

The North Dakota Department of Agriculture is soliciting Palmer Amaranth Uncrewed Aerial Systems Grant Program Request for Grant Proposals

Grant Application Guidance

Application Due Date:

February 2, 2024 at 12:00 P.M. CST

No late submissions accepted.



Doug Goehring, Agriculture Commissioner
North Dakota Department of Agriculture

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1. FUNDING OPPORTUNITY DESCRIPTION

a) LEGISLATIVE AUTHORITY

The Palmer Amaranth Uncrewed Aerial Systems (UAS) Grant program is authorized as one-time funding by the Sixty-eighth Legislative Assembly of North Dakota through House Bill No. 1519.

The grant review committee consists of weed officers or representatives from impacted areas, ND Department of Agriculture (NDDA) noxious weed specialist, plant protection officer, and plant industries division director.

b) PURPOSE

The NDDA is pleased to announce a competitive solicitation process to award 2023-2025 Palmer amaranth UAS grant funds to aid in the identification and control of the noxious weed Palmer amaranth in ag systems.

Palmer amaranth (*Amaranthus palmeri*) is a problematic weed in cropping systems that can cause yield loss in many crops once established, is resistant to many herbicide modes of action, and produces significant seed load. North Dakota is a leading producer of crops such as sugar beets, potatoes, peas, lentils, and dry beans that have few available alternate herbicides available if Palmer amaranth were to become established. Early detection and rapid response are important for reducing the risk of establishment. This opportunity seeks to utilize developed and emerging UAS technology to respond to Palmer amaranth.

Applicants should develop projects based on any of the following activities/criteria:

- Ability to identify individual Palmer amaranth plants at various stages of growth in North Dakota crops and landscapes.
- Ability to distinguish between Palmer amaranth and other pigweed species.
- Expansion of previous research projects conducted looking to identify Palmer amaranth using high resolution imagery, machine learning, and/or artificial intelligence.
- Target areas include sugar beet and soybean fields in Traill, Richland, Barnes, and Cass counties or other priority sites.
- Ability to spot spray an herbicide for control of Palmer amaranth in North Dakota.
- Secondary Objectives if time and funding allow include:
 - Identification of other state listed noxious weeds such as:
 - Absinth Wormwood (*Artemisia absinthium* L.))
 - Canada Thistle (*Cirsium arvense* (L.) Scop.)
 - Dalmatian Toadflax (*Linaria genistifolia* spp. *dalmatica*)
 - Diffuse Knapweed (*Centaurea diffusa* Lam.)
 - Houndstongue (*Cynoglossum officinale* L.)
 - Leafy Spurge (*Euphorbia esula* L.)
 - Musk Thistle (*Carduus nutans* L.)
 - Purple Loosestrife (*Lythrum salicaria* L., *Lythrum virgatum* L., and all cultivars)
 - Russian Knapweed (*Centaurea repens* L.)

- Saltcedar (Tamarisk spp.)
- Spotted Knapweed (Centaurea maculosa Lam.)
- Yellow Toadflax (Linaria vulgaris)
- Identification of honey bee hives (boxes)

2. AWARD INFORMATION

a) AVAILABLE FUNDING

NDDA has been appropriated a total of \$275,000 federal grant funding to be awarded to project(s) for the 2023-2025 biennium.

b) FUNDING REQUIREMENT

NDDA reserves the right to fund no projects or one or more projects.

The NDDA intends to award grants to multiple Applicants. The NDDA will make award to the highest scoring Applicants whose proposals are determined to be responsive to the requirements of the application and are determined to be the most advantageous in consideration of the RFGP evaluation criteria.

c) AWARD AMOUNT

Grant award amounts do not have a minimum but cannot exceed total funds available. NDDA reserves the right to offer an award amount less than the amount requested.

d) PERIOD OF PERFORMANCE

The Period of Performance will begin approximately January 1, 2024 through December 31, 2024 as listed in the Notice of Grant Award (NOGA). Project shall be conducted during the 2024 growing season.

3. ELIGIBILITY INFORMATION

a) ELIGIBLE APPLICANTS

Applicants must meet the following requirements to be considered eligible to apply for the Palmer Amaranth UAS Grant program.

- The entity or individual shall certify that the operation of the uncrewed aircraft system, autonomous vehicle, or other autonomous technology is related to inspecting, operating, maintaining, or construction of agriculture property or infrastructure.
- Must have in their possession or have access to an Uncrewed Aerial Vehicle (UAV) that has the capability to carry the necessary equipment to complete the project.
- Must have all proper licenses and certifications to operate the equipment and work within the bounds of any Federal Aviation Administration (FAA)

regulations or other legal requirements.

4. APPLICATION AND SUBMISSION INFORMATION

a) APPLICATION REQUIREMENTS

Grant applications must be submitted via email to raweisz@nd.gov by the due date. Grant applications must include the 2023-2025 Palmer Amaranth UAS Grant Request for Grant Proposals (RFGP) applications as posted on the NDDA website at <https://www.ndda.nd.gov/divisions/plant-industries/noxious-weeds>.

All applicants must adhere to the following instructions, in addition to other requirements as stated in this RFGP to be considered eligible for grant funds. The following information is addressed on the Palmer Amaranth UAS Grant RFGP application. Applications missing any of the subsequent information may be deemed ineligible.

- Each RFGP must list the name of the company or individual submitting the proposal, street address, mailing address, telephone number, email address, and the person(s) who will be responsible for the project.
- RFGP must describe in detail how the grant funds will be used to meet the project objectives. Applications should:
 - Provide a detailed description and/or supporting research of how the applicant's Palmer amaranth detection algorithm was tested for accuracy.
 - Discuss how applicant will detect and report suspect Palmer amaranth plants in a timely manner within fields within five-foot accuracy to NDDA throughout the project.
 - Explain how applicant will coordinate with landowners for permission to fly fields and/or coordinate with county weed boards/county extension agents for landowner communication and ground-truthing for verification of suspect detections of noxious weeds.
 - Describe the timeline of the project.
 - Should demonstrate the ability to fly UAS in remote or rural areas.
 - Explain applicant's ability to analyze data and imagery in an environment that may offer few options for internet connection.
 - Explain in detail, alternative approaches if applicant is requesting funds for secondary objectives.
- Applicants may include any additional information that they consider pertinent and that will enhance the quality of their proposal.
- RFGP are not limited to a specific minimum or maximum project amount. NDDA reserves the right to offer an award amount less than the amount requested or not offer an award at all.

b) APPLICATION REVIEW INFORMATION

NDDA will review grant applications to ensure the RFGP meets the statutory purpose of the

program, all application criteria are fulfilled, and that costs are allowable.

c) REVIEW AND SELECTION PROCESS

All applications will be reviewed by the grant review committee after the grant application deadline. Applications are evaluated on the merits of the proposals based on the scoring criteria listed above. Applicants will be notified during the review process if monetary adjustments to grant requests, project proposal scope of work and/or project budgets are necessary. Reviews will be ranked on the below priorities.

d) APPLICATION REVIEW INFORMATION

NDDA will review grant applications to ensure the RFGP meets the statutory purpose of the program, all application criteria are fulfilled, and that costs are allowable. Once applications are reviewed by the committee, the committee will complete an evaluation for each project. Below are the evaluation criteria:

1. Relevance- 25 Points MAX Is the proposal relevant to the project purpose? Does the proposal meet or exceed the project activities noted in the purpose of the RFGP?
2. Work Plan-25 points MAX Is the work plan complete? Is the work plan feasible? Is the timeline reasonable? Do the tasks relate to the project objectives and expected outcomes?
3. Potential Impact-20 points MAX How great is the potential impact of the intended outcomes? Can the outcomes be reasonably applied to future projects in weed management?
4. Qualifications and Management-15 points MAX Has the applicant adequately demonstrated their qualifications to successfully complete the project based on the eligibility information of the RFGP?
5. Budget-15 points MAX Is the amount requested reasonable? Are the line items reasonable and appropriate?

Applicants may be asked to give a short presentation to the grant review committee, presentations can be virtual or in person. Presentations will be scheduled after the RFGP application period closes.

e) ANTICIPATED AWARD ANNOUNCEMENT

Successful and unsuccessful applicants will be notified in writing.

5. AWARD ADMINISTRATION INFORMATION

a) AWARD NOTICE

Successful applicants will be sent a Notice of Grant Award (NOGA). Prior to beginning work on the proposed project or receiving funding, successful applicants will be required to

sign a NOGA indicating their intention to complete the proposed tasks, report results, and authorizing NDDA to monitor the progress of the proposed project.

NOGA's must be signed and returned to NDDA within 30 days of receipt. Failure to submit an executed copy of the NOGA within 30 days of receipt may result in the loss of awarded grant funds unless the delay was caused by circumstances outside the control of the applicant. Grant funds are not effective, and expenditures related to this grant should not be incurred until fully executed NOGA by both parties.

b) POLICY REQUIREMENTS

General Compliance

All awarded grants must comply with all applicable federal and state laws and regulations and the terms of the grant award as specified in the NOGA Requirements.

Monitoring

NDDA reserves the ability to perform site monitoring visits to any and all applicants to ensure that work is progressing within the required timeframe and that fiscal procedures are followed accurately and appropriately. Monitoring includes both financial and program information, as well as site visits.

Ineligible Costs

NDDA will not reimburse for any costs incurred by any applicant for work performed in the preparation and production of this RFGP, nor for any work performed prior to the formal Execution of the NOGA. Indirect costs are not eligible for reimbursement.

NDDA will not reimburse indirect or overhead costs (NDDA Policy #220 Indirect Costs – It is the policy of NDDA that payment of indirect or overhead costs on grants, contracts, and other agreements is prohibited. NDDA defines indirect or overhead costs according to the Office of Management and Budget 2 CFR Part 225

Open Records

RFGP submitted for funding, all related grant awards, and reports shall be subject to disclosure under the North Dakota open records law, N.D.C.C. CH. 44-04.

Under the North Dakota public records law and subject to the Confidentiality clause, certain records may be open to the public upon request. Public records may include: (a) records NDDA receives from applicant under the NOGA, (b) records obtained by either party under the NOGA, and (c) records generated by either party under NOGA.

Applicant agrees to contact NDDA immediately upon receiving a request for information under the public records law and to comply with NDDA's instructions on how to respond to such request.

Other Considerations

All proposals submitted in response to this RFGP become the property of NDDA. NDDA

reserves a royalty-free, nonexclusive, and irrevocable license to reproduce, publish, otherwise use, and to authorize others to use materials produced under this grant agreement.

NDDA also reserves the right to:

- Post funded RFGP or final reports to the NDDA website
- Reject any or all RFGP received
- Waive or modify minor irregularities in RFGP received after prior notification and agreement of applicant
- Use any or all ideas submitted unless those ideas are covered by legal patent or proprietary rights
- Clarify the scope of this program, within the RFGP requirement and with appropriate notice to potential applicants, to best serve the interests of the State of North Dakota
- Amend program specifications after their release, with appropriate written notice to potential applicants
- Require a good faith effort on part of the applicant work with NDDA subsequent to project completion to develop or implement project results
- Withhold any payments when grant award conditions are not met

C) REPORTING

The applicant will be responsible for setting up and maintaining a project file that contains all records of correspondence with NDDA, receipts, invoices and copies of all reports and documents associated with the project. All records, regardless of physical form, and the accounting practices and procedures of applicant relevant to RFGP are subject to examination by the North Dakota State Auditor, the Auditor's designee, or Federal auditors, if required. Applicant shall maintain all of these records for at least three (3) years following completion of NOGA and be able to provide them upon reasonable notice.

NDDA reserves the right to modify reporting requirements during the course of the project. Information submitted in any report to NDDA will be a public record. Annual and final reports must be submitted using the required format.

Final Reports

A final performance report will be required by the applicant at the end of the performance period. The final report may be posted on the NDDA website and is important for sharing project findings with state agencies and the public. The final report may include the following:

- Program Summary
- Program Approach
- Goals and Outcomes Achieved
- Beneficiaries
- Contact Person
- Additional Information

In addition to the final project report NDDA reserves the right to conduct a follow-up survey of funded projects in order to determine long-term impacts of the project.

Reporting Compliance

Applicants who do not submit the final report or who submit unacceptable presentations may be required to return previously distributed funds to NDDA.

D) PAYMENT

Requests for reimbursements will be accepted on a quarterly basis. Each reimbursement request must include an itemized invoice and documentation of the work or expenses for which payment is requested. Itemization shall include the purpose, amount, and date incurred. Applicants must provide assurance that the work has been completed (i.e., include receipts, invoices) and clearly outline expenditures. Applicant agrees to the withholding of the final ten percent of the total compensation until an acceptable final report, including all financial documentation is received.

E) BUDGET ADJUSTMENTS

Applicants agree that any changes in scope of service or budget during the project period, needs prior written approval to NDDA.

F) CONTACT

For questions or assistance, please contact:
North Dakota Department of Agriculture
Attn: Richard Weisz
600 E. Boulevard Avenue Dept. 602
Bismarck, ND 58505-0020
Phone: 701.328.2250
Email: raweisz@nd.gov