft. Red cherry corn, uses unknown but said to be fed to chicken and animals. Received from Cutler of the National Research Council.
218160	Arizona	P31. Near Shonto Trading Post, Navajo Indian Reservation, Arizona. Altitude 5300 ft. Soft yellow flour, used for corn meal cakes. Received from Cutler of the National Research Council.
218161	Arizona	P32. Navajo Indian Reservation near Shonto Trading Post, Arizona. Altitude 5300 ft. Small ears of soft yellow flour used for cornmeal cakes. Received from Cutler of the National Research Council.
218162	Arizona	P33. Navajo Indian Reservation near Shonto Trading Post, Arizona. Altitude 5300 ft. Mixed colors of flour corn, used for cornmeal cakes. Received from Cutler of the National Research Council.
218163	Arizona	P34. Navajo Indian Reservation, near Shonto Trading Post, Arizona. Altitude 5300 ft. White flour corn, used for cornmeal bread. Received from Cutler of the National Research Council.
218164	Arizona	P35. Navajo Indian Reservation, near Shonto Trading Post, Arizona. Blue flour corn, used for cornmeal breads. Received from Cutler of the National Research Council.
218165	Arizona	P36. Navajo Indian Reservation, near Shonto Trading Post, Arizona. Cherry colored corn, used for porridge. Received from Cutler of the National Research Council.
218166	Arizona	P37. Navajo Indian Reservation, near Shonto Trading Post, Arizona. Pink and calico corn, flour, used for cornmeal for breads and porridge. Received from Cutler of the National Research Council.
218167	New Mexico	P38. Acoma Pueblo, New Mexico. Altitude 6000 ft. Rust-colored dented flour corn, used for cornmeal. Received from Cutler of the National Research Council.
218168	New Mexico	P39. Acoma Pueblo, New Mexico. Altitude 6000 ft. Cherry-pink flour corn, used for porridge and cornmeal. Received from Cutler of the National Research Council.

PI number	Source	Description
218169	New Mexico	P40. Laguna Pueblo, New Mexico. Altitude 5800 ft. Mixed white, yellow and blue corn. Used for cornmeal. Received from Cutler of the National Research Council.
218170	New Mexico	P41. Laguna Pueblo, New Mexico. Altitude 5800 ft. Mixed corn, mainly blue, grown for cornmeal. Received from Cutler of the National Research Council.
218171	New Mexico	P42. Jemez Pueblo, New Mexico. Altitude 6800 ft. Rust colored dented flour corn used for cornmeal and parching and boiling. Received from Cutler of the National Research Council.
218172	New Mexico	P43. Jemez Pueblo, New Mexico. Altitude 6000 ft. Rust colored-yellow dent flour mixtures. Received fro Cutler of the National Research Council.
218173	New Mexico	P44. Jemez Pueblo, New Mexico. Altitude 6000 ft. Mixed white, pink and blue corn used for cornmeal. R ceived from Cutler of the National Research Council.
218174	Arizona	P45. Moencopi Pueblo, Arizona. Altitude 4300 ft. Sweet corn ears eaten boiled after drying or parched. Received from Cutler of the National Research Council.
218175	Arizona	P46. Moencopi Pueblo, Arizona. Altitude 4300 ft. Blue flour corn used for cornmeal breads. Received from Cutler of the National Research Council.
218176	Arizona	P47. Moencopi Pueblo, Arizona. Altitude 4300 ft. White corn used for cornmeal and for feeding chickens. Received from Cutler of the National Research Council.
218177	Arizona	P48. Moencopi Pueblo, Arizona. Altitude 4300 ft. Pink flour corn used for porridge and cornmeal for breadstuffs, sometimes for feeding chickens. Received from Cutler of the National Research Council.
218178	Arizona	P49. Moencopi Pueblo, Arizona. Altitude 4300 ft. Calico corn, fed to chickens. Received from Cutler of the National Research Council.
218179	Arizona	P50. Fields near San Xavier de Bac, Arizona. Altitud 2300 ft. Cream-color flour corn. Received from Cutle of the National Research Council.
218180	Arizona	P51. Near San Xavier del Bac, Arizona. Altitude 2300 ft. Received from Cutler of the National Research Council.
218181	Arizona	P52. Papago Reservation near San Xavier del Bac, Arizona. Altitude 2300 ft. Used for cattle feed. Received from Cutler of the National Research Council.
218182	Arizona	P53. Papago Reservation near San Xavier del Bac, Ariz. Altitude 2300 ft. White dent, used for cattle feed, occasionally for cornmeal. Received from Cutler of the National Research Council.

PI number	Source	Description
218183	Arizona	P54. Papago Reservation near San Xavier del Bac, Arizona. Altitude 2300 ft. Used for cattle feed. White dent corn. Received from Cutler of the National Research Council.
218184	Arizona	P56. Papago Indian Reservation, near San Xavier del Bac, Arizona. Altitude 2300 ft. Used mainly for cattle feed but somewhat for flour for cakes. Receiv from Cutler of the National Research Council.
218185	Arizona	P57. Papago Indian Reservation near San Xavier del Bac, Arizona. Altitude 2300 ft. Native cream-color flour corn used for cornmeal breads and for parching. Received from Cutler of the National Research Council.
218186	Arizona	P58. Mojave Indian Reservation near Parker, Arizona. Altitude 300 ft. Used for boiling and for cornmeal, a native type with considerable drought resistance and deep roots. Received from Cutler of the National Research Council.
218187	Arizona	P59. Mojave Indian reservation, near Parker, Arizona. Altitude 300 ft. Typical cream-white flour corn of old varieties grown by the Mohave Indians, used for parching and for cornmeal. Received from Cutler of the National Research Council.
218188	New Mexico	P60. Zia Pueblo, New Mexico. Altitude 6000 ft. Yello flint corn. Received from Cutler of the National Research Council.
218189	Arizona	P69. Near Sommerton, Arizona. Altitude 100 ft. White dent corn. Received from Cutler of the National Research Council.
218190	Arizona	P70. Near San Xavier del Bac, Papago Reservation, Arizona. Altitude 2300 ft. Received from Cutler of the National Research Council.
218191	Arizona	P71. Papago Indian Reservation near San Xavier del Bac, Arizona. Altitude 2300 ft. Received from Cutler of the National Research Council.
218195	W. Virginia	Bloody Butcher variety. Seed obtained from Lynn T. Warman, Co. Agent, Parkersburg, West Virginia. He says farmers in the area where he obtained it refer to it as the "Rector" corn, referring back to C. R. Rector of Wood Co.

OPEN-POLLINATED CORN VARIETIES MAINTAINED BY NORTH DAKOTA - 1954

PI number	Source	Description
219870	Alberta, Canada	Alta Gold. Received from Wiidakas, North Dakota. A yellow, sweet corn. From Experiment Station, Edmonton, Alberta, Canada.
219871	North Dakota	Assiniboine. Received from Wiidakas, North Dakota Mixed color flint. #D-4, Canadian Indians, Oscar H. Will Seed Co., Bismarck, North Dakota.
219872	North Dakota	Baby Orchard. Received from Wiidakas, North Dakot Yellow, sweet. D-62. Source, Oscar H. Will Seed Co., Bismarck, North Dakota.
219873	New Hampshire	Carnival. Mixed color popcorn. Received from Wiidakas, North Dakota. Obtained from A.F. Yeage New Hampshire.
219874	North Dakota	Dakota Squaw. Mixed color flint. Received from Wiidakas, North Dakota. Obtained from Oscar H. Will Seed Co., Bismarck, North Dakota.
219875	North Dakota	Dakota White. Received from Wiidakas, North Dakot White flint. D-104. Oscar H. Will Seed Co., Bismarck, North Dakota.
219876	North Dakota	Early June. White, sweet. Received from Wiidakas, North Dakota. Oscar H. Will Seed Co., Bismarck, North Dakota.
219877	North Dakota	Falconer. Yellow, semi-dent. D-20. Received from Wiidakas, North Dakota. Oscar H. Will Seed Co., Bismarck, North Dakota.
219878	North Dakota	Gehu. Yellow flint. D-23. Received from Mr. Wiidakas, North Dakota. Oscar H. Will Seed Co., Bismarck, North Dakota.
219879	North Dakota	Golden Bantam. Yellow, sweet. D-24. Received from Wiidakas, North Dakota. Great Plains Field Station, Mandan, North Dakota.
219880	North Dakota	Golden Gem. Yellow, sweet. D-25. Received from Mr. Wiidakas, North Dakota Experiment Station, Fargo, N. Dakota.
219881	Unknown	Japanese Hulless. White popcorn. D-37. Received from Wiidakas, North Dakota. From Oscar H. Will Seed Co., Bismarck, North Dakota.
219882	North Dakota	Minnesota 13 (Boyd). Yellow dent. Received from Wiidakas, North Dakota. From Oscar H. Will Seed Co., Bismarck, North Dakota.
219883	North Dakota	Minnesota 13 (Haney). Yellow dent. D-105. Received from Wiidakas, North Dakota. Selection made by Haney from Minnesota 13.

PI number	Source	Description
219884	Unknown	Minnesota 13 (Late). Yellow dent. Received from Wiidakas, North Dakota. Oscar H. Will Seed Co., Bismarck, North Dakota.
219885	North Dakota	Northwestern. Red dent. D-56. Received from Wiidakas, North Dakota. Oscar H. Will Seed Co., Bismarck, North Dakota.
219886	North Dakota	Nueta. Red sweet. D-60. Received from Wiidakas, North Dakota. Oscar H. Will Seed Co., Bismarck, North Dakota.
219887	North Dakota	Pioneer. White dent. D-103. Received from Wiidakas, North Dakota. Oscar H. Will Seed Co., Bismarck, North Dakota.
219888	North Dakota	Rainbow (Great Plains). Mixed color flint. Received from Wiidakas, North Dakota. D-100. Great Plains Field Station, Mandan, North Dakota.
219889	Unknown	Rainbow (South Dakota). Mixed color flint. D-73. Received from Wiidakas, North Dakota. Oscar H. Will Seed Co., Bismarck, North Dakota.
219890	Russia	Red Star. Orange-yellow flint. Received from Wiidakas, North Dakota. D-74. Oscar H. Will Seed Co., Bismarck, North Dakota.
219891	North Dakota	Rustler. White dent. D-78. Received from Wiidakas, North Dakota.
219892	North Dakota	Square Deal. Yellow dent. D-87. Received from Wiidakas, North Dakota. Oscar H. Will Seed Co., Bismarck, North Dakota.
219893	North Dakota	Stowel's Evergreen. White, sweet. Wiidakas, North Dakota. Oscar H. Will Seed Co., Bismarck, North Dakota.
219894	North Dakota	Sunshine. Yellow, sweet. Received from Wiidakas, North Dakota. From N. Dak. Exp. Station, Fargo, N. Dak. (Dr. A.F. Yeager).
219895	North Dakota	Yellow Flour. Yellow. Received from Wiidakas, North Dakota. From Oscar H. Will Seed Co., Bismarck, North Dakota.

OPEN-POLLINATED CORN VARIETIES MAINTAINED BY MISSOURI - 1954

PI number	Source	Description
221863	Oklahoma	Improved Reid's Yellow Dent. (Mo. Acc. No. 2266). Received from M.S. Zuber, Columbia, Mo.
221864	Oklahoma	Oklahoma Large Southwestern Dent. (Mo. Acc. No. 2267). Received from M.S. Zuber, Columbia, Mo.

PI number	Source	Description
221865	Missouri	Gundy Special Yellow (white cob). (Mo. Acc. No. 2268). Received from M.S. Zuber, Columbia, Mo.
221866	Missouri	Boone Co. White (Mo. Acc. No. 2269) Received from M. S. Zuber, Columbia, Mo.
221867	Missouri	90-Day Yellow. (Mo. Acc. No. 2270). Received from M. S. Zuber, Columbia, Mo.
221868	Missouri	Iowa Silvermine. (Mo. Acc. No. 2271). Received from M. S. Zuber, Columbia, Mo.
221869	Missouri	Johnson County White (Mo. Acc. No. 2272). Receiv from M. S. Zuber, Columbia, Mo.
221870	Missouri	Reid's Yellow Dent. (Mo. Acc. No. 2273). Receive from M. S. Zuber, Columbia, Mo.
221871	Arkansas	Delta Prolific White. (Mo. Acc. No. 2275). Received from M. S. Zuber, Columbia, Mo.
221872	Arkansas	Neal's Paymaster. (Mo. Acc. No. 2276). Received from M. S. Zuber, Columbia, Mo.
221873	Arkansas	White Surecropper. (Mo. Acc. No. 2277). Received from M. S. Zuber, Columbia, Mo.
221874	Texas	Yellow Surecropper. (Mo. Acc. No. 2278). Received from M. S. Zuber, Columbia, Mo.
221875	Texas	Ferguson Yellow Dent. (Mo. Acc. No. 2279). Received from M. S. Zuber, Columbia, Mo.
221876	Tennessee	Jarvis Golden Prolific. (Mo. Acc. No. 2280). Received from M. S. Zuber, Columbia, Mo.
221877	Missouri	Midland. (Mo. Acc. No. 2287). Received from M.S. Zuber, Columbia, Mo.
221878	Missouri	Leaming. (Mo. Acc. No. 2288). Received from M.S. Zuber, Columbia, Mo.
221879	Missouri	St. Charles. (Mo. Acc. No. 2289). Received from M. S. Zuber, Columbia, Mo.
221880	Missouri	Midland. (Mo. Acc. No. 2290). Received from M.S. Zuber, Columbia, Mo.
221881	Missouri	St. Charles. (Mo. Acc. No. 2291). Received from M.S. Zuber, Columbia, Mo.
221882	Missouri	Reids. (Mo. Acc. No. 2292). Received from M.S. Zuber, Columbia, Mo.
221883	Missouri	Blattel White (Mo. Acc. No. 2294). Received from M.S. Zuber, Columbia, Mo.

PI number	Source	Description
221884	Missouri	Pipe corn. (Mo. Acc. No. 2295). Received from M. S. Zuber, Columbia, Mo.
221885	Missouri	White Dent. (Mo. Acc. No. 2307). Received from M. S. Zuber, Columbia, Mo.
221886	Missouri	Early Yellow Dent. (Mo. Acc. No. 2308). Received from M. S. Zuber, Columbia, Mo.
221887	Missouri	Iowa Gold Mine. (Mo. Acc. No. 2313). Received from M. S. Zuber, Columbia, Mo.
221888	Missouri	Missouri Pipe Corn Meerscheum (Mo. Acc. No. 2320). Received from M.S. Zuber, Columbia, Mo.
221889	Missouri	Mexican June. (Mo. Acc. No. 2474). Received from M. S. Zuber, Columbia, Mo.
221890	Missouri	Frerer Yellow Dent. (Mo. Acc. No. 2632). Receive from M.S. Zuber, Columbia, Mo.
221891	Missouri	West Virginia Yellow Dent. (Mo. Acc. No. 2634). Received from M.S. Zuber, Columbia, Mo.
221892	Missouri	Ozark Mortgage Lifter. (Mo. Acc. No. 2635). Received from M. S. Zuber, Columbia, Mo.
221893	Missouri	Ozark Early Adams. (Mo. Acc. No. 2636). Received from M. S. Zuber, Columbia, Mo.
221894	Missouri	Ozark Yellow Silvermine. (Mo. Acc. No. 2639). Received from M.S. Zuber, Columbia, Mo.
221895	Kansas	Dill White Dent. (Mo. Acc. No. 2648). Received from M. S. Zuber, Columbia, Mo.
221896	Missouri	Osborn White Dent. (Mo. Acc. No. 2713). Receive from M. S. Zuber, Columbia, Mo.

OPEN-POLLINATED CORN VARIETIES MAINTAINED BY NORTH DAKOTA - 1954

PI number	Source	Description
222283	North Dakota	Alta Goldsweet. Received from Wiidakas, Fargo, North Dakota.
222284	North Dakota	Carnival (popcorn). Received from Wiidakas, Fargo North Dakota.
222285	North Dakota	Cudu D-12. Received from Wiidakas, Fargo, N.Dak.
222286	North Dakota	Dakota Squaw (flint). Received from Wiidakas, Fargo, North Dakota.
222287	North Dakota	Early June (sweet). Received from Wiidakas, Fargo, North Dakota.

PI number	Source	Description
222288	North Dakota	Falconer (semi-dent). Received from Wiidakas, Fargo, North Dakota.
222289	North Dakota	Golden Bantam (sweet). Received from Wiidakas, Fargo, North Dakota.
222290	North Dakota	Golden Gem (sweet). Received from Wiidakas, Fargo, North Dakota.
222291	North Dakota	Japanese Hulless (popcorn). Received from Wiidakas, Fargo, North Dakota.
222292	North Dakota	Minnesota 13 (90-day dent). Received from Wiidakas, Fargo, North Dakota.
222293	North Dakota	Minnesota (13)(Boyd) (dent). Received from Wiidakas, Fargo, North Dakota.
222294	North Dakota	Minnesota 13 (Haney) (dent). Received from Wiidakas, Fargo, North Dakota.
222295	North Dakota	Northwestern (dent). Received from Wiidakas, Fargo, North Dakota.
222296	North Dakota	Orchard Baby (sweet). Received from Wiidakas, Fargo, North Dakota.
222297	North Dakota	Peruvian Red (D-64). Received from Wiidakas, Fargo, North Dakota.
222298	North Dakota	Pioneer White (dent). Received from Wiidakas, Fargo, North Dakota.
222299	North Dakota	Red Star (flint). Received from Wiidakas, Fargo, North Dakota.
222300	North Dakota	Rosebud Blue D-77. Received from Wiidakas, Fargo North Dakota.
222301	North Dakota	Rustler (white dent). Received from Wiidakas, Fargo, North Dakota.
222302	North Dakota	Square Deal (dent). Received from Wiidakas, Fargo, North Dakota.
222303	North Dakota	Stowel's Evergreen (sweet). Received from Wiidaka Fargo, North Dakota.
222304	North Dakota	Sunshine (sweet). Received from Wiidakas, Fargo, North Dakota.
222305	North Dakota	Bulk 1 - white flints. Received from Wiidakas, Fargo, North Dakota.
222306	North Dakota	Bulk 2 - yellow flints. Received from Wiidakas, Fargo, North Dakota.

PI number	Source	Description
222307	North Dakota	Bulk 3 - mixed color flints. From Wiidakas, Fargo, North Dakota.
222308	North Dakota	Bulk 4 - white flour. Received from Wiidakas, Fargo, North Dakota.
222309	North Dakota	Bulk 5 - colored flour. Received from Wiidakas, Fargo, North Dakota.

OPEN-POLLINATED CORN VARIETIES MAINTAINED BY NEBRASKA - 1954

PI number	Source	Description
222310	Nebraska	Cattle corn. From eastern Nebraska with relatively long, slender, smoothly dented ears. Received from Agr. Exp. Station, Lincoln, Nebr.
222311	Nebraska	Dawes #2. From western Nebraska. An early variety, probably an adapted selection of Minnesota 13. Received from Agr. Exp. Station, Lincoln, Nebr.
222312	Nebraska	Early composite from western Nebraska. Received from Agr. Exp. Station, Lincoln, Nebr.
222313	Nebraska	Mid-season composite from south-central and southwestern Nebraska. Received from Agr. Exp. Station, Lincoln, Nebr.
222314	Nebraska	Reid Yellow Dent. From north-central Nebraska; Barber strain. Received from Agr. Exp. Station, Lincoln, Nebraska.
222315	Nebraska	Hays Golden. From southwestern Nebraska. Received from Agr. Exp. Station, Lincoln, Nebraska.
222316	Nebraska	Krug Yellow Dent. From east-central Nebraska. Shroup strain. Received from Agr. Exp. Station, Lincoln, Nebraska.
222317	Nebraska	Reid Yellow Dent. From central Nebraska. Nubold strain. Received from Agr. Exp. Station, Lincoln, Nebraska.
222318	Nebraska	Golden Republic. From south-central Nebraska. Probably flint-dent origin. Received from Agr. Exp. Station, Lincoln, Nebraska.
222319	Nebraska	Red Meadowbrook Reid. From eastern Nebraska. Received from Agr. Exp. Station, Lincoln, Nebr.

OPEN-POLLINATED CORN VARIETIES MAINTAINED BY MICHIGAN - 1954

PI number	Source	Description
222468	Michigan	Nothstine variety collected from S. J. Nothstine, Nancelona, Michigan, 1949. Very early variety in northern Michigan. Received from Agr. Exp. Station, East Lansing, Michigan.
222469	Michigan	Golden Glow. Smithers strain of Golden Glow collected from Jacob Smithers of Marian, Michigan in 1949. Very early strain of Golden Glow which was originally developed in Wisconsin. Received from Agr. Exp. Station, East Lansing, Mich.
222470	Michigan	Pickett-Dickerson strain. Collected from M. G. Dickerson, of Bloomingdale, Michigan in 1949. Pickett variety is the oldest selected variety in Michigan. It was developed by J. W. Pickett in Kent County. Adapted to central Michigan. Received from Agr. Exp. Station, East Lansing, Michigan.
222471	Michigan	MAC variety. Collected from Carl Abel of Cedar Springs, Michigan in 1949. Originally developed at Michigan Agricultural Experiment Station from a field corn of Duncan and Golden Glow. Earlier than Duncan variety, about same maturity as early Golden Glow but better yielding. Received from Agr. Exp. Station, East Lansing, Michigan.
222472	Michigan	Collected from Ernest York of Three Rivers, Michigan in 1949. Originally developed by J. R. Duncan of Michigan Agricultural Experiment Station. Adapted to southern Michigan. Received from Agr. Exp. Station, East Lansing, Mich.
222473	Michigan	Pickett variety, Thurman strain. Collected from John Thurman of Mt. Clemens, Mich. in 1949. Same origin as Pickett-Dickerson strain but is earlier in maturity. Received from Agr. Exp. Station, East Lansing, Michigan.
222474	Michigan	Polar Dent. Collected from Arthur Jewett of Mason, Michigan in 1949. Developed by J. R. Duncan of the Michigan Agricultural Experiment Station. Is a strain of the Duncan variety selected for its resistance to spring frosts. Adapted to southern Michigan. Received from Agr. Exp. Station, East Lansing, Michigan.
222475	Michigan	Yonderian. Collected from Loren Yonderian of Gobles, Michigan in 1949. Mid-season in maturity, adapted to southern Michigan. Received from Agr. Exp. Station, East Lansing, Michigan.
222476	Michigan	Bussey. Collected from Alvin Bussey of Lake Leelanau, Michigan in 1949. Early maturity. Received from Agr. Exp. Station, East Lansing, Mich.
222477	Michigan	Ranger. Collected from Henry Ranger of Northport, Michigan in 1949. Early maturity. Received from Agr. Exp. Station, East Lansing, Michigan.

Appendix C

PI number	Source	Description
222478	Michigan	Mathison. Collected from Frank E. Mathison of Traverse City, Michigan in 1949. Early maturity. Received from Agr. Exp. Station, East Lansing, Mich.
222479	Michigan	Pratt. Collected from Ted Pratt of Lapeer, Mich. in 1949. Mid-season in maturity. Received from Agr. Exp. Station, East Lansing, Michigan.
222480	Michigan	Folks White Cap. Collected from William Folks of Hanover, Michigan in 1949. Medium early maturity. Received from Agr. Exp. Station, East Lansing, Mich.
222481	Michigan	Pride of North. Collected from Roscoe J. Carl and Son Seed Co. of Lansing, Michigan in 1952. Received from Agr. Exp. Station, East Lansing, Mich.
222482	Michigan	Early Murdock. Collected from Roscoe J. Carl and Son Seed Co. of Lansing, Mich. in 1952. Received from Agr. Exp. Station, East Lansing, Mich.
222483	Michigan	Pickett variety, Deidrich strain. Collected from Albert Deidrich of Richmond, Michigan in 1949. Earlier than Dickerson or Thurman strain of Pickett. Received from Agr. Exp. Station, East Lansing, Mich.
222484	Michigan	Ferden Yellow Dent. Collected from Lee Ferden of Chesaning, Michigan in 1949. Developed by P. P. Ferden and Son from Illinois open-pollinate variety. Very well adapted to central Michigan. "Show type" of corn. Received from Agr. Exp. Station, East Lansing, Michigan.
222485	Michigan	Early Golden Glow. Collected from Edward and Walter Gauthier of Cedar, Michigan in 1949. Very early strain of Golden Glow. Received from Agr. Exp. Station, East Lansing, Michigan.
222486	Michigan	Late Golden Glow. Collected from Edward and Walte Gauthier of Cedar, Michigan, in 1949. Later matur ing strain of Golden Glow. Received from Agr. Exp. Station, East Lansing, Michigan.
222487	Michigan	Bethke. Collected from Carl Bethke of Grand Haven, Michigan in 1950. Medium early maturity. Received from Agr. Exp. Station, East Lansing, Michigan.
222488	Michigan	Schmiege strain of flint corn. Collected from Albert Schmiege of Saginaw, Michigan in 1951. Early, long-eared, 8-row flint variety. Received from Agr. Exp. Station, East Lansing, Michigan.

PI number	Source	Description
222489	Michigan	Huron. Collected from unknown farmer near Okemos, Michigan in 1953. Early maturing strain adapted t central Michigan. Received from Agr. Exp. Station East Lansing, Michigan.
222490	Michigan	Smut Nose. Collected from Roscoe Carl and Son Seed Co. of Lansing, Michigan in 1952. Received from Mich. Agr. Exp. Station, East Lansing, Mich.
222491	Michigan	Improved Red Cob Fodder Corn. Collected from Roscoe Carl and Son Seed Co. of Lansing, Michigan in 1952. Agr. Exp. Station, East Lansing, Mich.
222492	Michigan	White Cap Yellow Dent. Collected from Roscoe Carl and Son Seed Co. of Lansing, Michigan. Received from Agr. Exp. Station, East Lansing, Mich.
222493	Michigan	Collected from Roscoe Carl and Son Seed Co. of Lansing, Mich. Golden Glow strain, but a different ear type than other Golden Glow strains maintained at the Michigan Station. Received from Agr. Exp. Station, East Lansing, Mich.
222494	Michigan	Pickett strain collected from Roscoe Carl and Son Seed Co. of Lansing, Michigan. Different plant and ear type than other Pickett strains in Mich. collection. Received from Agr. Exp. Station, East Lansing, Mich.
222495	Michigan	Golden Glow strain collected from D. A. McPherson of Lowell, Michigan. More variable than other Golden Glow strains--could be outcrossed with other corns. Received from Mich. Agr. Exp. Station, East Lansing, Mich.
222496	Michigan	Unnamed variety collected from Mr. Abel in Hillsdale County, Michigan in 1952. Later maturing variety well adapted to southern Michigan. Received from Agr. Exp. Station, East Lansing, Mich.
222497	Michigan	Unnamed variety collected from Allan Courser of Isabella Co., Michigan in 1951. Early maturity. Received from Agr. Exp. Station, East Lansing, Mich.
222498	Michigan	Unnamed variety. Source of seed unknown. Early maturity.

Appendix C

OPEN-POLLINATED CORN VARIETIES MAINTAINED BY KANSAS - 1954

PI number	Source	Description
222609	Kansas	OP1. Original Midland. From Oscar Rhoades, Columbus, Kansas. Grown in that area since about 1870. Severe natural selection for drought resistance, and chinch bug resistance. Ear to row selected for five generations in 1911 to 1914. An outstanding yellow variety for southern Kansas. Received from Agr. Exp. Station, Manhattan, Kans.
222610	Kansas	Reid type composite #3. A composite of 12 mid-season yellow varieties mostly of Reid Yellow Dent type. Maintained by open pollination in isolation Adapted to northeast Kansas. Received from Agr. Exp. Station, Manhattan, Kansas.
222611	Kansas	Early White composite #2. A composite of 12 early white varieties mostly from northwest Kansas. Received from Agr. Exp. Station, Manhattan, Kansas.
222612	Kansas	Late white composite #6. A composite of 9 late white varieties. Mostly adapted to southeast Kansas. Received from Agr. Exp. Station, Manhattan, Kansas.
222613	Kansas	Reid Yellow Dent. The Kansas certified strain of this variety. Received from Agr. Exp. Station, Manhattan, Kansas.
222614	Kansas	Midland. C. C. Cunningham, Eldorado, Kansas obtained it from Mr. Rhoades about 1920. He has introduced some other germ plasm and selected an earlier, smoother type than the Original Midland of Rhoades. Received from Agr. Exp. Station, Manhattan, Kans.
222615	Kansas	Midland. Certified Midland from Carl Hellwig, Oswego, Kansas. Received from Agr. Exp. Station, Manhattan, Kansas.
222616	Kansas	Zahnley Yellow Dent. From Harry E. Zahnley, Alta Vista, Kansas. Grown on same farm since 1875. Relatively late, yellow endosperm variety. Received from Agr. Exp. Station, Manhattan, Kansas.
222617	Kansas	Richards White. From Richard Heinig, Goddard, Kansas. Grown there 40 years after brought from Illinois. Medium early variety with white kernels, white cob, short stubby ears. Received from Agr. Exp. Station, Manhattan, Kansas.
222618	Kansas	Hays Golden. Obtained by Hays Branch Station in 1923 from Ness County and further selected at the Station. Medium early variety well adapted to Western Kansas. A very drought-resistant yellow variety. Received from Agr. Exp. Station, Manhattan, Kansas.

PI number	Source	Description
222619	Kansas	Grown in western Kansas since about 1890. Extremely well adapted to adversities of the region. Medium early, white, very drought resistant. Received from Agr. Exp. Station, Manhattan, Kansas.
222620	Kansas	Cassel White. From Tribune Branch Experiment Station. An early white variety adapted to drought conditions of western Kansas. Received from Agr. Exp. Station, Manhattan, Kansas.
222621	Kansas	Golden Republic. From J. W. Kuhn, Belleville, Kansas. A fairly early yellow variety. Selected for adaptation to upland in north-central Kansas. Has considerable drought resistance. Received from Agr. Exp. Station, Manhattan, Kansas.
222622	Kansas	Mortgage Lifter Yellow. From Arthur Ingmire, Coffeyville, Kansas. A full season yellow variety from southeast Kansas. A dependable producer in that section. Received from Agr. Exp. Station, Manhattan, Kansas.
222623	Kansas	Montgomery Co. White. A high yielding, full season, white variety from Herman Schwatken, Elk City, Kansas. High moisture and low shelling percentage. Received from Agr. Exp. Station, Manhattan, Kansas.
222624	Kansas	Montgomery Co. Blue and White. High yielding, late maturing, white variety with some blue aleurone from Paul Adamson, Cherryvale, Kansas. Drought resistant. Received from Agr. Exp. Station, Manhattan, Kansas.
222625	Kansas	Woodson Co. Yellow. From Jim Heffern, Piqua, Kansas. Grown there since 1904. Adapted to upland conditions in southeast Kansas. Midseason maturity. Received from Agr. Exp. Station, Manhattan, Kansas.
222626	Kansas	Crawford Co. White. A late, high-eared, white variety from George Newberry, Girard, Kansas. Good yields under favorable conditions. Received from Agr. Exp. Station, Manhattan, Kansas.
222627	Kansas	St. Charles White. Midseason white variety from Allie Newman, Route 1, Holton, Kansas. Grown there about 60 years. Received from Agr. Exp. Station, Manhattan, Kansas.
222628	Kansas	Brown Co. Yellow. From Ed McCoy, Morrill, Kansas, who had grown it on his farm for 60 years. A fairly early variety with good yield as a variety and in test crosses.
222629	Kansas	Challender Blue and White. A white variety with some blue aleurone from Millard Challender, Sedgwick, Kansas. A good yielder in south central Kansas, especially on sandy soils. A full season variety.

PI number	Source	Description
222630	Kansas	Bill Day Yellow. From Blecha Bros., Dewey, Kans. A high yielding midseason variety, also good in test crosses. Received from Agr. Exp. Station, Manhattan, Kansas.
222631	Kansas	Labette Co. Yellow. From F. W. Schermberg, Labette Co., Kansas. A good full season variety in southeast Kansas. High yielding, and lodging resistant. Received from Agr. Exp. Station, Manhattan, Kansas.
222632	Kansas	Labette Co. Yellow. From Leo Lotz, Edna, Kansas. Related to Mortgage Lifter variety. Drought resistant, high yielding, full season variety. Received from Agr. Exp. Station, Manhattan, Kansas.
222633	Kansas	Labette Co. Yellow. From Clair Leib, Edna, Kansas, yielded well in test crosses. Drought resistant. Full season. Received from Agr. Exp. Station, Manhattan, Kansas.
222634	Kansas	Shawnee White (Muskrush). From John D. Anderson, Silver Lake, Kansas. Late, large-growing variety. Good yielder in favorable years. Received from Agr. Exp. Station, Manhattan, Kansas.
222635	Kansas	Bowman's Cole Creek. From Bowman Bros., Lebo, Kansas. Grown there since 1874. White kernel, white cob variety, midseason maturity, drought resistant and makes grain when other varieties fail. Same is true of inbreds from it. Received from Agr. Exp. Station, Manhattan, Kansas.
222636	Kansas	Allen Co. Yellow. High yielding, midseason, yellow variety from Iola, Kansas. Received from Agr. Exp. Station, Manhattan, Kansas.
222637	Kansas	Crawford Co. Chief. From Carl Shaffer, Girard, Kansas. Red cob white selected originally from Boone Co. white. A large growing late variety, high eared. Good yielder as a variety and in test crosses. Source of inbreds outstanding for drought resistance. Received from Agr. Exp. Station, Manhattan, Kansas.
222638	Kansas	Neosho Co. White. From Charles Mitchel, Thayer, Kansas. Grown in southeast Kansas since about 1875. Full season variety. Received from Agr. Exp. Station, Manhattan, Kansas.
222639	Kansas	Pride of Saline. Dept. of Agronomy, Kansas State College. The outstanding variety in Kansas. White grain, low shelling percentage. Very drought resistant and widely adapted. High yielding as a variety and in test crosses. A source of many good inbred lines. Received from Agr. Exp. Station, Manhattan, Kansas.

PI number	Source	Description
222640	Kansas	Butler Co. White. From Potwin, Kansas. Grown in Butler Co. 55 years. A good yielding white variety. Drought resistant. Received from Agr. Exp. Station, Manhattan, Kansas.
222641	Kansas	Butler Co. Yellow. From Ernest G. Classen, Route 1, Whitewater, Kansas. A mid-season variety high yielding as a variety and in test crosses. Received from Agr. Exp. Station, Manhattan, Kansas.
222642	Kansas	Kansas Sunflower. From I. G. Waldon, New Cambria, Kansas. A fairly late yellow variety once widely distributed in Kansas. The inbred K4 came from this variety. Adapted to east central Kansas. Received from Agr. Exp. Station, Manhattan, Kans.
222643	Kansas	Commercial White. A white cob selection from St. Charles white. Large, late variety. Very high yielding under good conditions. Lodging resistant. Received from Agr. Exp. Station, Manhattan, Kans.
222644	Kansas	Early Yellow Composite #1. A composite of 12 early yellow varieties mostly of Hays Golden type. Increased under open pollination. Hardy, drought resistant types. Received from Agr. Exp. Station, Manhattan, Kansas.
222645	Kansas	Late Yellow Composite #4. A composite of 9 late yellow varieties; several of Midland type. Increased in isolation with open pollination. Received from Agr. Exp. Station, Manhattan, Kans.
222646	Kansas	Blue and White Composite #5. A composite of 7 varieties with mostly white grain but some blue aleurone. A hardy, high yielding group of varieties. Received from Agr. Exp. Station, Manhattan, Kansas.
222647	Kansas	South American popcorn. Certified seed. Received from Agr. Exp. Station, Manhattan, Kansas.
222648	Kansas	Supergold popcorn. Certified seed. Received from Agr. Exp. Station, Manhattan, Kansas.
222649	Kansas	Improved South American popcorn. From F. A. Mangelsdorf, Atchison, Kansas. OP67. Received from Agr. Exp. Station, Manhattan, Kansas.