



U.S. Department of
Agriculture
Agricultural Marketing Service
Science & Technology
Programs

Plant Variety Protection Office
10301 Baltimore Avenue
Room 405, National Agricultural Library
Beltsville, MD 20705

Application for Plant Variety Protection Certificate



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Instructions for Applications and Exhibits

To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, and E; (3) for a tuber reproduced variety, verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; and (4) payment by [credit card](#) or check drawn on a U.S. bank for \$4,382 (\$518 filing fee and \$3,864 examination fee), payable to "Treasurer of the United States" (*See Section 97.6 of the Regulations and Rules of Practice*). **NEW:** For a seed reproduced variety, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to **reproduce** the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. **NO SEEDS SHOULD BE SENT TO PVPO.** With the exception of tubers, instructions for direct deposit will be sent with the filing letter. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 405, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory except for the items below.

Items listed on the ST 470 Application Form

- ❖ Item 18 - The USDA-APHIS reference number(s) for the approved petition(s) to deregulate the genetically modified plant(s) or transgene(s) is required to commercialize transgenic event(s) . A summary of all reference numbers can be found at http://www.aphis.usda.gov/biotechnology/not_reg.html. The petition reference number (e.g. [93-258-01p](#)) for each transgene present in the PVP applicant's variety should be indicated in block #18.
- ❖ Item 20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (*See Regulations and Rules of Practice, Section 97.103*).
- ❖ Item 23. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*
- ❖ Item 24. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a payment by credit card or check payable to "Treasurer of the United States" in the amount of \$768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Instructions Regarding Name Clearance

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, Seed Regulatory and Testing Branch, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. <http://www.ams.usda.gov/lsg/seed.htm>.

Important Notice about Changes in Ownership or Assignments

It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (*See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.*)

How to send seed samples

Domestic (U.S.) sources: Seed samples from within the U.S. should be sent directly to NCGRP at the following address via commercial carriers (i.e. FedEx, UPS, etc.) rather than the U.S. Postal Service. USDA-ARS-NCGRP, Attn: PVP Coordinator, 1111 South Mason St., Fort Collins, CO 80521-4500, Tele # 970.495.3200

Non-US sources:

1. Please email NCGRP (Renee.White@ars.usda.gov, with a cc to William.Prange@ars.usda.gov), in advance of seed shipment to request documentation necessary to import seed into the United States. This documentation includes an Import Permit Address label specific for this shipment as well as a copy of the Import Permit.
2. Please note that the import label is valid only for the shipment assigned and is not re-usable. Seed shipped without proper documentation (Import Permit and Import Address labels) from non-US sources may be destroyed.
3. It is requested that a copy of the Import Permit be enclosed with the seed.
4. A Phytosanitary Certificate issued by the country of origin must accompany all samples received from non-US sources, per USDA Animal Plant Health Inspection Service (APHIS) regulations.
5. Inside the shipping box, please include your 1) seed deposit forms and 2) a letter to indicate where the seed is to be shipped after it is inspected by the Plant Protection and Quarantine Office (to USDA-ARS-NCGRP), and 3) a Phytosanitary Certificate.

Instructions for Completing Exhibit A - Origin and Breeding History

The applicant is required to provide:

1. A full disclosure of the genealogy, including the breeding method;
2. The details of subsequent stages of selection and multiplication used to develop the variety; A statement of uniformity reporting the level of variability in any characteristics of the variety (commercially acceptable variability is allowed);
3. A statement of genetic stability showing the number of cycles of seed reproduction for which the variety has remained unchanged in all distinguishing characteristics;
4. The type and frequency of variants observed during reproduction and multiplication;

Obtaining intellectual property rights requires disclosure. As part of this disclosure the applicant is to provide the public with information about his/her invention in exchange for protection of the variety. For Plant Variety Protection, this includes a full disclosure of the parentage and breeding methodology in the Exhibit A, Origin and Breeding History.

Also, as part of the breeding history and methodology, the Exhibit A includes the details of subsequent stages of selection and multiplication; including the selection criteria. Additionally, if not obvious or enclosed elsewhere in the application, the Exhibit A would provide the characteristic(s) by which the application variety can be distinguished from the direct parent(s).

Lastly, provide a separate statement that discusses whether there are genetic variants that are to be expected during normal maintenance of the variety, the description of the variants, and their frequency. In general, the frequency of variants should not be more than 5%. Beyond this level, the uniformity and stability of the variety may be called in question.

Instructions for Completing Exhibit B - Statement of Distinctness

To produce a Statement of Distinctness the applicant can follow the steps below. **If additional space is required, feel free to attach your supporting data on a separate sheet of paper and attach it to the Exhibit B form below.

1. State the most similar previously existing variety, varieties, or identifiable group of varieties; or,
2. State all the previously existing varieties known for a crop. Generally, this can only be one for a newly identified crop.
3. State the character or characters that clearly distinguish the applicant's variety from the varieties stated in step 1 (i.e., the most similar variety or varieties).

4. State the qualities or quantities of the character(s) referenced in step 2. Note the character state must be provided for the application variety and the most similar variety or varieties.

General Requirements for a Distinguishing Character

1. Differences in quantitative characters such as plant size, seed size, and maturity that are not obvious and detectable without a direct comparison must be supported by evidence provided by the applicant. The evidence must be given as numerical data obtained from at least 2 trials. ([Please see the Guidelines for Presenting Evidence in Support of Variety Distinctness.](#))
2. Distinction based on differences in color needs to be referenced with a standard such as the Royal Horticultural Society Colour Chart or the Munsell Book of Color, unless dramatic (i.e., red vs. green). Color chart measurements must be conducted in two or more localities or growing seasons.
3. Distinction based on differences in disease reaction needs to be supported with data or results from at least 2 trials that were conducted in two or more localities or growing seasons, unless dramatic (i.e., immune vs. highly susceptible); or the presence or absence of a gene known to elicit the reaction must be stated. When the causal agent has been demonstrated or identified, the source of the disease must be provided. Also, the disease reaction needs to be referenced to the causal agent or organism including the race, strain, or pathotype where appropriate. If the causal agent has not been demonstrated or identified, the source of the disease or inoculant must be provided.
4. Differences in yield cannot be used as a basis for distinction because yield is a highly complex character. Sub-characters that contribute to differences in yield can be used as a basis for distinction.
5. Improvements in uniformity (by reducing the standard variation) are not sufficient to assess distinction.

The PVPO will accept differences using molecular techniques (DNA fingerprinting) only if:

1. The molecular marker locus is publicly disclosed and cited (cites to URLs such as Soybase or MaizeGDB are acceptable),
2. the molecular marker locus is clearly identified,
3. the specific differentiating data is cited,
4. if photographic copies are provided, they contain sufficient resolution of scientific publishable quality gels or other molecular data with sufficient resolution and labeling to resolve the individual data in question are provided, and
5. the molecular marker locus can be detected by a third party.

For example, in the case of:

SNPs - the locus is defined by the SNP sequence showing the substitution or indel
SSRs - the locus may be defined by primer pairs or sequence
AFLPs - the locus is defined by primer pairs
RAPDs - the locus is defined by primer pairs

Guidelines for Presenting Evidence in Support of Variety Distinctness

Differences in quantitative characters such as plant size, seed size, maturity and any difference not obvious must be given as numerical data obtained from similar comparisons with a statistical analysis showing the degree of significance. The comparison must be conducted in at least two locations or two growing periods.

The following information is required as part of the statistical analysis:

1. Provide data or results from at least 2 trials for comparison of a differentiating characteristic, conducted in two or more localities or growing seasons with the results analyzed separately clearly demonstrating repeatability (do not pool your data);
The location of each trial; planting, harvesting, and comparison dates for each trial; number of plants in each trial; sample size or number of plants (or plant parts) for each comparison;
2. Mean or average value of the differentiating characteristic for each variety in the comparison.
3. Some measure of the range of observed values for each variety in the comparison, such as the standard deviation, 95% confidence intervals, the actual range observed values from minimum to the maximum, or a histogram or box plot, which are helpful in determining the validity of any comparisons;
4. Name of the specific statistical analysis used (e.g., T-test, specific "LSD" procedure, ANOVA, 95% confidence interval, binomial distribution or the like);
5. Citation of the actual statistic and the probability value (if a T-test was used, provide the actual T-value, as well as the probability value corresponding to it);
6. Evidence that the analysis is appropriate in this case (e.g. if the distribution was not a normal distribution, that the analysis was non-parametric, e.g. Mann-Whitney U-test, or that the data were appropriately transformed), include any factors that prevented the normal distribution and/or confidence of the data.

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE <i>(Instructions and information collection burden statement on reverse)</i>		The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995. Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).	
1. NAME OF OWNER		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME	3. VARIETY NAME
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)		5. TELEPHONE (include area code)	FOR OFFICIAL USE ONLY
		6. FAX (include area code)	PVPO NUMBER
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.)		8. IF INCORPORATED, GIVE STATE OF INCORPORATION	9. DATE OF INCORPORATION
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)		11. TELEPHONE (Include area code)	F E E S R E C D FILING AND EXAMINATION FEES: \$ DATE CERTIFICATION FEE: \$ DATE
		12. FAX (Include area code)	
13. E-MAIL			
14. CROP KIND (Common Name)		15. GENUS AND SPECIES NAME OF CROP	16. FAMILY NAME (Botanical)
17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input type="checkbox"/> NO		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input type="checkbox"/> NO (If "no", go to item 23) <input type="checkbox"/> UNDECIDED
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input type="checkbox"/> Exhibit B. Statement of Distinctness c. <input type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input type="checkbox"/> Filing and Examination Fee (\$4,382), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
		22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. ____ FOUNDATION ____ REGISTERED ____ CERTIFIED <i>(If additional explanation is necessary, please use the space indicated on the reverse.)</i>	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
25. The owners declare that a viable sample of basic seed will be furnished directly to an acceptable depository in support of the variety within three months of filing. Seed will be replenished upon request in accordance with such regulations as may be applicable. For a tuber propagated variety or vegetative propagated parent of the variety, a tissue culture or vegetative sample will be deposited in a public repository within three months of the date of the certificate fee request letter. These will be maintained for the duration of the certificate." The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER		SIGNATURE OF OWNER	
NAME (Please print or type)		NAME (Please print or type)	
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE

22. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

23. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

24. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
 SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE
 APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

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EXHIBIT A – ORIGIN AND BREEDING HISTORY

** Use additional pages as needed.

1. Name of Owner	2. Temporary Designation or Experimental Name	3. Variety Name
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4. Describe the genealogy (back to and including public and commercial varieties, lines, or clones used) and the breeding method(s). **

5. Give the details of subsequent stages of selection and multiplication. **

Year	Detail of Stage	Selection Criteria

6. Is the variety uniform? Yes No

How did you test for uniformity?

7. Is the variety stable? Yes No

How did you test for stability? Over how many generations?

8. Are genetic variants observed or expected during reproduction and multiplication? Yes No

If yes, state how these variants may be identified, their type and frequency.

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EXHIBIT B – STATEMENT OF DISTINCTNESS
**** Use additional tables to present clear differences for additional comparison varieties.**
Use additional pages to present supporting evidence.

1. Name of Owner	2. Temporary Designation or Experimental Name	3. Variety Name
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Based on overall morphology, _____ is most similar to _____.
 _____ *Applicant's new variety* most clearly differs from _____ *Most similar comparison variety(ies)*
 _____ in the following traits:
Applicant's new variety _____ *Most similar comparison variety(ies)* _____

Name the specific trait. Then list the value of that trait for each variety in the comparison. Submit appropriate supporting evidence (see the [Guidelines for Presenting Evidence in Support of Variety Distinctness in the instructions below](#)).

<i>Eg. Leaf Pubescence</i> <i>Eg. Leaf Color</i> <i>Eg. Plant Height</i>	<i>heavy pubescence</i> <i>Dark Green (5GY 3/4)</i> <i>200 cm +/- 10 cm (N=25)</i>	<i>glabrous</i> <i>Light Green (2.5GY 8/10)</i> <i>250 cm +/- 15 cm (N=25)</i>	<i>photograph attached</i> <i>Munsell Color Chart</i> <i>statistics attached</i>
1. Qualitative traits:	Applicant's New Variety _____	1st Comparison Variety _____	Location of Evidence Within the Application
2. Color traits:			
3. Quantitative traits:			
4. Other:			

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EXHIBIT E - STATEMENT OF THE BASIS OF OWNERSHIP

1. Name of Owner

2. Temporary Designation or Experimental Name

3. Variety Name

4. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.**

YES

NO

5. Is the applicant a U.S. national or a U.S. based entity? **If no, give name of country.**

YES

NO

6. Is the applicant the original owner?

YES

NO

If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

YES

NO

If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

YES

NO

If no, give name of country

7. Additional explanation on ownership (*Trace ownership from original breeder to current owner. Use the reverse for extra space if needed*):

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.