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New Hampshire

Department of Agriculture,
Markets & Food

Shawn N. Jasper, Commissioner

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April 19, 2024

His Excellency, Governor Christopher T. Sununu
and the Honorable Council
State House
Concord, New Hampshire 03301

REQUESTED ACTION

Authorize the New Hampshire Department of Agriculture, Markets and Food, Division of Agricultural Development (DAMF) to enter into Cooperative Project Agreement (CPA) with the University of New Hampshire in the amount of \$61,868.31 to evaluate genetic enhancement of squash for powdery mildew resistance, effective upon Governor and Council approval through April 1, 2026. 100% Federal Funds – Specialty Crop Block Grant.

Funding is available in account, Specialty Crop State Grant I, as follows:

02-18-18-185010-28200000 Specialty Crop State Grant I

<u>ACCOUNT</u>	<u>FY2024</u>
072-500577 Grants to Schools – Federal	\$61,868.31

EXPLANATION

The New Hampshire Department of Agriculture, Markets & Food (DAMF) received Specialty Crop Block Grant (SCBG) money from the United States Department of Agriculture to fund projects that increase the competitiveness of specialty crops in New Hampshire. The projects for 23SCBPNH1200-00 were solicited through the RFP process and submitted for review by USDA, Agricultural Marketing Service as part of our state application. The proposal submitted by the University of New Hampshire was one of the projects accepted by USDA for funding as enumerated in the CPA.

Squash and pumpkins (*Cucurbita* spp.) are important specialty crops for the state of New Hampshire. Growers face many challenges in producing these crops, many of which are caused by pests and disease. Powdery mildew (PM) is a major disease of squash and pumpkins. Varieties with robust genetic PM resistance reduce the use of fungicides and are especially important for organic growers who do not have as many options for disease management. Currently, the majority of commercialized squash and pumpkins rely on one primary form of genetic resistance. Relying on one only source of genetic resistance poses a risk to NH growers. The UNH cucurbit breeding program has identified several addition sources of PM resistance. The aims of this project are to 1) better understand the nature of new PM resistance genes; 2) Develop DNA markers to enable more rapid breeding; 3) Breed resistance genes into commercially viable cultivars. In the event that these Federal funds become no longer available, General Funds will not be requested to support this program.

Respectfully submitted,



Shawn N. Jasper
Commissioner

COOPERATIVE PROJECT AGREEMENT

between the

STATE OF NEW HAMPSHIRE, DEPARTMENT OF AGRICULTURE, MARKETS AND FOOD
and the

University of New Hampshire of the UNIVERSITY SYSTEM OF NEW HAMPSHIRE

- A. This Cooperative Project Agreement (hereinafter "Project Agreement") is entered into by the State of New Hampshire, **Department of Agriculture, Markets and Food**, (hereinafter "State"), and the University System of New Hampshire, acting through **University of New Hampshire**, (hereinafter "Campus"), for the purpose of undertaking a project of mutual interest. This Cooperative Project shall be carried out under the terms and conditions of the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002, except as may be modified herein.
- B. This Project Agreement and all obligations of the parties hereunder shall become effective on the date the Governor and Executive Council of the State of New Hampshire approve this Project Agreement ("Effective date") and shall end on **4/1/26**. If the provision of services by Campus precedes the Effective date, all services performed by Campus shall be performed at the sole risk of Campus and in the event that this Project Agreement does not become effective, State shall be under no obligation to pay Campus for costs incurred or services performed; however, if this Project Agreement becomes effective, all costs incurred prior to the Effective date that would otherwise be allowable shall be paid under the terms of this Project Agreement.
- C. The work to be performed under the terms of this Project Agreement is described in the proposal identified below and attached to this document as Exhibit A, the content of which is incorporated herein as a part of this Project Agreement.

Project Title: Genetic Enhancement of Squash for Powdery Mildew Resistance

- D. The Following Individuals are designated as Project Administrators. These Project Administrators shall be responsible for the business aspects of this Project Agreement and all invoices, payments, project amendments and related correspondence shall be directed to the individuals so designated.

State Project Administrator

Name: Joshua Marshall
Address: NH Dept Agriculture, Markets & Food
P.O. Box 2042
Concord, NH 03302-2042
Phone: 603-271-3688

Campus Project Administrator

Name: Dianne Hall
Address: University of New Hampshire
Sponsored Programs Administration
51 College Rd
Durham, NH 03824
Phone: 603-862-1942

- E. The Following Individuals are designated as Project Directors. These Project Directors shall be responsible for the technical leadership and conduct of the project. All progress reports, completion reports and related correspondence shall be directed to the individuals so designated.

State Project Director

Name: Joshua Marshall
Address: NH Dept Agriculture, Markets & Food
P.O. Box 2042
Concord, NH 03302-2042
Phone: 603-271-3688

Campus Project Director

Name: Christopher Hernandez
Address: UNH Agriculture, Nutrition &
Food Systems
Kendall Hall Rm. 422
Durham, NH 03824
Phone: 603-862-1368

F. Total State funds in the amount of \$61,868.31 have been allotted and are available for payment of allowable costs incurred under this Project Agreement. State will not reimburse Campus for costs exceeding the amount specified in this paragraph.

Check if applicable

Campus will cost-share % of total costs during the term of this Project Agreement.

Federal funds paid to Campus under this Project Agreement are from Grant/Contract/Cooperative Agreement No. 23SCBPNH1200-00 from AMS/USDA under CFDA# 10.170. Federal regulations required to be passed through to Campus as part of this Project Agreement, and in accordance with the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002, are attached to this document as Exhibit B, the content of which is incorporated herein as a part of this Project Agreement.

G. Check if applicable

Article(s) of the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002 is/are hereby amended to read:

H. State has chosen not to take possession of equipment purchased under this Project Agreement.
 State has chosen to take possession of equipment purchased under this Project Agreement and will issue instructions for the disposition of such equipment within 90 days of the Project Agreement's end-date. Any expenses incurred by Campus in carrying out State's requested disposition will be fully reimbursed by State.

This Project Agreement and the Master Agreement constitute the entire agreement between State and Campus regarding this Cooperative Project, and supersede and replace any previously existing arrangements, oral or written; all changes herein must be made by written amendment and executed for the parties by their authorized officials.

IN WITNESS WHEREOF, the University System of New Hampshire, acting through the University of New Hampshire and the State of New Hampshire, Department of Agriculture, Markets and Food have executed this Project Agreement.

By An Authorized Official of:
University of New Hampshire

Name: Karen M. Jensen
Title: Director, Pre-Award
Signature and Date: Karen Jensen Digitally signed by Karen Jensen
Date: 2024.03.11 11:18:39
-0400

By An Authorized Official of: the New
Hampshire Office of the Attorney General
Name: Sheri Phillips
Title: Assistant Attorney General
Signature and Date: Sheri Phillips 4/18/2024

By An Authorized Official of:
Department of Agriculture, Markets and
Food

Name: Shawn N. Jasper
Title: Commissioner
Signature and Date: Shawn N. Jasper 3/11/24

By An Authorized Official of: the New
Hampshire Governor & Executive Council
Name: _____
Title: _____
Signature and Date: _____

EXHIBIT A

- A. Project Title:** Genetic Enhancement of Squash for Powdery Mildew Resistance
- B. Project Period:** April 1, 2024-April 1, 2026
- C. Objectives:** Objective 1: Evaluate the nature of two new PM resistances: Pm and Pm-A. Specifically, what level of control do these sources give and what parts of the plant do they protect?
Objective 2: Develop DNA markers for the different PM resistance sources.
Objective 3: Make new PM lines available to companies for commercialization.
Objective 4: Collaborate with companies and attend grower meetings to inform growers of the PM resistances provided by new cultivars.
- D. Scope of Work:** Squash and pumpkins (*Cucurbita* spp.) are important specialty crops for the state of New Hampshire. Growers face many challenges in producing these crops, many of which are caused by pests and disease. Powdery mildew (PM), is a major disease of squash and pumpkins. Varieties with robust genetic PM resistance reduce the use of fungicides, and are especially important for organic growers who do not have as many options for disease management. Currently, the majority of commercialized squash and pumpkins rely on one primary form of genetic resistance. Relying on one only source of genetic resistance poses a risk to NH growers. The UNH cucurbit breeding program has identified several addition sources of PM resistance. The aims of this project are to 1) better understand the nature of new PM resistance genes; 2) Develop DNA markers to enable more rapid breeding; 3) Breed resistance genes into commercially viable cultivars.
- E. Deliverables Schedule:** Annual reports on project activity due in December of 2024 and 2025. Final printed and digital report due by December 10, 2026
- F. Budget and Invoicing Instructions:** Campus will submit invoices to State on regular Campus invoice forms no more frequently than monthly and no less frequently than quarterly. Invoices will be based on actual project expenses incurred during the invoicing period, and shall show current and cumulative expenses by major cost categories as shown below. State will pay Campus within 30 days of receipt of each invoice. Campus will submit its final invoice not later than 60 days after the Project Period end date.

Budget Item	State Funding
1. Salaries & Wage	\$40,187.00
2. Fringe Benefits	\$5,248.00
3. Travel	\$0
4. Supplies and Services	\$16,433.31
5. Equipment	\$0
6. Facilities and Admin Costs	\$0
Total	\$61,868.31

EXHIBIT B

This Project Agreement is funded under a Grant/Contract/Cooperative Agreement to State from the Federal sponsor specified in Project Agreement article F. All applicable requirements, regulations, provisions, terms and conditions of this Federal Grant/Contract/Cooperative Agreement are hereby adopted in full force and effect to the relationship between State and Campus, except that wherever such requirements, regulations, provisions and terms and conditions differ for INSTITUTIONS OF HIGHER EDUCATION, the appropriate requirements should be substituted (e.g., OMB Circulars A-21 and A-110, rather than OMB Circulars A-87 and A-102). References to Contractor or Recipient in the Federal language will be taken to mean Campus; references to the Government or Federal Awarding Agency will be taken to mean Government/Federal Awarding Agency or State or both, as appropriate.

Special Federal provisions are listed here: None or **Uniform Guidance issued by the Office of Management and Budget (OMB) in lieu of Circulars listed in paragraph above.**