Supporting Statement for the Census of Users of the National Plant Germplasm System

OMBC Control No. 0536-XXXX

Part A: Justification

April 7, 2017

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Justification

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A. Justification

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

Agricultural productivity depends heavily on the process of genetic enhancement, i.e., the use of genetic materials for crop improvement. The United States holds a large and diverse collection of plant genetic resources in The National Plant Germplasm System (NPGS). This multiinstitutional network is one of the largest national genebank systems in the world. The mission of the NPGS is support agricultural production by 1) acquiring germplasm; 2) conserving germplasm; 3) evaluating and characterizing germplasm; 4) documenting germplasm; and 5) distributing germplasm. Resources must be allotting to these various responsibilities. During the past decade, demand for germplasm from the NPGS has increased, while its budget has decreased in real terms. Thus, the NPGS must provide more germplasm services with fewer resources. The information to be collected by the Census of Users of the National Plant Germplasm (i.e., living tissue from which plants can be grown) needed by breeders and other scientists in both the public and private sectors. This census will provide data not currently available to NPGS officials and it will broaden the scope of economic analyses of genetic enhancement. That will, in turn, add to the empirical foundation for the assessment of research and development investments, and, in turn, productivity at USDA's Economic Research Service (ERS). The database would consist of statistically assessable information on germplasm use for breeding and research. This includes information about use of specific crops; traits sought, and the utility of germplasm by type and purpose; institutional needs for germplasm (both public and private); and requestors' predictions of future use. Two data products will be released to the public: 1) aggregated estimates of users' evaluations; and 2) maps detailing U.S. demand for germplasm traits in NPGS material. The results will be compared with an earlier study measuring demand for NPGS material during 1995-1999.

Legal authority for the planned data collection is 7 U.S.C. 2204(a) and 7 U.S.C. 427 (attachment A). This section authorizes the Secretary to collect statistics concerning agriculture, including those related to the collection, maintenance and distribution of seeds and plants.

2. Indicate how, by whom, how frequently, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

The Census of Users of the National Plant Germplasm System is a new, one-time, data collection. The census will solicit data from the 6,009 people who requested germplasm from a set of ten crops from the NPGS over a five year 2009-2013. (The ten crops are beans, barley, corn, cotton, sorghum, squash, soybeans, potato, rice and wheat. These capture the most economically important row crops in the U.S., as well as crops originating in the Americas.) A web-based instrument will ask a set of eight questions for each crop, along with two questions about profession and institutional affiliation (attachment B). There are spaces for optional comments. Responses are voluntary. The census instrument and procedures are based on the instrument used in a similar study "Demand for Genetic Resources from the National Plant Germplasm System" in 2000. That instrument was developed by the International Food Policy Research Institute, Auburn University's Department of Agricultural Economics and Rural Sociology, the National Genetic Resources Laboratory (NGRL) of the NPGS, and ERS. The sequence of questions began with simple estimates of accessions requested and received and ended with professional and institutional inquires, as suggested by Auburn sociologist Rick Walsh, who advised the earlier study. Using the results of the census, along with the study conducted 15 years ago, we plan to compare two time periods of germplasm use.

The database of responses will be used by ERS researchers to measure germplasm demand, the way germplasm is used, the degree to which NPGS germplasm met users' objectives, and sources of increased demand for NPGS materials. Analysis will form the basis of an Economic Research Report published by USDA ERS. Geospatial findings will also be used in ERS products related to productivity and changing growing conditions . The database will be shared with NPGS staff and research leaders in the plant genetic resource area at the Agricultural Research Service (ARS) for program assessment.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also, describe any consideration of using information technology to reduce burden.

The information collection will be administered on-line using SurveyMonkey, a web-based survey software package. Collection of these data online permits a substantial cost savings, and SurveyMonkey is a popular, low-cost, reliable survey package that is easy to use for both questionnaire developers and respondents.

The census questionnaire has been kept as simple and respondent-friendly as possible. The webbased instrument was pretested for ease of use by seven germplasm requestors from USDA's ARS. Nine NPGS users then estimated the time spent completing the forms. ERS information technology staff has worked to enhance the instrument design, including such elements as validated input, skip logic, indicators of survey progress and incentives in the form of access to aggregated data. (Respondents will be sent a link to the ERS report, which will include an appendix with the data.)

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purpose described in item 2 above.

We consulted with the NGRL, which maintains data on the distribution of NPGS resources. The NGRL has data on the germplasm requests by crop, the type of germplasm distributed, and recipients' locations by country. However, the data collected do not include information about the traits sought, the ways in which germplasm has been used, the utility of accessions in breeding and other scientific endeavors, and expectations of use of the system's resources in the future. By including two additional descriptors of abiotic tolerance in the question about traits sought (i.e., temperature resistance and moisture/drought resistance), we can also measure the demand for traits related to changing growing conditions. No other survey or census collects this information.

5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.

The census will be sent to individual requestors. Requestors vary widely in their institutional affiliation. The majority of requestors come from non-profit institutions, but requestors are associated with businesses of all sizes as well. Among requestors from U.S. commercial institutions, 339 meet the Small Business Administration's definition for small business manufacturers (i.e., less employing less than 500 people), or approximately 5.6% of all requestors. Unaffiliated individuals also request germplasm from the NPGS. The economic impacts of participation in the survey will be small for all respondents because participation will occur at a time convenient for the respondents, and the mean time for completing the questionnaire is 19.8 minutes. Because information will be collected via the internet, the use of an electronic information collection method will further reduce the participation burden. Based

on a total burden of 1,619.2 hours, the burden on small businesses in the U.S. would be 90.68 hours.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

The NPGS budget has declined in real terms over the past decade while NPGS distributions have doubled over the same period. The NPGS must make decisions about how to allocate its limited resources among many crops and activities based on limited information. Though the NPGS knows who is receiving germplasm, it does not know how the germplasm is being used or what traits are important to germplasm recipients. Information about the needs of germplasm requestors can help determine needed investments in the NPGS and guide priority-setting. ERS' Agricultural Science Policy program is tasked with investigating the direction and efficiency of the public sector in enhancing the stock of agricultural knowledge and in developing new technologies; this includes assessing the economic value and cost of preserving the public's access to genetic resources and genetic diversity. Without this information collection, ERS analysis will rely primarily on analysis of costs of maintaining the NPGS and not the benefits, with little empirical understanding of the demand for the genetic material the NPGS maintains and supplies. Furthermore, demand from NPGS users for traits such as drought tolerance, heat tolerance, or tolerance to new configurations of pests and diseases is likely to rise as growing conditions change. As the major genebank in the U.S., the NPGS is an important source of genetic traits for adaption to new environmental challenges. Without the combination of data about traits sought and the purpose intended for germplasm, it will be difficult or impossible to assess the use of NPGS resources for adaptation to changing conditions.

- 7. Explain any special circumstances that would cause an information collection to be conducted in a manner:
 - requiring respondents to report information to the agency more often than quarterly;
 - requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;
 - requiring respondents to submit more than an original and two copies of any document;
 - requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records for more than three years;
 - in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;
 - requiring the use of a statistical data classification that has not been reviewed and approved by OMB;
 - that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or

• requiring respondents to submit proprietary trade secret, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.

There are no special circumstances.

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments.

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting form, and on the data elements to be recorded, disclosed, or reported.

A 60-Day Federal Register Notice was published on April 7, 2016 (Volume 81 Number 67, Pages 20320-20321, attachment C). No comments were received.

ERS has communicated extensively with the NPGS, the NGRL, and ARS. Their staff have been involved since the beginning of planning this census. The NGRL provided information about existing data, such as the geographical distribution of germplasm, the location of respondents and the types of germplasm requested. The NPGS, NGRL, and ARS have commented on the study's conceptual design, the efficacy and practicality of the collection instrument for capturing the desired data, and techniques to improve response rates.

Seven Agricultural Research Service (ARS) scientists reviewed the questionnaire and provided feedback. We revised the instrument on the basis of their comments. The reviewers were:

- 1. Dr. Todd Campbell, Research Geneticist, ARS, Florence, SC
- 2. Dr. Tommy Carter, Research Geneticist, ARS, Raleigh, NC
- 3. Dr. Michael Dowd, Chemical Engineer, ARS, New Orleans, LA
- 4. Dr. Sherry Flint-Garcia, Research Geneticist, ARS, Columbia, MO
- 5. Dr. Bob Graybosch, Supervisory Research Geneticist/Research Leader, ARS, Lincoln, NE
- 6. Dr. Dolores Mornhinweg, Research Geneticist, ARS, Stillwater, OK
- 7. Dr. Roy Navarre, Research Geneticist, ARS, Pullman, WA.

Results from the pretesting and actions taken in response are summarized below:

1. You might want to consider making all percentage estimates as pull down options. Some are and some are not. Some will type in a % sign and others will not.

Response: Added percent signs after answers for all relevant questions.

2. Differences between germplasm categories is a bit vague.....cultivars vs. advanced breeding materials? Maybe a quick definition is in order at first occurrence.

Response: The categories were set by the NPGS. We have expanded the titles of the categories in the instrument to be more explanatory.

3. The order of the germplasm groups changes during the survey....specifically weedy relatives and genetic stocks. It's easier if always in the same order.

Response: For questions involving germplasm types, the order is now always the same:

- Cultivars
- Advanced breeding materials
- Landraces
- Wild and weedy relatives
- Genetic stocks
- Material type unknown
- 4. Choice of traits seem random. I know you can't list all traits for lack of space, but seems a little odd.

Response: NGRL staff agreed that the choice of traits was suitable, especially because we want to capture resistance to temperature and moisture changes.

5. "over next 10 years, expect use of accessions to change?".... do you mean how often I will be requesting germplasm, or if I ordered it for one purpose that I will use in another way in the future? I assumed the latter.

Response: The former is correct. The instrument was reworded to "… do you expect your <u>requests for</u> NPGS accessions to change?"

6. Primary professions are a bit odd.....These are not really professions. These are activities, which is what you asked in an earlier question. I would add "Geneticist" to the list as a default. And I would allow multiple options to be chosen.

Response: We reworded the question to "What best describes your primary professions?" A single option was needed so responses can be compared with 2000 results. The categories were edited to read as follows:

- Acquisition/curatorial activities
- Pre-breeding/evaluation activities
- Breeding
- Genetics/molecular biology
- Education

- Farming
- Other (please specify)

The National Agricultural Statistics (NASS) reviewed the census protocol. The review was conducted by Mingshan Zheng (Mathematical Statistician), at NASS Methods Division, December 7, 2016 (attachment F: NASS review of Census of Users of the National Plant Germplasm System and ERS response).

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

Payment or gifts will not be provided to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

ERS does not intend to invoke CIPSEA or any other data protection statute for this collection, because it will not collect any sensitive or personally identifiable information.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior or attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

The Census of Users of the National Plant Germplasm System does not request information of a sensitive nature.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I.
- Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories.

We estimate the total hour burden of this collection to be 1,619.2 hours, based on information summarized in the tables below, and explained in further detail after the tables.

Census of Users of the National Plant Germplasm System Reporting Burden

| Users of the National Plant Germplasm System, 10 crops, 2009-2013—census burden | | | | | | |
|---|---|---|---|--|---|---|
| | Estimated percentage of users responding | Estimated number of respondents or non- respondents | Time to complete the questionnaire/ review email | Total time to respond or read (minutes) | Total time to respond or read <i>(hours)</i> | Estimated total hours of response and non-response burden |
| Total respondents and non- respondents | | 6,009 | | | | 1,609.4 |
| Initial email | 36.33 | 2,183 | 19.8 | 43,223.4 | 720.4 | |
| First reminder | 18.16 | 1,091 | 20.8 | 22,692.8 | 378.2 | |
| Second reminder | 13.63 | 819 | 21.8 | 17,854.2 | 297.6 | |
| Third reminder | 4.54 | 273 | 22.8 | 6,224.0 | 103.7 | |
| Non- respondents | | 1,643 | 4 | 6,572.0 | 109.5 | |

| Non-response follow-up survey burden | | | | | | |
|---|------------------|-------------------|-----------|-------------|-----------------|--|
| | Estimated number | Number of users | | Estimated | Estimated total | |
| | of non- | selected for non- | Total | average | hours of | |
| | respondents, | response bias | responses | minutes per | response | |
| | census | analysis | | response | burden | |
| Respondents to follow-up survey for non- response bias analysis | 1,643 | 97 | 100 | 6 | 9.7 | |
| Users not replying to non- response survey | | 3 | | 1 | .1 | |

| Total User Burden | | | | |
|---|---|--|--|--|
| | Estimated total annual hours of response and non- | | | |
| | response burden | | | |
| Total burden | 1,619.2 | | | |
| Total Census burden | 1,609.4 | | | |
| Total burden, follow-up survey for non- | 9.8 | | | |
| response bias analysis | | | | |

Affected Public: The respondent group is the universe of 6,009 users who requested germplasm from the National Plant Germplasm System for ten crops (beans, barley, corn, cotton, sorghum, squash, soybeans, potato, rice and wheat) during 2009-2013. (Email addresses were not available for approximately 4 percent of requestors. These have been omitted from the study

universe.) 4,671 requestors are from the U.S. and 1,338 are from other countries. Among the U.S. users, 824 (17.64 percent) represent commercial firms, 2,180 (46.67 percent) are from the non-profit sector (Federal agencies, state agencies, universities, and other non-profit institutions), and 1,667 (35.69 percent) are unaffiliated individuals.

Estimated Number of Respondents: The estimated total number of potential respondents for this study is 6,009. Approximately 70 percent of U.S. commercial users (576), 85 percent of U.S. non-profit users (1,853 users), 60 percent of unaffiliated U.S. users (1,000), and 70 percent of non-U.S. users (937 users) are expected to respond to the survey, for a total of 4,366 respondents, or approximately 73 percent. Restricting the count to U.S. users only, approximately 3,429 or 73 percent of all users are expected to respond. An estimated 1,643 potential respondents will not complete this survey (attachment D).

Users who belong to different institution types tend to request different amounts of germplasm (e.g. U.S. non-profit users tend to request more germplasm than do users as a whole, and U.S. unaffiliated users tend to request much lower numbers of germplasm accessions than do users as a whole). The greater the number of germplasm accessions requested, the most vested users are in the system. Experience with the 2000 study "Demand for Genetic Resources from the National Plant Germplasm System" found that response rates were highest among U.S. nonprofit users, followed by U.S. commercial users, and then unaffiliated individuals. (Response rates were low among international users. Delivery to international users was complicated by problems with timely postal delivery, particularly to requestors in developing countries. We expect an electronic instrument to improve international delivery significantly.) The expected response rate for the entire universe of users, weighted by the amount of germplasm they requested, is 77 percent of total demand for the entire universe and 80 percent of total U.S. demand for U.S. users only. For example, NPGS data for the census participants indicates that U.S. commercial users requested 22 percent of all distributed acquisitions in the U.S. in 2009-2013; nonprofit U.S. users requested 73 percent of all distributed acquisitions; and unaffiliated individuals in the U.S. requested 5 percent of all distributed acquisitions. Thus, expected response rates of 70 percent for U.S. commercial users, 85 percent for U.S. non-profit users, and 60 percent for unaffiliated U.S. users would represent $(0.7 \times 22) + (0.85 \times 73) + (0.6 \times 5) \approx 80$ percent of total distributed acquisitions in the U.S.

If the demand-weighted response for U.S. users falls below 80 percent, a modified stratified sample of 100 non-respondents will be contacted first by email and then by telephone and asked to respond to a smaller set of questions. Four strata will be constructed based on classification of U.S. NPGS users by institutional type: 1) U.S. commercial companies; 2) U.S. federal agencies; 3) U.S. state agencies, universities, and non-profit organizations; and 4) U.S. individuals without stated affiliations. The non-response bias study will focus on U.S. users because they receive the majority of the samples distributed, meeting the needs of U.S. users (now and in the future) is the primary policy objective for the NPGS, and U.S. users are the only component of the planned geospatial analysis. The sample will be allocated to each stratum in proportion to the number of demand-weighted non-responding users in the stratum.

Estimated Number of Responses per Respondent: Each participating NPGS germplasm user is expected to respond one time by completing the Census of NPGS Users questionnaire. A

sample of non-responding U.S. users contacted by email or telephone for follow-up are expected to respond once.

Estimated Total Annual Responses: A total of 4,366 responses (3,429 from the U.S. and 937 from other countries) are expected from requestors who complete the Census of National Plant Germplasm System Users questionnaire. An additional 97 responses are expected from non-respondents who will be contacted by email or telephone for an analysis of non-response bias (as per Frey 1996, *National Plant Breeding Study 1*, Iowa State University). Three requestors are not expected to respond to either the electronic or telephone follow-up. Other non-respondents (who incur a smaller amount of burden) will total 1,543 (total non-respondents minus 100 contacted by email or telephone.)

Estimated Time per Response and Total Burden: The initial time expected to read the email and complete the Census questionnaire is 19.8 minutes. For each non-response, the time expected to read initial and reminder emails is one minute per reminder.

Of the total of 6,009 users, 36.33 percent are estimated to respond to the initial invitation to complete the Census questionnaire, 18.16 percent to respond to the first reminder, 13.63 percent to respond to the second reminder, and 4.54 percent to the final reminder. Non-respondents are expected to be about 27 percent of the total (attachment E).

Users who respond to the initial invitation total 2,183, with a response burden time of 19.8 minutes each, giving a total burden of 720.4 hours.

Users who respond to the first reminder total 1,091, with a response burden time of one minute reading the initial invitation plus 19.8 minutes reading the first reminder and completing the questionnaire, for a total burden of 378.2 hours.

Users who respond to the second reminder total 819, with a response burden time of one minute reading the initial invitation, one minute reading the first reminder, plus 19.8 minutes reading the second reminder and completing the questionnaire, for a total burden of 297.6 hours.

Users who respond to the third reminder total 273, with a response burden time of one minute reading the initial invitation and first and second reminders, plus 19.8 minutes reading the final reminder and completing the questionnaire, for a total burden of 103.7 hours.

Non-respondents total 1,643. They face a burden time of one minute each for the initial invitation plus the three reminders, for a total of four minutes. Their total burden is 109.5 hours.

The 100 non-respondents selected for email and telephone follow-up are estimated to face an additional burden of 1 minute to read the email invitation to complete the census non-response survey. Responding to the survey will add 5 minutes each for those 97 who reply, resulting in a total burden of 9.8 hours.

The total burden is thus estimated at 1,619.2 hours (720.4 + 378.2 + 297.6 + 103.7 + 109.5 + 9.8)

Estimated Total Cost Burden: The total cost burden is estimated by first estimating U.S. plant breeder salaries and then combining that with the hourly burden estimated above. This is likely to be an overestimate for two reasons. First, although the majority of NPGS users are likely to be plant breeders or to represent institutions engaging in plant breeding, the unaffiliated users are likely to have somewhat lower salaries. Second, plant breeders and other users outside of the U.S. are expected to have somewhat lower salaries than U.S. plant breeders.

In 2006, Bliss (*Horticultural Science* vol. 41 no. 1, pp. 45-47) estimated the average plant breeder salary in the private sector to be about \$80,000 annually. In that same year, the average salary for all university professors in the U.S. was \$73,207 (data from the American Association of University Professors (<u>http://www.aaup.org/our-work/research/annual-report-economicstatus-profession</u>). We use this as an estimate of the average salary for plant breeders affiliated with universities and other non-profit institutions. By 2014, the American Association of University Professors estimated an annual average salary of \$87,838. Assuming that private sector plant breeding salaries rose by the same proportion leads us to estimate an average private-sector plant breeding annual salary of \$95,990

Ignoring the likely lower salaries for unaffiliated users or users outside of the U.S., the overall average annual salary can be estimated by assuming three-quarters of the users are affiliated with non-profits and one-quarter are affiliated with private firms. This results in an estimated average annual salary of \$89,876. Assuming that 2000 hours are worked per year would lead to an hourly wage of \$44.94.

Thus, a response burden of 1,619.2 hours at an hourly cost of \$44.94 results in a total cost of \$72,767.

13. Provide estimates of the total annual cost burden to respondents or record keepers resulting from the collection of information, (do not include the cost of any hour burden shown in items 12 and 14). The cost estimates should be split into two components: (a) a total capital and start-up cost component annualized over its expected useful life; and (b) a total operation and maintenance and purchase of services component.

The census has no capital or start-up costs to respondents, nor any operation, maintenance, or service purchase costs.

14. Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost and any other expense that would not have been incurred without this collection of information.

The total cost to the Federal government is estimated to be \$326,245. This assumes ERS staff time at 2.1 Fulltime equivalent (FTE), (Grade GS-14, step 5), with time divided as indicated in the table; ERS overhead, \$51,250; National Germplasm Resources Laboratory at 0.1 FTE, (Grade GS-14, step 5) \$12,341; and NGRL overhead, \$3,500.

| Census of Users of the National Plant Germplasm System: | FTEs from the Federal |
|---|------------------------------|
| Government | |

| Activity | In-house (ERS) FTEs | In-house (NGRL) | Estimated |
|--|---------------------|-----------------|-----------|
| | | FTEs | cost |
| Development of questionnaire, materials, and documentation | 0.6 | | 74,044 |
| Management of data collection | 0.1 | 0.1 | 24,681 |
| Follow-up | 0.15 | | 18,512 |
| Data editing | 0.1 | | 12,341 |
| Analysis | 0.4 | | 49,362 |
| Publication | 0.75 | | 92,555 |
| Overhead ERS | | | 51,250 |
| Overhead NPGS | | | 3,500 |
| TOTAL | 2.1 | 0.1 | \$326,245 |

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-1.

This is a new collection of information.

16. For collections of information whose results are planned to be published, outline plans for tabulation and publication.

- Aggregated estimates of NPGS users' evaluation of their experience with NPGS germplasm distributions, including:
 - Usefulness of the germplasm received
 - Expected future use of germplasm
 - o Most important traits sought in the germplasm received from the NPGS
- U.S. maps indicating:
 - Geographic distribution of the relative importance of traits sought in NPGS germplasm, in particular traits that respond to abiotic stress (that is, stresses, such as temperature or rainfall extremes from the environment) and traits that respond to biotic stresses (that is, stresses due to the deleterious effects of pests or pathogens)

Two ERS products will be publically available:

• A comprehensive report reviewing demand of genetic resources available from the NPGS, a comparison of results with ERS' 2000 study for all users, an estimation of future needs for U.S. users, and the expected impacts for research and, in turn, agricultural production. Aggregated data from the study will be given in an appendix.

• A general interest article published in ERS' quarterly journal *Amber Waves*.

Timeline for the project:

| ACTIVITY | CALENDAR COMPLETION DATE |
|--|--------------------------|
| Initiate dissemination of memo and email invitation from the NPGS requesting participation in the Census | Upon OMB approval (T) |
| Disseminate first email reminder to requestors | T + 7 days |
| Disseminate second email reminder to requestors | T + 14 days |
| Disseminate third email reminder to requestors | T + 21 days |
| On-line questionnaire closed | T + 1 month |
| Complete matching responses against list of requestors to identify non-respondents | T + 1.5 months |
| Develop sample of non-respondents and conduct follow-up phone calls to sample | T + 2.5 months |
| Complete construction of non-response bias analysis | T + 3.5 months |
| Complete analysis of the data, in consultation with NPGS colleagues | T + 7 months |
| Complete draft of report | T + 10 months |
| Clear and publish final report | T + 16 months |

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

ERS will display the expiration date for OMB approval of the information collection on the instrument, together with its OMB control number.

18. Explain each exception to the certification statement identified in Item 19 "Certification for Paperwork Reduction Act."

There are no exceptions to the certification.