

Country Report on the implementation of the  
International Treaty on Plant Genetic  
Resources for Food and Agriculture  
(ITPGRFA)

# United States of America

19/10/2018

# First Report on Compliance of ITPGRFA

## Online Reporting System on Compliance of the International Treaty on Plant Genetic Resources for Food and Agriculture

Pursuant to Article 21 of the Treaty, the Governing Body approved, at its Fourth Session, the Compliance Procedures that include, among others, provisions on monitoring and reporting: Resolution 2/2011.

According to the Compliance Procedures, each Contracting Party is to submit to the Compliance Committee, through the Secretary, a report on the measures it has taken to implement its obligations under the Treaty. This Online Reporting Systems facilitates the submission of such information in electronic format.

Should you need any additional information regarding the reporting on compliance or the use of the online system, please visit the Treaty's Website or contact the Secretariat at [PGRFA-Treaty@fao.org](mailto:PGRFA-Treaty@fao.org).

## Additional Reporting Information

Name and contact of the reporting officer

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Institution(s) of affiliation

> United States Department of State

## Article 4: General Obligations

1. Are there any laws, regulations procedures or policies in place in your country that implement the Treaty?

*Please select only one option*

- Yes  
 No

1A. If your answer is 'yes', please provide details of such laws, regulations, procedures or policies:

> The United States is pleased to provide the following information about its work related to the ITPGRFA. This voluntary report includes information regarding laws, policies, programs and activities that exceed the obligations of the United States under the ITPGRFA. To the extent that it does so, that reporting neither creates any legal obligations nor implies that any legal obligations exist with respect to any of the information provided.

The United States had the necessary laws, regulations and procedures in place to implement the Treaty prior to our ratification. The United States Department of Agriculture's (USDA's) Agricultural Research Service maintains the National Plant Germplasm System (NPGS), a network of more than 20 federal genebanks that operate under authority derived from, inter alia, 7 U.S.C. § 2201, 2204, 3125a, 3291, 5841, and 5924. Under these authorities, the USDA Secretary is authorized to provide, free of charge, samples of germplasm from the federal genebanks to any requestor, so long as such provision is not inconsistent with other laws or regulations. USDA's existing programs and practices are consistent with the treaty's provisions on access to and transfer of technology.

Following ratification of the Treaty, the NPGS is developing new procedures to distribute MLS materials to recipients outside of the United States with the Treaty's SMTA.

2. Are there any other laws, regulations, procedures or policies in place in your country that apply to plant genetic resources?

*Please select only one option*

- Yes  
 No

2A. If your answer is 'yes', please provide details of such laws, regulations, procedures or policies:

> There are several law and regulations that apply to PGRFA, including:

- The 1990 Food, Agriculture, Conservation and Trade Act (also known as the Farm Bill)
- The Federal Seed Act (FSA) (7 U.S.C. § 1551-1611), a truth-in-labeling law that ensures the accuracy of plant genetic resources used by farmers.
- The Plant Variety Protection Act (7 U.S.C. § 2321) provides legal intellectual property rights protection to breeders of new varieties of plants which are sexually reproduced (by seed) or tuber-propagated.
- The Plant Patent Act (35 U.S.C. § 161-164) provides intellectual property rights to breeders of new asexually reproduced varieties of plants.
- The Patent Act (35 U.S.C. § 101 et seq.) provides intellectual property rights for certain aspects of crops, provided they are eligible for patenting, new, useful, and non-obvious.

3. Is there any law, regulation, procedure or policy in place in your country that needs to be adjusted / harmonized to ensure conformity with the obligations as provided in the Treaty?

*Please select only one option*

- Yes  
 No

3A. If your answer is 'yes', please provide details of such adjustments and any plans to make those adjustments:

> No laws or regulations require adjustment, but some operational and technical procedures and policies have been or will be changed to ensure conformity with the Treaty.

## Article 5: Conservation, Exploration, Collection, Characterisation, Evaluation and Documentation of Plant Genetic Resources for Food and Agriculture

4. Has an integrated approach to the exploration, conservation and sustainable use of plant genetic resources for food and agriculture (PGRFA) been promoted in your country?

*Please select only one option*

Yes

No

5. Have PGRFA been surveyed and inventoried in your country?

*Please select only one option*

Yes

No

5A. If your answer is 'yes', please provide details of your findings, specifying species, sub-species and /or varieties, including those that are of potential use.

> The ex situ collections in the NPGS are inventoried in GRIN-Global.

For a recent inventory of PGRFA found in situ in the United States, see Khoury et al. 2013. An inventory of crop wild relatives of the United States. *Crop Sci.* 53:1496–1508. doi: 10.2135/cropsci2012.10.0585

Also attached is a list of List of native crop wild relatives of the United States related to food crops.

You have attached the following documents to this answer.

[Native CWR of the United States Related to Food Crops.pdf](#) - List of native crop wild relatives of the United States

You have attached the following Web links/URLs to this answer.

[Khory et al 2013](#)

[GRIN Global](#)

5B. If your answer is 'no', please indicate:

Any difficulties encountered in surveying or inventorying PGRFA;

Any action plans to survey and inventory PGRFA;

The most important PGRFA that should be surveyed and inventoried

>

6. Has any threat to PGRFA in your country been identified?

*Please select only one option*

yes

No

6A. If your answer is 'yes', please indicate:

The species, subspecies and/or varieties subject to such threats;

The sources (causes) of these threats;

Any steps taken to minimise or eliminate these threats;

Any difficulties encountered in implementing such steps;

> Khoury et al. 2013 provides a detailed list of threatened crop wild relatives, and priorities for conservation action.

You have attached the following Web links/URLs to this answer.

[Khory et al. 2013](#)

7. Has the collection of PGRFA and relevant associated information on those plant genetic resources that are under threat or are of potential use been promoted in your country?

*Please select only one option*

Yes

No

7A. If your answer is 'yes', please provide details of the measures taken:

> As per Khoury et al. 2013, priorities for collecting PGRFA and incorporating them into NPGS genebanks have been established, and such collections are underway.

8. Have farmers and local communities' efforts to manage and conserve PGRFA on-farm been promoted or supported in your country?

*Please select only one option*

- Yes  
 No

8A. If your answer is 'yes', please provide details of the measures taken:

> USDA provides information to farmers and local communities to promote on-farm conservation of PGRFA. Much of the on-farm conservation in the United States is conducted by non-governmental organizations and networks of crop enthusiasts, such as the Seed Savers Exchange, or by nurseries and seed businesses that specialize in heirloom varieties.

You have attached the following Web links/URLs to this answer.

[USDA information on heirloom varieties](#)

9. Has in situ conservation of wild crop relatives and wild plants for food production been promoted in your country?

*Please select only one option*

- Yes  
 No

9A. If your answer is 'yes', please indicate whether any measures have been taken to:

- Promote in situ conservation in protected areas  
 Support the efforts of indigenous and local communities

9B. If such measures have been taken, please provide details of the measures taken:

> The USDA Forest Service and USDA Agricultural Research Service (USDA/ARS) have established a joint strategic framework on the conservation and use of native crop wild relatives in the United States. The U.S. Department of the Interior Bureau of Land Management (BLM) leads the interagency Native Plant Materials Development Program, which has been working since 2001 to develop high quality seeds and seedlings of America's native plant species for restoration, rehabilitation, and reclamation. BLM also leads Seeds of Success (SOS), a national native seed collection program, in partnership with other federal government agencies and non-governmental organizations. SOS's mission is to collect wildland native seed for research, development, germplasm conservation, and ecosystem restoration. BLM has also worked with many American Indian tribes on native plant materials development projects. BLM recently awarded a contract to the National Academy of Science to conduct a National Native Seed Assessment across the federal, state, tribal and private sectors to assess native seed needs, facilities for seed storage and related needs to support the native seed supply chain.

You have attached the following documents to this answer.

[USDA FS and ARS Framework Native Crop Wild Relatives.pdf](#) - USDA Forest Service and USDA/ARS joint strategic framework on the conservation and use of native crop wild relatives in the United States.

You have attached the following Web links/URLs to this answer.

[Interagency Native Plant Materials Development Program](#)

10. Are there any ex situ collections of PGRFA in your country?

*Please select only one option*

- Yes  
 No

10 A. If your answer is 'yes', please provide information on the holder and content of such collections:

> In 1990, Congress authorized establishment of a National Genetic Resources Program (NGRP). NGRP has the responsibility to acquire, characterize, preserve, document, and distribute to scientists germplasm of all life forms important for food and agricultural production, which in addition to plants includes animals, microbes, and invertebrates. The US National Plant Germplasm System (NPGS) is part of the NGRP.

The NPGS is a collaborative effort to safeguard the genetic diversity of agriculturally important plants. The NPGS is managed by USDA/ARS, the in-house research agency of the USDA, and conducted in collaboration with U. S. universities and U. S. agricultural industries, especially seed companies.

The mission of the NPGS is to support agricultural production by:

- acquiring crop germplasm
- conserving crop germplasm
- evaluating and characterizing crop germplasm
- documenting crop germplasm
- distributing crop germplasm

11. Has the development of an efficient and sustainable system of ex situ conservation of PGRFA been

promoted in your country?

*Please select only one option*

Yes

No

11A. If your answer is 'yes', please indicate the measures taken to promote ex situ conservation, in particular any measures to promote the development and transfer of technologies for this purpose:

> With regard to the development and transfer of technologies, USDA, working with the Global Crop Diversity Trust and Bioversity International, developed GRIN-Global, an open-source software for PGRFA information management, and made it freely available for genebanks around the world to use.

USDA has also done extensive work developing cryopreservation technologies and techniques for citrus, grapes, and crops. Follow the link below for a partial list of USDA publications on this topic.

The USDA Office of Technology Transfer (OTT) is responsible for facilitating the adoption of USDA research discoveries, by bringing new technologies to market.

Many U.S. government agencies have implemented open-access policies to ensure that the results of federally-funded research are made available to the public. For example, USDA requires that such authors submit all final peer-reviewed journal manuscripts to the USDA public access archive system once they have been accepted for publication.

You have attached the following Web links/URLs to this answer.

[USDA publications on cryopreservation.](#)

12. Has the maintenance of the viability, degree of variation, and the genetic integrity of ex situ collections of PGRFA been monitored in your country?

*Please select only one option*

yes

No

12A. If your answer is 'yes', please provide details of the main conclusions of these monitoring activities

> The viability, degree of variation and genetic integrity of NPGS collections is continually monitored. The collections are maintained according to accepted international curatorial standards, such as the FAO Genebank Standards for Plant Genetic Resources for Food and Agriculture.

13. Has your country cooperated with other Contracting Parties, through bilateral or regional channels, in the conservation, exploration, collection, characterization, evaluation or documentation of PGRFA?

*Please select only one option*

Yes

No

13A. If your answer is 'yes', please indicate the other Contracting Parties with whom the cooperation was undertaken (where additional to cooperation through the Governing Body or Treaty mechanisms) and, where possible, details of any relevant projects:

> The United States is involved in several bilateral research partnerships with other contracting parties, as well as global and regional research partnerships, such as the Borlaug Global Rust Initiative.

The United States has worked with many other Contracting Parties through the Global Crop Diversity Trust and Bioversity International to support the development of crop-specific and regional PGRFA conservation strategies and to implement GRIN-Global in the Czech Republic, Bolivia, Chile, Portugal, and Tunisia.

You have attached the following Web links/URLs to this answer.

[Borlaug Global Rust Initiative](#)

## Article 6: Sustainable Use of Plant Genetic Resources for Food and Agriculture

14. Are there any policy and legal measures in place in your country that promote the sustainable use of PGRFA

*Please select only one option*

- Yes  
 No

14A. If your answer is 'yes', please indicate whether such policy and legal measures include:

- Pursuing fair agricultural policies that promote the development and maintenance of diverse farming systems that enhance the sustainable use of agricultural biological diversity and other natural resources;
- Strengthening research that enhances and conserves biological diversity by maximizing intra- and inter-specific variation for the benefit of farmers;
- Promoting plant breeding efforts, with the participation of farmers, that strengthen the capacity to develop varieties particularly adapted to social, economic and ecological conditions, including in marginal areas;
- Broadening the genetic base of crops and increasing the range of genetic diversity available to farmers
- Promoting the expanded use of local and locally adapted crops, varieties and underutilised species
- Supporting the wider use of diversity of varieties and species in on-farm management, conservation and sustainable use of crops and creating strong links to plant breeding and agricultural development
- Reviewing and adjusting breeding strategies and regulations concerning variety release and seed distribution

14B. If such policy and legal measures are in place, please provide details of the measures taken and any difficulties encountered in implementing them:

> USDA and public-sector plant breeders in the United States work closely with U.S. farmers to develop locally-adapted varieties to suit their needs. The U.S. plant variety protection system promotes maximizing variation by requiring that the new varieties be distinct, thereby ensuring a wide spectrum of genetic diversity available commercially.

USDA is also involved in programs to broaden the genetic base of crops, in collaboration with university and private-sector plant breeders. For example, the Germplasm Enhancement of Maize (GEM) project aims to increase the diversity of U.S. maize germplasm by incorporating exotic, public, and proprietary material into breeding programs.

USDA has several conservation programs to promote the sustainable use of agricultural biodiversity and other natural resources, for example:

- The Agricultural Conservation Easement Program, Administered by USDA's Natural Resources Conservation Service, provides financial and technical assistance to help conserve agricultural lands and limit non-agricultural uses of the land.
- The Environmental Quality Incentive Program, administered by USDA's Natural Resources Conservation Service, aims to help farmers confront agricultural challenges such as weather and pests. The voluntary program provides farmers with financial resources and one-on-one help to plan and implement improvements that lead to cleaner water and air, healthier soil, and better wildlife habitats, all while improving agricultural operations.
- The Conservation Reserve and Conservation Reserve Enhancement Programs, administered by USDA's Farm Service Agency, help farmers preserve environmentally sensitive land. The programs work by providing annual payments to farmers in exchange for removal of environmentally sensitive land from agricultural production, as well as by planting species that improve environmental quality.

Also see information provided in response to question 9 regarding collection and restoration of native plant materials.

## Article 7: National Commitments and international Cooperation

15. Has the conservation, exploration, collection, characterization, evaluation, documentation and sustainable use of PGRFA been integrated into your country's agriculture and rural development programmes and policies?

*Please select only one option*

- Yes  
 No

15A. If your answer is 'yes', please provide details of the integration of such activities into the agriculture and rural development programmes and policies:

> The 1990 Food, Agriculture, Conservation and Trade Act, also known as the 1990 Farm Bill, set out an integrated agricultural and rural development policy.

16. Has your country cooperated with other Contracting Parties, through bilateral or regional channels, in the conservation and sustainable use of PGRFA?

*Please select only one option*

- yes  
 No

16A. If your answer is 'yes', please indicate whether the aim of such cooperation is to:

- Strengthen the capability of developing countries and countries with economies in transition with respect to conservation and sustainable use of PGRFA  
 Enhance international activities to promote conservation, evaluation, documentation, genetic enhancement, plant breeding, seed multiplication, and sharing, providing access to and exchanging PGRFA and appropriate information and technology, in conformity with the Multilateral System of Access and Benefit-Sharing under the Treaty

16B. If, in addition to cooperation through the Governing Body or other Treaty mechanisms, your country has cooperated with other Contracting Parties directly or through FAO and other relevant international organizations, please indicate such other Contracting Parties and, where possible, details of any relevant projects:

> The United States Agency for International Development (USAID) provides significant support to the Global Crop Diversity Trust, through contributions to the endowment.



## Article 8: Technical Assistance

17. Has your country promoted the provision of technical assistance to developing countries and countries with economies in transition, with the objective of facilitating the implementation of the Treaty?

*Please select only one option*

- Yes  
 No

17A. If your answer is 'yes', please provide details of the measures taken

> The United States provides technical assistance to developing countries and countries with economies in transition with the objective of advancing the conservation and sustainable use of PGRFA, and promoting global food security.

USAID supports collaborative research on crops to advance food security goals through the sustainable use of plant genetic resources for food and agriculture. This includes collaborative research efforts between developing country national government researchers, the international agricultural research centers of the CGIAR and the World Vegetable Center, and U.S. university-based researchers and plant breeders.

In addition, the NPGS hosts numerous visiting scientists and trains students from numerous Contracting Parties in plant genetic resource management and related fields.

18. Has your country received technical assistance with the objective of facilitating the implementation of the Treaty?

*Please select only one option*

- Yes  
 No

18 A. If your answer is 'yes', please provide details of such technical assistance:

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## Article 9: Farmers' Rights

19. Subject to national law, as appropriate, have any measures been taken to protect and promote farmers' rights in your country?

*Please select only one option*

- Yes
- No

19 A. If your answer is 'yes', please indicate whether such measures were related to:

- Recognition of the enormous contribution that local and indigenous communities and farmers of all regions of the world have made and will continue to make for the conservation and development of plant genetic resources;
- The protection of traditional knowledge relevant to PGRFA
- The right to equitably participate in sharing benefit arising from the utilisation of PGRFA
- The right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of PGRFA
- Any rights that farmers have to save, use, exchange, and sell farm-saved seed/propagating material

19B. If such measures were taken, please provide details of the measures taken and any difficulties encountered in implementing them:

> Regarding protection of traditional knowledge, in accordance with the Presidential Memorandum of April 29, 1994, and Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments), the U.S. National Park Service (NPS) and other U.S. government agencies, maintain a government-to-government relationship with federally recognized tribal governments.

In order to effectively manage and interpret park resources, the NPS consults with and seeks information, which may include traditional knowledge, from individuals and organizations, including tribes, that have a traditional association with park areas. For example, as the ancestral homelands of many American Indian tribes, parks protect resources, sites, and vistas that are highly significant for the tribes. Therefore, the NPS pursues an open, collaborative relationship with American Indian tribes to help tribes maintain their cultural and spiritual practices and enhance NPS's understanding of the history and significance of sites and resources in the parks.

Needs for privacy and confidentiality of certain kinds of information are respected. Such information is deemed confidential when authorized by law, regulation, or policy. Culturally sensitive information is collected and recorded only to the extent necessary to support sound management decisions and only in consultation with tribal and other stakeholder representatives. Further, the National Parks Omnibus Management Act of 1998 (NPOMA) (54 U.S.C. 100701-100707) allows parks to restrict from public release information about the "nature and specific location" of "objects of cultural patrimony" in order to preserve the resource.

Regarding the right to participate in decision-making, the Indian Agricultural Resource Management Planning Program ensures that affected tribes are provided the right to participate in making decisions, relative to the sustainable use of Indian agricultural lands and resources, with the aim of conserving such assets.

The U.S. government has several federal advisory committees that provide opportunities for farmers to participate in making decisions, relative to the conservation and sustainable use of plant genetic resources including the Plant Variety Protection Board (PVPB) and the National Agricultural Research, Extension, Education, and Economics Advisory Board (NAREEEAB).

Crop Germplasm Committees (CGC) comprise a cross section of National Plant Germplasm System (NPGS) users, including farmers, who provide technical support and advice to National Plant Germplasm System (NPGS) genebanks and collections.

Regarding the right to participate in benefit-sharing, the public access policy for scholarly publications funded by the USDA requires that authors submit all final peer-reviewed journal manuscripts to the USDA public access archive system once accepted for publication. The USDA will ensure easy search and download of scholarly publications resulting from USDA funds without charge no later than 12 months following publication. By providing research in a transparent and accessible manner, farmers world-wide can access information and share in benefits from USDA funded projects.

In the United States, when plant variety protection expires, samples of the formerly protected seeds automatically become available through the NPGS and can be requested by farmers, breeders, and other members of the public without restrictions for use in plant breeding.

Regarding the right to save, use, exchange and sell farm-save seed, the U.S. plant variety protection law encourages the development of novel varieties of sexually reproduced plants and makes them available to the public, providing protection to those who breed, develop, or discover them, and thereby promotes progress in agriculture in the public interest. Under this law, farmers have the right to save seed of a protected variety for use on their own land, so long as no other agreement has been established between the breeder and the farmer that may otherwise restrict this.

## Article 11: Coverage of the Multilateral System

20. Has your country included in the Multilateral System of Access and Benefit-Sharing (MLS) all PGRFA listed in Annex 1 to the Treaty that are under the management and control of your Government and in the public domain?

*Please select only one option*

- All  
 Partially  
 None

20A. If your answer is 'all', please provide details of any difficulties encountered in including Annex 1 PGRFA in the MLS:

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20B. If your answer is 'partially', please provide details of:

The extent to which Annex 1 PGRFA have been included in the MLS

The crops that have been included in the MLS; and

The difficulties encountered in including Annex 1 PGRFA in the MLS:

>

20C. If your answer is 'none', please provide details of the difficulties encountered in including Annex 1 PGRFA in the MLS:

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21. Has your country taken measures to encourage natural and legal persons within your jurisdiction who hold Annex 1 PGRFA to include those resources in the MLS?

*Please select only one option*

- Yes  
 No

21A. If your answer is 'yes', please provide details of:

The natural or legal persons within your jurisdiction that included Annex 1 PGRFA in the MLS;

The crops that have been included in the MLS by these persons; and

Any difficulties these persons encountered in including Annex 1 PGRFA in the MLS:

> The Plant Variety Protection Act stipulates that, once protection has expired, formerly proprietary crop varieties automatically are incorporated into the NPGS, and therefore are included in the MLS.

21B. If your answer is 'no', please provide details, in particular details of any difficulties encountered in encouraging these persons to include Annex 1 PGRFA in the MLS:

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## Article 12: Facilitated access to plant genetic resources for food and agriculture within the Multilateral System

22. Has your country taken measures to provide facilitated access to Annex 1 PGRFA, in accordance with the conditions set out in Article 12.4 of the Treaty?

*Please select only one option*

- Yes  
 No

22A. If your answer is 'yes', please provide details of such measures:

> The U.S. NPGS distributes, on average, 80,000 samples per year to requestors outside of the United States.

22B. If your answer is 'no', please provide details of any difficulties encountered in providing facilitated access to Annex 1 PGRFA:

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23. Has facilitated access been provided in your country to Annex 1 PGRFA pursuant to the standard material transfer agreement (SMTA)?

*Please select only one option*

- Yes  
 No

23A. If your answer is 'yes', please provide the number of SMTAs entered into:

> As of February 2018, the NPGS has transferred 4,287 samples, representing 409 separate orders, with the SMTA attached.

23B. If your answer is 'no', please provide details of any difficulties encountered in providing facilitated access to Annex 1 PGRFA pursuant to the SMTA:

>

24. Has the SMTA been used voluntarily in your country to provide access to non-Annex 1 PGRFA?

*Please select only one option*

- Yes  
 No

24A. If your answer is 'yes', please indicate the number of such SMTAs entered into:

>

25. Does the legal system of your country provide an opportunity for parties to material transfer agreements (MTAs) to seek recourse in case of contractual disputes arising under such agreements?

*Please select only one option*

- Yes  
 No

25A. If your answer is 'yes', please provide details of the relevant laws, regulations or procedures:

> The SMTA provides for dispute settlement procedures, including arbitration. Those arbitral decisions are enforceable in U.S. court (see response to question 26).

26. Does the legal system of your country provide for the enforcement of arbitral decisions related to disputes arising under the SMTA?

*Please select only one option*

- Yes  
 No

26A. If your answer is 'yes', please provide details of the relevant laws, regulations or procedures:

> U.S. law provides generally for the recognition and enforcement of foreign arbitral awards falling under the 1958 Convention on the Recognition and Enforcement of Foreign Arbitral Awards (the "New York Convention"). The New York Convention is enforced through Chapter II of the Federal Arbitration Act ("FAA"). See 9 U.S.C. §§ 201-208. Section 203 of the FAA grants U.S. federal district courts with jurisdiction over actions or proceedings falling under the New York Convention. Section 207 of the FAA allows any party to the arbitration, within three years of an award falling under the New York Convention, to apply to such courts to confirm the award and requires such courts to confirm the award "unless it finds one of the grounds for refusal or deferral of recognition or enforcement of the award specified in the Convention."

27. Have there been any emergency disaster situations in respect of which your country has provided facilitated access to Annex 1 PGRFA for the purpose of contributing to the re-establishment of agricultural systems?

*Please select only one option*

Yes

No

27A. If your answer is 'yes', please provide details of such emergency disaster situations and the Annex 1 PGRFA to which access was provided:

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## Article 13: Benefit-sharing in the Multilateral System

28. Has your country made any information available regarding Annex I PGRFA?

- Yes  
 No

28A. If your answer is 'yes', please provide details of any information made available regarding Annex 1 PGRFA (e.g. catalogues and inventories, information on technologies, results of scientific and socio-economic research, including characterisation, evaluation and utilisation):

> Yes – The United States makes large amounts of information available through GRIN-Global. In addition, the U.S. government maintains and delivers many billions of genome sequence data points, without charge or restriction, through several federally supported crop genome databases, such as:

- Gramene: a curated, open-source, integrated data resource for comparative functional genomics in crops and model plant species.
- GrainGenes: a comprehensive resource for molecular and phenotypic information for wheat, barley, rye, and other related species, including oat.
- Maize GDB: a community-oriented, long-term, federally funded informatics service to researchers focused on the crop plant and model organism *Zea mays*.
- RosBreed: a project focused on developing and applying modern DNA tests and related breeding methods to deliver new cultivars of rosaceous crops, including apple and strawberry.

You have attached the following Web links/URLs to this answer.

[Gramene](#)

[GrainGenes](#)

[MaizeGDB](#)

[RosBreed](#)

29. Has your country provided or facilitated access to technologies for the conservation, characterisation, evaluation and use of Annex I PGRFA?

If access to technologies was provided, please provide details of the access provided.

*Please select only one option*

- Yes

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- No

29A. If your answer is 'yes', please indicate whether your country:

- Has established or participated in crop-based thematic groups on utilisation of PGRFA
- Is aware of any partnerships in your country in research and development and in commercial joint ventures relating to the material received through the MLS, human resource development and effective access to research facilities.

29B. If access to technologies was provided, please provide details of the access provided:

> The United States has collaborated with other governments and the CGIAR centers on research related to the conservation, characterization, evaluation and use of Annex 1 PGRFA. See response to questions 14, 16, and 17.

30. Has your country provided for and/or benefitted from capacity building measures in respect of Annex 1 PGRFA?

*Please select only one option*

- Yes

- No

30A. If your answer is 'yes', please indicate whether such measures were related to:

- Establishing and/or strengthening programmes for scientific and technical education and training in conservation and sustainable use of PGRFA;
- Developing and strengthening facilities for conservation and sustainable use of PGRFA;
- Carrying out scientific research and developing capacity for such research.

30B. If your country provided for and/or benefitted from such measures, please provide details:

> The United States has provided for capacity building in respect to Annex I PGRFA, through support to the Global Crop Diversity Trust, as well as through training, provision of equipment, and information management.

See responses to questions 11, 14, 16, 17, and 28.

## Article 14: Global Plan of Action

31. Has your country promoted the implementation of the Global Plan of Action for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture?

Please note that this question differs from question 15 as it only concerns Annex I PGRFA and is more specific.

*Please select only one option*

Yes

No

31A. If your answer is 'yes', please indicate whether the implementation of the plan was promoted through:

National actions

International cooperation

31B. If the implementation of the plan was promoted, please provide details:

> The NPGS genebanks' five-year project plans address objectives that support U.S. implementation of the Global Plan of Action.



## **Article 15: Ex Situ Collections of Plant Genetic Resources for Food and Agriculture held by the International Agricultural Research Centres of the Consultative Group on International Agricultural Research and other International Institutions**

32. Has facilitated access to Annex I PGRFA been provided in your country to the International Agricultural Research Centres of the Consultative Group on International Agricultural Research (IARCs) or other international institutions that have signed agreements with the Governing Body of the Treaty?

*Please select only one option*

- Yes  
 No

32A. If your answer is 'yes', please indicate:

To which IARCs or other international institutions facilitated access was provided;

The number of SMTAs entered into with each IARC or other international institution:

> The United States has sent Annex I PGRFA to essentially all of the CGIAR IARCs. As this access predated U.S. ratification of the Treaty, materials were provided without any SMTA.

32B. If your answer is 'no', please provide details of any difficulties encountered in providing facilitated access to Annex 1 PGRFA to IARCs and other international institutions that have signed agreements with the Governing Body of the Treaty

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33. Has access to non-Annex I PGRFA been provided in your country to IARCs or other international institutions that have signed agreements with the Governing Body of the Treaty?

*Please select only one option*

- Yes  
 No

33A. If your answer is 'yes', please indicate:

To which IARCs or other international institutions access was provided;

The number of MTAs entered into with each IARC or other international institution:

> The United States has sent non-Annex I PGRFA to essentially all of the CGIAR IARCs. As this access predated U.S. ratification of the Treaty, materials were provided without any SMTA.

33B. If your answer is 'no', please provide details of any difficulties encountered in providing access to non-Annex 1 PGRFA to IARCs and other international institutions that have signed agreements with the Governing Body of the Treaty:

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## Article 16: International Plant Genetic Resources Networks

34. Has your country undertaken any activities to encourage government, private, non- governmental, research, breeding and other institutions to participate in the international plant genetic resources networks?

*Please select only one option*

Yes

No

34A. If your answer is 'yes', please provide details of such activities:

> The United States has been an active member of the NORGEN Genetic Resources task force, a plant genetic resources network between the United States, Canada, and Mexico, for many years.

## Article 18: Financial Resources

35. Has your country provided and/or received financial resources for the implementation of the Treaty through bilateral, regional or multilateral channels?

*Please select only one option*

Yes

No

35A. If your answer is 'yes', where possible, please provide details of such channels and the amount of the financial resources involved:

> See responses to questions 16 and 17.

36. Has your country provided financial resources for national activities for the conservation and sustainable use of PGRFA?

*Please select only one option*

Yes

No

36A. If your answer is 'yes', please provide details of such national activities and the amount of the financial resources involved:

> For example, the USDA National Institute for Food and Agriculture (NIFA) provides funding through competitive, formula, and special grant programs to university, federal laboratory, and private researchers across the United States.

## About this reporting format

37. Have you encountered any difficulties in completing this reporting format?

*Please select only one option*

Yes

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No

37A. If your answer is 'yes', please provide details on such difficulties:

> Given the size and complexity of the United States government, it is difficult for to provide complete information on all U.S. efforts related to the ITPGRFA. With this in mind, the information provided in this report is meant to give a general impression of U.S. work related to the ITPGRFA.

37B. If you have suggestions for improvement of this reporting format, please share them:

> The United States recommends adding a section for general or other comments not related to experiences in reporting or implementation. As there is currently no section in the reporting format for such remarks, please note that we have provided a general comment as part of our response to the first question, under article 4, that applies to the entire report.

## **General remarks on the implementation of the ITPGRFA**

38. You may use this box to share any advice you may have arising from your country's experience with implementation of the Treaty:

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39. You may use this box to share any additional information that may be useful to provide a broader perspective of difficulties in implementation of the Treaty:

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40. You may use this box to share any additional information that may be useful to provide a broader perspective of measures that could help to promote compliance:

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