The collection of this information is authorized by the Plant Protection Act of 2000. The information will be used to determine eligibility to receive all types of permits. No permit will be issued until this application has been approved.

U.S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
BIOTECHNOLOGY REGULATORY SERVICE

APPLICATIONS FOR PERMIT OR COURTESY PERMIT UNDER 7 CFR 340

(Genetically Engineered Organisms or Products)

1. NAME, ADDRESS, TELEPHONE, AND EMAIL OF APPLICANT

Name: Dr. John Jefferson
Position:
Organization: Land Grant University
Organization Unique ID:
Address: 123 Main Street
Anytown, MD 20202
County/Province:
Township/Island: NOT A VALID PERMIT. APHIS SAMPLE PERMIT.
Day Telephone: 301-555-1212
FAX:
Alternate: 555-555-5555
Email 1: **Email 2:**
JRJefferson@landgrantuniversity.edu

2. INTRODUCTION TYPE

- [ ] Importation
- [ ] Interstate Movement
- [x] Interstate Movement and Release
- [ ] Release

3. PERMIT TYPE

- [x] Standard Permit
- [ ] Courtesy Permit

4. PURPOSE OF PERMIT

- [ ] Industrial Product
- [ ] Pharmaceutical Product
- [ ] Phytoremediation
- [x] Traditional
- [ ] test purpose

5. CONFIDENTIAL BUSINESS INFORMATION VERIFICATION (CBI)

Does this application contain CBI? ☐ **Yes** ☒ **No**
CBI Justification:
N/A

6. REQUEST TYPE

☒ **New** ☐ **Amendment** ☐ **Renewal** ☐ **Variance** ☐ **Amendment, Renewal and/or Variance**

Amendment/Renewal Description:
Previous Permit Number(s):

7. MEANS OF MOVEMENT

Common carrier.

8. VARIANCE VERIFICATION

Have you previously applied for variance(s) that you wish to apply to this permit? ☐ **Yes** ☒ **No**
Variance Number(s):

If so, describe in a brief summary how the variance will be applied:
N/A

9. REGULATED ARTICLE

Scientific Name: Vitis vinifera

Common Name: grape

Cultivar and/or Breeding Line:

Any biological material (e.g., culture medium, or host material) accompanying the regulated Article during movement:
No additional biological material will be included with regulated material during movement.

Country and locality where the donor organism, recipient organism, and vector or vector agent were collected, developed, and produced:
The recipient organism was from a vineyard collection in Anytown, MD. Lines were transformed at Land Grant University in Maryland.

Processes, Procedures, and Safeguards Description:
The facility where the genetically engineered grape was constucted is a controlled-access building. The geenhouse facilities used to produce seed are only accessible by personnel with security badges. Regulated seed is kept separtated from non-enginned seed by the use of labels.

10. ARTICLE SUPPLIER AND/OR DEVELOPER

WARNING: Any use of ePermits to make materially false, fictitious, or fraudulent statements or representations is subject to civil penalties of up to $250,000 (7 U.S.C. § 7734(b)) or punishable by a fine of not more than $10,000, or imprisonment of not more than 5 years, or both (18 U.S.C. §1001).

Name	Location	Contact Information
Dr. Abigail Adams	Land Grant University 123 Main Drive Anytown, MD 20202	**Day Telephone:** 301-555-1213 **FAX:** **Email:**

11. PHENOTYPES/GENOTYPE

1) Phenotypic Designation Name: Herbicide Tolerant

Identifying Line(s): Al-111, Al-122, Al-133

Construct(s): pAlfalfa

Mode of Transformation: Agrobacterium tumefaciens, disarmed

Phenotype Description: glyphosate tolerant

A description of the anticipated or actual expression of the altered genetic material in the regulated article and how that expression differs from the expression in the non-modified parental organism.

Phenotype(s)

HT - Glyphosate tolerant

Genotype(s)

Gene(s) of Interest

Promoter: 35S **from** Cauliflower mosaic caulimovirus - Full length 35S

Gene: EPSPS **from** Agrobacterium tumefaciens - 5-Enolpyruvylshikimate-3-phosphate

Terminator: Rubisco **from** Brassica oleracea - 3' terminator region from the Brassica Q10 subunit of Ribulose-1,5-bisphosphate carboxylase oxygenase

2) Phenotypic Designation Name: Fungal Resistant

Identifying Line(s):

Construct(s): FR-04, FR-09

Mode of Transformation: Agrobacterium tumefaciens, disarmed

Phenotype Description: Fungal Resistance to Powdery Mildew

A description of the anticipated or actual expression of the altered genetic material in the regulated article and how that expression differs from the expression in the non-modified parental organism.

Phenotype(s)

FR - Powdery mildew resistant

Genotype(s)

Gene(s) of Interest

Promoter: 35S **from** Cauliflower mosaic caulimovirus - 35S enhanced expression

Gene: PWresist **from** Cucurbita pepo - PWresist gene

Terminator: NOS **from** Agrobacterium tumefaciens - NOS terminator from Agrobacterium tumefaciens

Selectable Marker

Promoter: 35S **from** Cauliflower mosaic caulimovirus - enhanced 35s promoter

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Gene: EPSPS **from** Agrobacterium tumefaciens - 5-Enolpyruvylshikimate-3-phosphate (EPSP) synthase conferring glyphosate tolerance

Terminator: NOS **from** Agrobacterium tumefaciens - Nopaline synthase from Agrobacterium

3) Phenotypic Designation Name: Yield Increase

Identifying Line(s): YI-3456, YI-5678

Construct(s): pAlfalfaYield

Mode of Transformation: Agrobacterium tumefaciens, disarmed

Phenotype Description: Yield Increase

A description of the anticipated or actual expression of the altered genetic material in the regulated article and how that expression differs from the expression in the non-modified parental organism.

Phenotype(s)

AP - Yield increased

Genotype(s)

Gene(s) of Interest

Promoter: 35S **from** Bean common mosaic virus - enhanced 35S promoter

Gene: Yielder exons 1-5 **from** Glycine max - High yielding gene regions involved in stress tolerance and biomass production

Terminator: NOS **from** Agrobacterium tumefaciens - Nopaline synthase sequence

Selectable Marker

Promoter: 35S **from** Cauliflower mosaic caulimovirus - enhanced 35S activity

Gene: EPSPS **from** Agrobacterium tumefaciens - 5-Enolpyruvylshikimate-3-phosphate (EPSP) synthase conferring glyphosate tolerance

Terminator: NOS **from** Agrobacterium tumefaciens - NOS 3' terminator

12. INTRODUCTION

Point of Origin

Location Name & Description	Location Address	Contact(s)
1) Land Grant University	123 Main Street Adams Anytown, MD 55555	**1)** James Monroe **Day Telephone:** 301-555-1212
2) Land Grant University	Tyler OH	

Destination

Location Name & Description	Location Address	Contact(s)
1) Land Grant University	123 Main Drive Rascal MD 55555 **Proposed Start Date:** 08/01/2010 **Proposed End Date:** 08/01/2011 **Quantity:** 15 Lbs Plant parts **Inspected by BRS or PPQ?** Yes **Previous Permit No.:** 08-000-000-rm	**1)** Dolly Madison **Day Telephone:** 301-555-1213

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2) Land Grant University	1122 Agriculture Lane Smith Smith, OH 44044 **Proposed Start Date:** 08/01/2010 **Proposed End Date:** 08/01/2011 **Quantity:** 5 Lbs Plant Parts **Inspected by BRS or PPQ?** Yes **Previous Permit No.:** 08-000-000-rm	**1)** Elizabeth Monroe **Day Telephone:** 555-555-1245

Release Site

Location Name & Description	Location Address	Contact(s)
1) Polk Research Farm	Polk MD 20202 **Proposed Release Start Date:** 11/01/2011 **Proposed Release End Date:** 08/01/2014 **No. of Releases:** 10 **Quantity:** 10 acres	**1)** James Madison **Day Telephone:** 555-55-5555

Location Unique ID:	WilliamsFarm1
Location GPS Coordinates:	39.464564, -77.757351
Release Site History:	Over 30 years in agricultural cropping
Critical Habitat Involved?:	___ Yes _X_ No

13. DESIGN PROTOCOLS

Production Design

A detailed description of the purpose for the introduction of the regulated article including detailed description of the proposed experimental and/or production design:

The purpose of the release to accumulate information on the reaction of the engineered lines to infection with Powdery Mildew, to access yield and to determine the efficacy of the herbicide tolerance gene (glyphosate). This release is a continuation of plants that are already in the ground. New lines may also be added to the field trial site. Training of vines and control of pests and disease will be according to standard industry practices. Powdery mildew is endemic to the area of release and there will be no artificial inoculations.

Destination or Release Description

A detailed description of the intended destination (including final and all intermediate destinations), uses, and/or distribution of the regulated article (e.g., greenhouses, laboratory, or growth chamber location; field trial location, pilot project location; production, propagation, and manufacture location; proposed sale and distribution location):

The tissue culture derived grapes were grown in pots in the Greenhouse at 100 Jefferson Dr. Anytown, MD. The greenhouse is kept locked at all times. Individual pots are labeled with a plastic stick. Plants will be transported in an enclosed vehicle to the field test site.

The site of release is on university owned agricultural research farm. Access is restricted by a locked gate. The material will be used for research only.

Some of the engineered lines are already in the ground (under permit 08-000-000rm). New lines will be released under this permit.

Confinement Protocols

A detailed description of the proposed procedures, processes, and safeguards which will be used to prevent escape and dissemination of the regulated article at each of the intended destinations:

Grape (Vitus vinifera) is primarily a self-pollinating species; and the pollen is heavy that does not drift far (6 - 20 ft.). There will be at least 50 ft. separation distance to grapes surrounding the field test. There will be no Vitus species within 50 ft of the field test.

The plot is located off the main road and is accessible only through a locked gate.

The plot will be monitored monthly from June to October to ensure the separation distance is maintained and scout for any unintended effects (unusual disease or insect pressure, or other unusual unanticipated phenotype).

During the fall harvest, fruits will be collected in a box transported in an enclosed vehicle back to Land Grant University.

Containment During Shipment:
Plant parts will be shipped interstate according to 340.8. No seed will be shipped. Plants will be packed in sealed plastic bags of at least 5 mil thickness, inside a sturdy, sealed,

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leak-proof, outer shipping container constructed of corrugated fiberboard, corrugated cardboard, wood or other material of equivalent strength.

Final Disposition Method: [x] Destruction/Devitalization [ ] Other [x] Storage in Contained Facility

Final Disposition Description:

At the termination of the field trial, the regulated grape plants will be treated with a systemic foliar herbicide, mechanically removed 2-3 months following the herbicide treatment and incinerated on site.

The field site will be monitored on a monthly basis for volunteer grapevine plants over 1 year. No other grapevines will be planted on site during the one year monitoring after termination of the trial.

14. ATTACHMENTS

15. ADDITIONAL INFORMATION

NOT A VALID PERMIT. APHIS SAMPLE PERMIT.

16. COURTESY JUSTIFICATION

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I, *John Jefferson*, hereby certify that the information in this application and all attachments is complete and accurate to the best of my knowledge and belief.

I acknowledge this is not an application to move or import select agents, the genes expressing select agents, or the toxins made by the select agents, as described in 9 CFR 121.

I will not introduce the regulated articles described in this application until APHIS has deemed the application complete and has granted the permit. By signing this permit, I agree to comply with any and all state, local, and tribal laws and regulations that may apply to the introduction of the articles described in this applications.

If there are any changes to the information disclosed in this application, I will contact APHIS.

17. SIGNATURE OF RESPONSIBLE PERSON	**18. DATE**
John Jefferson	November 2, 2011

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