National Germplasm Resources Laboratory
USDA/ARS, Beltsville, Maryland
February 28, 2023

FY2024 GUIDELINES FOR PLANT EXPLORATION PROPOSALS

Deadline for all exploration proposals: July 31, 2023
Deadline for draft proposals (foreign explorations only): May 31, 2023

The United States Department of Agriculture (USDA), Agricultural Research Service (ARS) funds foreign and domestic plant explorations to acquire plant germplasm for inclusion in the U.S. National Plant Germplasm System. Plant Exploration Proposals may be submitted by any qualified U.S. scientist. Plant exploration proposals must be supported by the appropriate Crop Germplasm Committee (CGC), or other qualified crop specialists when there is no appropriate CGC. Proposals must also include a letter of support from the NPGS curator(s) responsible for the proposed collections. Scientists planning to submit a proposal are advised to first consult Anne Frances in the National Germplasm Resources Laboratory, Plant Exchange Office (PEO) in Beltsville, Maryland. The PEO can provide suggestions and assistance with technical matters when preparing a proposal.

Proposals are recommended for funding by the Plant Germplasm Operations Committee (PGOC) and approved by the ARS Office of National Programs. The Guidelines presented here are for proposals to be funded during the period October 1, 2023 - September 30, 2024 (Fiscal Year 2024); previous versions are obsolete. The Guidelines for Plant Exploration Proposals are revised annually and may be obtained from the PEO.

The format for plant exploration proposals (Attachment A) is designed to guide prospective explorers through the background study required to obtain the information for sound planning and effective implementation of field programs, to fully inform reviewers, and to provide a basis for judging and prioritizing proposals. It will also be used to assist ARS with awarding Non-Assistance Cooperative Agreements (NACAs; see 7 USC 3318(b)/7 CFR Part 550) for explorations by non-ARS scientists. Indirect costs cannot be reimbursed to State Cooperative Institutions that receive funding through an NACA. The format requires applicants to certify that they will abide by all rules and regulations of host countries concerning collection of plant genetic resources and understand that proper permission is required in advance of collection. In addition, it requires certification that the explorers will submit a report on the exploration and provide complete "passport" data, including latitude and longitude, for each collection.

Foreign ARS-supported explorations: Participants in ARS-supported explorations in other countries are required to follow the NPGS Code of Conduct for Foreign Plant Explorations (Attachment B). Explorations must comply with the host country's laws governing access to germplasm. Regulations vary significantly among countries. Permission for access to germplasm is obtained from the host country authority designated by their national government. The PEO usually assumes responsibility for communicating with host country authorities regarding the national access permission. Permission may also be required by regional, state or individual landholding authorities. Scientists are strongly encouraged to consult with the PEO regarding access issues before submitting proposals. Some host country governments require an official agreement to cover the ownership, distribution, and/or use of the collected germplasm. The PEO reviews all agreements to ensure that they are consistent with U.S. government policies and arranges for their signature by an authorized representative of ARS.
Agreement with host countries on benefit sharing is closely linked to obtaining access to genetic resources. Depending on the situation in the host country, a limited amount of funding may be requested in the budget for additional non-monetary benefits beyond those routinely associated with plant explorations. These expenditures should increase the country’s capacity to conserve plant genetic resources and may include genebank supplies, training of host country scientists, and small projects to increase/characterize the collected germplasm in the host country. The host country authority for access will determine the acceptability of the non-monetary benefits. Please consult with the PEO before including benefits of this type in your proposal.

After sharing with the host country, the remainder of the germplasm obtained from ARS-funded plant explorations is added to the National Plant Germplasm System (NPGS) where it is curated, evaluated, and made available for distribution. Germplasm in the NPGS is available to all bona fide users, public, private, and foreign. Germplasm collected on ARS-funded explorations is distributed to non-NPGS participants after deposition in the NPGS and is subject to the conditions of agreements signed with the host country.

The prevention of accidental introduction of noxious weeds, insects, diseases, and other organisms into the United States is of utmost concern to ARS. Participants on ARS-supported explorations are required to closely follow U.S. plant quarantine laws and regulations administered through the USDA Animal and Plant Health Inspection Service (APHIS). In most cases, germplasm must be accompanied by an original phytosanitary certificate from the country of origin. Participants will declare all germplasm upon their return to the U.S. In place of hand carrying, it is recommended that germplasm be shipped to the USDA Plant Germplasm Quarantine Center in Beltsville, MD. Regardless of the path by which the germplasm enters the country, it will be inspected by an APHIS inspector for evidence of insects, disease or weed contamination and treated appropriately, when necessary. Depending on the taxa and plant parts collected, more extensive quarantine testing may be required, especially for obligate parasite plant pathogens such as viruses and viroids.

A separate proposal format entitled "Guidelines for Germplasm Exchange Proposals" is available from the PEO for proposals involving expeditions to exchange germplasm with foreign genebanks when the expedition plans do not include exploration.

Domestic ARS-supported explorations: Domestic ARS-supported explorations must abide by all federal, state, tribal and local regulations governing access to property, collection of germplasm and herbarium vouchers, and legally protected species. There are many types of land ownership in the United States, among which the processes to obtain permission to enter property and collect germplasm vary significantly. Documentation of permission of the property owner or responsible agency for entry and collection of germplasm and herbarium vouchers is required in all cases. Rare, threatened, and endangered plants can be collected only with proper permits from federal and state agencies. Germplasm obtained on domestic explorations will be sent promptly to the NPGS curator for inclusion in the NPGS.

Preparation of proposal: The format for preparing proposals is presented in Attachment A. Please include only the titles of the sections in your proposal (not the instructions). Consult the NPGS curator(s) responsible for the proposed collection early in the process of proposal preparation and determine the curators’ preferred collection protocol, recommended number of individuals to sample in each population, and recommended quantities of seeds/fruits for each sample. The NPGS curator(s) responsible for the proposed collections must sign a statement (see item 21) to certify that they agree to curate the collections. Request an endorsement for the proposal from the appropriate Crop Germplasm Committee (CGC), or other crop specialists when there is no appropriate CGC. A Letter of
Collaboration from the Authorized Official at non-federal institutions is required to facilitate provision of funding.

**Draft proposal:** Because the assistance of PEO is usually required in acquiring host country approvals for explorations, please submit a draft proposal to the PEO by **May 31, 2023** for foreign explorations.

Address items 1, 2, 3, 4, 5, 6, and 7 (brief explanation of need). Early notification will allow the PEO to assist with meeting host country requirements for access to germplasm and with negotiating terms.

**Final submission of proposals:** Submit the proposal to the PEO no later than **July 31, 2023**. This deadline may be waived to permit response to real emergencies. Final proposals should include the Letter of Endorsement from the Crop Germplasm Committee and the signed Crop Curator Statement.

**Review of proposals:** Proposals are reviewed by members of the Plant Germplasm Operations Committee (PGOC) and a representative of each of the four NPGS Regional Technical Committees. The reviewers send their recommendations to the Plant Exchange Office, which prioritizes acceptable proposals for approval by the ARS Office of National Programs.

**Notification of funding decision:** Scientists will be notified by PEO of the decision on funding of their proposal. Scientists whose explorations are funded will receive instructions on program requirements, funding arrangements, and procedures for importing germplasm to the U.S.

**Documentation requirements:** Complete documentation of all collections is required. Required fields include locality data (including latitude, longitude, elevation, and associated uncertainty fields), associated vegetation, habitat description, plant characteristics and local uses of the plant for all germplasm. A sample data collection sheet is attached (Attachment C). Explorers are urged to use their own similar data collection formats tailored to the target crop species. For a full description of all fields on the form, contact the Plant Exchange Office. Explorers may also choose to develop electronic forms using an application such as ArcGIS Collector, Trimble Terraflex, or Epicollect. GPS devices are available on loan from the PEO. A copy of the data must accompany all germplasm sent to the USDA Plant Germplasm Quarantine Center (Bldg. 580, BARC-East, Beltsville, MD 20705) or other APHIS inspection facility.

Collectors must use an identification system for germplasm samples that combines characters and numbers. Characters may be the collectors’ initials or an abbreviation for the country (not including the United States) in which the exploration is conducted, and numbers may refer to the year of the collection and the sample number. For example, accessions from an exploration in Armenia in 2024 could be numbered as ARM2024-1, ARM2024-2, etc. Identification with unique numbers will greatly facilitate the tracking of accessions in the Germplasm Resources Information Network (GRIN-Global) database.

An herbarium voucher specimen should be prepared for any accession that cannot be identified authoritatively in the field, for an accession that possesses uncharacteristic morphological traits, and especially for all accessions of wild relatives. A description of the methods for preparing herbarium specimens may be found in “Field Techniques Used by the Missouri Botanical Garden.” At least two herbarium vouchers should be made for each accession, with additional vouchers recommended as availability of plant material allows. For a foreign exploration, a set of the herbarium vouchers should be deposited with an herbarium in the host country. For all explorations, at least one herbarium voucher should be deposited in the **U.S. National Arboretum** Herbarium (contact Harlan Svoboda, Telephone:...
202-245-2715, Email: Harlan.Svoboda@usda.gov) or in another internationally recognized U.S. herbarium. The U.S. National Arboretum Herbarium is a USDA/ARS facility.

Reporting requirements: Within 30 days of completion of the exploration, submit a summary report (see Attachment D for format) to the PEO. Submit the final report within 90 days of completion of the exploration. Future exploration proposals by the same participants will not be approved until the final report is received. Include the following in the final report:

a. Catalog of collections: a record of all collections including all passport data. This may be in electronic form or in the form of links to accessions in GRIN-Global.

b. Narrative report: 3 to 5 single-spaced pages (more, if necessary). Include a list of participants and addresses, dates, objectives, day-by-day field log, and accomplishments. Also include significant observations likely to be of interest to germplasm users, or other explorers who may visit the same areas in the future. Provide a list of contacts (domestic and foreign) with complete addresses and indicate how they contributed to the mission and how they might contribute to future missions in the same country.

c. Copies of permits for the exploration and agreements on germplasm exchange (including the SMTA).

d. Page-size map showing itinerary: identify principal points on the itinerary and most important collection sites.

e. Information on any threats to genetic resources in the area visited.

ARS scientists: ARS scientists are required to follow USDA and ARS regulations for obtaining travel authorization, implementing travel, accounting for expenses, and submitting a trip report.

Funding Credit: In accordance with 2 CFR 415.2 – Acknowledgement of USDA Support on Publications and Audiovisuals, funding recipients are required to place on any reports and publications associated with the exploration, that the exploration was a part of the NPGS Plant Exploration/Exchange Program and funded through the U.S. Department of Agriculture, Agricultural Research Service, National Germplasm Resources Laboratory, Plant Exchange Office, Beltsville, Maryland.

Direct plant exploration proposals and requests for further information to:

Anne Frances
Plant Exchange Office/National Germplasm Resources Laboratory
Rm. 311, Bldg. 003, BARC-West
Beltsville, MD 20705-2350
Telephone: 301-504-5421
Email: Anne.Frances@usda.gov
PLANT EXPLORATION PROPOSAL FORMAT

The proposal must have a cover page with project title and summary. The following is an example and may be modified as appropriate.

PROJECT TITLE: PLANT EXPLORATION IN [NAME OF STATE(S)/COUNTRY(IES)] TO COLLECT [NAME OF CROP] GERMPLASM FOR CROP IMPROVEMENT.

PROJECT SUMMARY

The [name of Crop Germplasm Committee (CGC), or if no appropriate CGC, name of crop specialist] has determined there is a need for additional [name of crop] germplasm from [state(s)/country(s)]. This germplasm is desired for breeding programs for crop improvement, does not exist in other germplasm collections and can only be obtained by collection. Additionally, [list specific threats] threaten its continued existence if not placed in an ex situ collection. Explorations will be made in compliance with [name of country(ies)’s laws governing foreign access to germplasm. Samples of the germplasm will be deposited in the [designated genebank] in [country] and in the U.S. National Plant Germplasm System (NPGS). Germplasm in the NPGS will be curated on behalf of the U.S. Government and will be available to all qualified scientists/organizations, domestic and foreign, who are eligible to receive it. Germplasm will be collected as seeds, bulbs, cuttings, or other propagules. When possible, collections will be documented with voucher herbarium specimens. All collections will be documented with complete "passport" data (description, locality of collection, including latitude and longitude, etc.). All germplasm will be shipped or carried to the USDA Plant Germplasm Quarantine Center, Beltsville, Maryland, from which it will be distributed according to policies and procedures in effect at time of receipt.
CERTIFICATION

The signature of the leader of the exploration is required below.

For foreign plant explorations, I certify that I have read and will abide by the NPGS Code of Conduct for Foreign Plant Explorations. I agree to abide by all rules and regulations of host countries concerning collection of plant genetic resources and understand that proper permission is required in advance of collection.

I will promptly comply with reporting requirements explained in the Guidelines for Plant Exploration Proposals. I will provide a summary report, a narrative report, information on genetic erosion in the region visited and a catalog of collections. The catalog will include collector's name and number, plant name, collection locality, including latitude, longitude and elevation, and appropriate descriptive information (of plant and environment), etc.

I understand that all germplasm obtained from ARS-funded plant explorations will be added to the National Plant Germplasm System (NPGS) where it will be curated on behalf of the U.S. Government.

_________________________________________  ______________________
Signature                                   Date
1. **Submitted by:**
   Name, title, full address, telephone number, fax, and email.

2. **Objectives:**
   a. Taxa to be collected:
   b. Specific or general characteristics sought:
   c. Use to be made of germplasm collected:

3. **Dates of travel:**
   Specify dates and briefly explain why this period is appropriate.

4. **Host country(s) or state(s):**
   If proposal is for collecting in a foreign country indicate, as specifically as possible, the part of that country that will be visited (i.e., section of the country, states, or provinces).

5. **Suggested participants:**
   Identify all suggested participants and explain their qualifications, including foreign language capabilities and previous plant exploration and foreign travel experience (if relevant). For foreign explorations, inclusion of two U.S. scientists along with host country collaborators is highly recommended. For domestic explorations, a total of two participants is usually sufficient for a successful exploration; inclusion of more participants should be clearly justified.

6. **Permission for collection of germplasm:**
   Identify the steps that will be necessary to obtain required permissions for collection of germplasm and herbarium specimens. In general, permissions are obtained after notification that the proposal is funded and before the exploration is undertaken. The PEO will not transfer funds or establish a funding agreement until written proof of the appropriate international permissions has been obtained.

**International explorations:**
For international plant explorations, the appropriate procedure for obtaining access to plant genetic resources varies widely among countries. Generally, two types of permission are required:

- **Prior Informed Consent (PIC).**
The need for PIC is based on the principle of national sovereignty over genetic resources recognized in the UNEP Convention on Biological Diversity (see more information in the NPGS Code of Conduct for Foreign Plant Explorations, Appendix B). Describe the requirements (such as application forms) for obtaining PIC for collection of germplasm. The PEO will identify the host country national authorities on access to germplasm and usually assumes responsibility for communicating with them to obtain the necessary PIC (permission). Obtaining access permission for international collections often takes a minimum of 3 months, making it necessary to initiate the process immediately after notification of funding.

If a country is a party to the **International Treaty for Plant Genetic Resources for Food and Agriculture (IT)**, the national authorities may choose to provide access to the germplasm under the terms of the Standard Material Transfer Agreement (SMTA) of the Treaty, especially if the proposed genetic resources are listed in Annex 1 of the Treaty.
• Permission of the landowner.
In addition to the permission of the national government, permission is also needed from the landowners where the collecting will take place. This includes national, regional, and local parks, as well as privately held lands. Host country collaborators can assist with these permissions.

Domestic explorations:
For domestic plant explorations, PIC is not required, but permission must be obtained from specific landowners, both public and private, where collecting will take place. Landowners, including federal agencies, may require considerable time for processing applications for permits. Other types of plant collection permits may also be required. It is not currently possible to obtain permits from the U.S. National Park Service that allow deposition of germplasm in the NPGS. In the case where permission to survey or collect germplasm on private land owned by an individual is needed, a form is available from the Plant Exchange Office to document that permission has been obtained. Some states require permits for general collecting. Information is often available from the Department of Natural Resources in the specific states.

Threatened and endangered plants:
Some specific species are legally protected by other domestic, foreign, or international laws and may require additional permits. For example, the U.S. Fish and Wildlife Service regulates plants designated as endangered and threatened in the U.S. States, territories, and tribes also often have regulations on rare plants and may require other permits.

The movement of endangered plants and animals between countries is regulated by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). An export permit from the donor country is required for species listed by CITES.

7. Justification:
Explain the need for the collection and why the proposed field collection area will meet that need. Consider the abundance and distribution of the taxa to be collected; append maps showing their known distribution. Herbarium voucher records, many of which are available online (e.g., SEINET, USF, SERNEC and CPNWH), are very useful to identify potential collecting sites for wild taxa in the U.S. Taxa identified as priorities in the Crop Vulnerability Statement of the appropriate Crop Germplasm Committee are given priority for funding.

Note any political factors that may have an impact on the exploration, especially with reference to accessibility of field areas.

8. Germplasm currently available:
What germplasm of the species to be collected is now available in U.S., foreign or international collections from the proposed field area? Information on germplasm in the NPGS is available from GRIN-Global. Information on germplasm in the CGIAR International Agricultural Research Centers can be obtained through the GENESYS portal. Include a map of the existing georeferenced accessions in the area targeted for this exploration.

9. How does the exploration relate to earlier explorations or subsequent expeditions?
Discuss previous explorations for the same or related species in the proposed area of exploration. The PEO can provide information on prior NPGS-supported explorations. Explain any plans for future exploration for the same or related species.
10. **CGC or other concurrence:**
   Attach a copy of a letter from the appropriate CGC endorsing this exploration. If the target species are not covered by a CGC, letters from other specialists may be substituted. Please indicate if the exploration is proposed in response to a CGC’s recommendation.

11. **Benefits to host country (foreign explorations only):**
   In this section, discuss both routine benefits that the host country will receive as a result of the exploration and any additional non-monetary benefits that are requested. Routine benefits include strengthened professional ties, transfer of information and technology, and conservation of native germplasm in the host country. Additional non-monetary benefits are discussed on page 2 in the introduction to these guidelines.

12. **Status of mapping and map requirements:**
   What maps or mapping applications will be used? Google Earth may be helpful in planning and can be accessed offline in the field to access small amounts of data that have previously been cached. Paper maps are sometimes used in combination with digital maps, which are not sufficient for remote locations. Digital maps available for use on GPS devices, cell phones and other electronic devices can assist with navigation. Applications for mobile devices, such as Locus Map, may be useful in some cases. Topographic maps for the United States may be downloaded from the U.S Geological Service.

13. **Vehicle and fuel requirements, availability, and cost:**
   What type of vehicle will be needed considering road conditions likely to be encountered, distances to be traveled, and persons and supplies to be transported? Will 4-wheel drive be required? Where will the vehicle be obtained; what will it cost to rent; what is the cost of gasoline? Is gasoline readily available in remote areas?

14. **Currency/exchange rates:**
   [Omit this section from proposal for domestic exploration.]

15. **Holidays:**
   American embassies honor local as well as U.S. holidays. The traveler should be aware of foreign holidays and, if possible, should avoid travel immediately before, during, and after major holidays. [Omit this section for domestic exploration.]

16. **Supplies and equipment:**
   For foreign explorations, indicate if any are to be obtained in the host country.

17. **Field plan:**
   How will collector(s) proceed after arrival in the field area? Will a reconnaissance be conducted before collection of germplasm? If the field party includes more than one person, will they travel together or independently? If independently, what will be the objectives of each? Will the entire itinerary be covered by motor vehicle? If not, to what extent, where, and for how long a period will travel by boat, foot, horse, etc., be required? Consider condition of roads and physical accessibility of target areas, availability of food and lodging, etc. If international borders must be crossed (other than by air), address the feasibility of crossing such borders.
18. **Collecting protocol:**
Describe your strategy for field sampling and the rationale for selecting it. Distinguish between strategies for wild and landrace populations. Include information on:
-- Target number and criteria for selection of sampling sites
-- Ideal number of individuals to be sampled from each population
-- How individuals within populations will be selected for sampling (random vs. biased sampling, methods)
-- Number and type of propagules to be collected from each plant

19. **APHIS requirements for import of germplasm into US (foreign explorations only):**
Most germplasm of taxa not regulated by APHIS may be imported using the APHIS permit issued to PEO for admissible plant materials. **APHIS requires that germplasm of admissible plant taxa coming into the U.S. have an original phytosanitary certificate from the country of origin.**
Provide information on how you will obtain the phytosanitary certificate.

An APHIS/PPQ manual entitled “Plants for Planting Manual” provides information on restrictions on importing plant materials and which taxa and sources are regulated. Plants designated as Not Authorized Pending Pest Risk Assessment (NAPPRA) or not authorized (prohibited) are among those that are regulated. If this proposal includes plans to import plants that fall into either of these categories, a USDA Controlled Import Permit (CIP) issued by APHIS is required. A postentry quarantine (PEQ) permit issued by APHIS is required for germplasm that must undergo postentry quarantine. Other types of permits may be required for plants with other restrictions. Refer to the APHIS website “Plants and Plant Products Permits” for information on how to apply for a permit.

Indicate whether any of the taxa to be collected are regulated by APHIS as NAPPRA, prohibited, requiring postentry quarantine, or under other designations, and how you will handle them after importation. Describe plans for obtaining any necessary APHIS permits for these taxa.

20. **How collections will be brought or shipped to U.S. (foreign explorations only):**
Explain how collections will be packed and/or shipped. Collected germplasm may either be sent through a courier service, such as DHL or Federal Express, from the host country to the Plant Germplasm Quarantine Center in Beltsville, Maryland or may be carried as part of your baggage.
If germplasm is brought back as part of your baggage, the standard practice is that all materials is sent from the U.S. port of entry to the Plant Germplasm Quarantine Center in Beltsville, Maryland for inspection. Other arrangements are possible in some cases. Coordinate importation of germplasm with Anne Frances in PEO.

21. **Disposition of germplasm after collection:**
All germplasm is deposited in the appropriate NPGS collection. For foreign explorations targeting germplasm that must be quarantined (‘prohibited’ category) at the APHIS Plant Germplasm Quarantine Center in Beltsville, Maryland, contact must be made in advance with APHIS Plant Germplasm Quarantine Program (PGQP) to ensure that adequate ‘slots’ are available in the quarantine program for import, establishment, and testing. PEO will provide the appropriate contact in the APHIS-PGQP, if needed. For germplasm to be quarantined at other locations, discuss the arrangements that you have made.

Note any special distribution arrangements for quarantine, propagation, or increase.
Early in the process of proposal preparation, consult with the appropriate NPGS curator(s). Ask the curator to fill out the Crop Curator Statement (Attachment A, page 8) with their comments on the proposal and to certify that they anticipate having the capacity to curate the collections. Include this statement with your proposal.

22. **Contacts and cooperators:**
   Provide name, title, address, etc. for each and indicate how they have contributed or will contribute to the success of the mission.

23. **References consulted:**
   If personal communications are cited, attach copy.

24. **Itinerary (in target area):**
   Show enough major points on the itinerary and distances between them to permit a determination whether there will be sufficient time for transit and collecting. Provide an outline map showing the general itinerary. If any side trips by foot, horse, boat, etc. are planned, indicate approximate amount of time allowed for each. For foreign explorations, allow enough time at the end of the exploration to process germplasm and obtain a phytosanitary certificate from the host country’s plant protection organization. More time may be needed if other export permits, such as those for threatened or endangered species, are required.

25. **Budget estimate:**
   Show best estimate of cost for each participant for each budget item (airfare, per diem, vehicle rental, gasoline, driver, interpreter, supplies, etc.). For non-federal cooperators funded through a NACA, the cost for per diem may not exceed charges normally allowed by the cooperator’s institution, as stated in its written travel policy. Per diem for U.S. government applicants cannot exceed rates established by the U.S. Government. Salaries for participating scientists in this program are prohibited. The cost of supplies should not exceed $100, except in unusual circumstances. GPS receivers and altimeters are not covered, as they are available on loan from PEO. Indicate all sources of funds (USDA, State, or other).

26. **Attach vitae:**
   Vitae are required to comply with the following requirement of Directive 281.1. “Vitae of key personnel to include principal investigator(s), senior associate(s), and other senior professionals should be provided in order to assist evaluators to assess the competence and experience of the project staff.” **Limit vitae to three pages focusing on elements relevant to plant exploration.** Extra pages will be truncated before review.
CROP CURATOR STATEMENT

I have been in contact with [fill in traveler’s name] concerning the planned plant exploration to [fill in country or region]. I expect to have the capacity to curate the collections anticipated from this exploration.

Comments on the need for collection of targeted materials:

Other comments:

_________________________________  ___________________  ___________________  
Curator’s name  Location  Crop(s)

_________________________________  ___________________  
Signature  Date
NPGS CODE OF CONDUCT FOR FOREIGN PLANT EXPLORATIONS

This code of conduct is intended to guide NPGS plant explorers when collecting germplasm in foreign countries. Explorations are the main means of acquiring plant genetic resources that are not available in national or international collections. The successful implementation of a plant exploration in a foreign country requires careful consideration of scientific, political, and cultural matters. A plant explorer on an NPGS-sponsored exploration must respect the laws, customs, and environment of the host country. NPGS plant explorations abide by the principle of national sovereignty over plant genetic resources recognized in the UNEP Convention on Biological Diversity (CBD) and the associated Nagoya Protocol on Access and Benefit-Sharing, and the UN FAO International Treaty on Plant Genetic Resources for Food and Agriculture. As a result, access to genetic resources is subject to prior informed consent (PIC) of the national authority in the host country and shall be on mutually agreed terms. Native American tribes within the borders of the United States are recognized by the U.S. federal government as sovereign nations and will be treated accordingly regarding access to genetic resources.

The process of executing an NPGS-supported plant exploration can be organized by several elements: 1) Planning and preparing an exploration proposal, 2) Pre-trip preparation following funding, 3) Pre-travel preparation in host country prior to collecting, 4) Fieldwork and collecting, 5) Post-fieldwork sorting and cleanup at host institution, 6) Follow-up upon return to home country. The requirements for completing each of these phases following legal, ethical, and conservation standards are presented below.

PLANNING AND PREPARING AN EXPLORATION PROPOSAL

A plant exploration in a foreign country must include a host country collaborator. The ideal collaborator is a scientist already working with the target crop or crop group who would also benefit from collecting the genetic resources. Collaboration with the national genetic resources programs in host countries is strongly encouraged. Host country scientists must be included in the planning process. Contact your potential host country collaborators as early as possible when planning an expedition.

Collectors are required to comply with all host country rules and regulations on access to genetic resources. Obtain prior informed consent from host country authorities as early as possible in the planning process. Your host may be able to assist you with application for access permission. However, your host may not be aware of the national requirement to obtain access permission and may only know about the need for local permissions. The Plant Exchange Office can assist with communication with host country authorities and establishing the terms of access agreements. This process should be started well in advance of the exploration.

Determine how your proposed expedition may benefit national programs in the host country. Typical benefits include training in germplasm exploration methods, establishment of national germplasm collections with backups in international genebanks, transfer of information and technology, and collaboration in publication of research results. Additional non-monetary benefits may be provided based on the specific needs of the host country.

Determine in advance where collections will ultimately be deposited and who will have access to them.
All germplasm collected on NPGS explorations will be shared between the appropriate host country institutions and the NPGS. Germplasm deposited in the NPGS will be curated on behalf of the U.S. Government and become available to bona fide users, domestic or foreign. Germplasm collected on NPGS-supported explorations is considered in the public domain and cannot obtain intellectual property protections from the U.S. Government. While the NPGS will notify recipients of any restrictions on particular accessions, it does not have control over how the end user might utilize germplasm. Host countries may request certain restrictions or requirements concerning intellectual property rights. The Plant Exchange Office reviews requested restrictions to ensure concordance with U.S. government policy. All potential restrictions must be clarified in advance of any collecting.

Determine who will provide transportation and how costs will be shared for the exploration. If host country institutions provide a vehicle, it is customary for visitors to cover all operating expenses, maintenance, and most repairs (except perhaps full cost of major repairs). In addition, it is not unreasonable for hosts to require reimbursement in the form of a rental agreement. This should be agreed to in advance to avoid later misunderstanding. Besides expenses, host institutions may require that U.S. collaborators provide per diem for host collaborators.

When a proposal is submitted to the NPGS, written proof of host country interest and collaboration is required, both from collaborating scientists and their institutions. Collaborators should be notified when the proposal is submitted to the NPGS and be given a copy of the final proposal.

**PRE-TRIP PREPARATIONS**

Notify collaborators upon NPGS approval of proposal.

Prepare a list of equipment and supplies that must be purchased and carried or transported to the host country. Unless prior arrangements have been made, do not assume that host institutions will be able to supply expeditions with plant presses, corrugates, paper bags, envelopes, field labels, etc. Find out in advance if you can bring hard-to-get supplies or materials needed by host country collaborators.

Ask host country scientists if they are interested in receiving germplasm that can be provided from the NPGS collections. If so, arrange to carry the germplasm with you. Obtain any necessary import permits from the host country and phytosanitary certificates in the U.S. before departure.

Visiting scientists should offer to present guest lectures at host institutions. They should travel with one or more presentations on activities of their home institution or their current research. Scientific literature and a scientist’s reprints are often valued gifts that can be provided in digital format. Difficult to obtain publications and books are sometimes welcome contributions to host institutions. Ask in advance what literature is most needed.

**TRAVEL PREPARATION IN HOST COUNTRY**

Meet all collaborators, hosts, and essential government officials. Visits to government offices are important and appropriate.

Present seminars, share research activities and talk to graduate students.

Discuss with host colleagues the final responsibilities for trip expenses, itinerary, and how germplasm
FIELDWORK AND COLLECTING

Approach all plant collecting with a conservation ethic in mind. Collect so as not to endanger any natural plant population. Leave sufficient material behind so that a plant population can naturally regenerate.

Respect the local farmers, who are the trustees of local genetic material, for their knowledge and continued preservation of the crop landraces they grow. Work with them; in most cases they have extremely useful information to share about how and why certain plants are grown. Acknowledge their contributions.

Do not expect your hosts to work on national holidays. Respect their political or religious holidays as well as any important religious observances.

Follow your hosts’ lead in observing local customs and behavior. While your preferred field attire may seem entirely appropriate in your home country, it may not be appropriate in foreign settings.

Be respectful when photographing people and sensitive sites. Always ask permission to take photographs of people. Do not take photos that would be embarrassing to your hosts.

Avoid compelling your hosts to travel to areas where they feel uncomfortable. There may be good reasons for their reluctance to venture into areas of local unrest, even though desired germplasm is known to occur there.

Consider the need for voucher herbarium specimens for study by specialists in the NPGS and host countries. Wild species in particular should be documented by herbarium specimens and duplicates offered to herbaria in the host country. Photos documenting plant habit and habitat provide a valuable reference.

Take detailed notes and collecting information. Your hosts may want to take their own notes, but your data and notes should still be shared with them.

Approach foreign travel as a learning experience, keeping an open mind. Do not criticize what may seem unusual or unnecessary by your standards.

A successful expedition requires that foreign and host scientists work together. Sharing of expertise and knowledge while undertaking fieldwork is essential.

POST-FIELDWORK CLEANUP

Equally divide all collected germplasm and herbarium specimens, unless otherwise prearranged. If collections cannot be divided equally, the larger portion should go to the host institution. An alternate arrangement, which may be better under some circumstances, is for the host institution to grow out all of the seed and later ship a modest sample to the NPGS.

Obtain a phytosanitary certificate from the host country plant protection organization. It is not unreasonable for a host to require a few days to help procure the necessary phytosanitary certificates or
other export permits prior to departure.

Leave a photocopy of your field notes with the host institution. Specify when you expect to send typed notes or labels. Some institutions appreciate digitized copies.

Draft at least a short joint trip report including all collaborators prior to departing the host country.

Discuss with your hosts how they can take part in publishing results from the field collecting. They should be involved in publications that result from fieldwork in which they participated.

Be sensitive to host country constraints to germplasm exchange! Host institutions may not be able to release germplasm prior to your departure. Respect their requirements. Your hosts may be following government directives on policy over which they have no control. Do not place your hosts in an embarrassing situation.

FOLLOW-UP UPON RETURN

Promptly send a complete trip report and field collection data in final form to your collaborators, the NPGS site where the germplasm will be deposited, and the Plant Exchange Office. Acknowledge all host country participants as collectors in report and field collection data.

Arrange for shipment of any NPGS germplasm requested by your collaborators.

Maintain contacts with collaborators through timely communications.

Promptly follow through with non-monetary benefit sharing provisions of access agreements.

Acknowledge all exploration participants in presentations and papers.

Send emails to collaborators, hosts and government officials acknowledging their assistance. Inclusion of photographs taken on the trip is always appreciated.

Provide the host country with a list of assigned identification numbers when collections have been incorporated into the NPGS.

Do not discuss problems encountered on a trip any more widely than is necessary.

Plant Exchange Office
National Germplasm Resources Laboratory
Rm. 311, Bldg. 003, BARC-West
Beltsville, MD 20705-2350
Email: Anne.Frances@usda.gov
DATA COLLECTION FORM

COLLECTION OF XXXXXXX GERmplasm IN XXXXXXXXX

Coll. No. ___________ Latin name ________________________________

Local name ___________ Locality data ________________________________

Landowner ________________________________________________________

Elev.(m) ___________ Latitude ___________ Longitude ___________ Geographic ref. ________

Make altimeter ___________ Make GPS ___________________________ Uncertainty GPS (m) ________

Site size (m²) _______ Linear extent (m) _______ Herbarium specimen no. ________

Plant description ________________________________

__________________________ ________________________________

Improv. Status: wild weedy landrace other:________

Sample Source: wild pop. field garden market store other:________

Frequency in area: abundant frequent occasional rare Pop. Distrib.: ________________

No. plants found _______ No. plants sampled _______ Sampling method ________________

Pop. age/stage class distribution ________________________________

Type Propagule Collected: seed cuttings root plant other:________ Propagule maturity_____

Quantity propagules collected ________ Propagule source: plants ground both

SITE DESCRIPTION

Exposure/aspect _______ Slope_______

Site physical ________________________________________________________

Site vegetative ______________________________________________________

OTHER NOTES ________________________________________________________

Collectors _______________________________________________ Date________

__________________________ ________________________________

Collected with the support of the USDA Agricultural Research Service, in cooperation with XXXXXXXXX

A full description of passport data fields can be obtained from the Plant Exchange Office.
PLANT EXPLORATION REPORT SUMMARY

Participants:
(Name, title, full address, telephone number)

Countries visited:

Dates of travel:

Objectives:

Accomplishments: