Preparation Instructions

The USDA National Institute of Food and Agriculture (NIFA) requires Progress or Final Reports be submitted on-line using the REEport portal http://portal.nifa.usda.gov/portal/

Log in at the top of the screen. Select the REEport application using the SAES or EXT site. Click on Progress Report or Final Report. Select your project from the Draft Folder and complete.

The following are the guidelines for developing the Progress Report:

1. Target one key component of the research project.

2. Reports should emphasize significant accomplishments and their impact. DO NOT make a list of activities. Significant accomplishments are examples of research findings from the past year that are written in brief factual statements resulting in a paragraph. Do not repeat a previous year’s finding, but you can build upon earlier accomplishments with new or expanded findings.

3. The components of an accomplishment statement should include:
   a. Short title describing the accomplishment.
   b. A description of the specific problem addressed or major milestone achieved, major transfer of technology, or response to a customer and stakeholder need. The description could address: What agricultural or forestry problem is being resolved? How serious is the problem? Who cares and why?
   c. A short description of the approach you used and who was involved in the effort.
   d. State the results of the research in no more than a few sentences.
   e. Document the impact of the research findings such as financial returns, social benefits, natural resources quality, resolution of conflict, or contributions to science-based knowledge.

4. Remember your audience when writing the accomplishment. Use layperson’s language and do not use undefined abbreviations or jargon. Avoid lists of activities, generalized statements, presentation of data without interpretations, or emphases on methods.

Overview of Annual Report Processing

1. The draft report is entered into the REEport portal and saved. Data entry should happen at the Project Director (PD) level, followed by review and edits by the Department Head/Associate Dean.

2. The Department Head and Associate Dean can review the reports on-line or review a printed copy. The Web page contains instructions on how to review previously entered reports. We are assuming that each College/Department will have a central point for entering the reports. After all College/Department reviews are complete, the central contact should access each report, and make any final edits (print a copy for your files if necessary). Contact Jan when all reports are ready for review. No further edits are allowed on the report by the College/Department. In this way, the reports reviewed in the Director's office will be the final version approved by the College/Department.
3. Upon receipt of the signed Project Control List, the reports will be reviewed in the Director's office. If we identify a report that requires additional editing, our office will email the PD so edits can be done in the College/Department.

4. After the AES Director's Office review, all reports are submitted to the national CRIS database.

**CRIS Requirements**

1. Measurement data should be reported in metric terms only.

2. For the McIntire-Stennis program (College of Natural Resources only), please enter the number of graduate students associated with the project in the appropriate field.

3. Patents/Inventions: Patent applications and applications for Plant Variety Act protection are considered products and should be reported in the Products section.

4. Non-Formula Grant Reports: Progress reports for all non-formula grants should be submitted as defined in the Terms and Conditions.
Implementation

Attached is a list of AES projects for your department. Reports are due for all **Active** and **Terminated** projects. Grants are not included on the list as they have varying due dates throughout the year.

**REEport website**

You will enter your project data from the NIFA Reporting Portal – REEport website.

- Enter your email address and password at the top of the page.

*If this is your first time accessing this website*, click on the “Reset Password” link. Enter your CSU email address and click on SEND. You will receive an email with a link to reset your password.

- Select the REEport (SAES – Colorado State University) application. (If you have an Extension project, select the EXT application.)
• Select the Progress Report or the Final Report module.

• Expand the DRAFT folder and click on the project you want to report on.

Cover Page

• The first screen is the Cover page allowing you to verify the basic project information. You cannot change anything on this page (the "Project Change" tab is the only way to make changes, and only formula and state projects can be changed in REEport).

Note: All reports on formula and state projects are now to be done on the federal FY basis. The reporting period dates that are shown on this page are the period of time you are reporting on for this year. This year, the reporting period dates should be 10/01/13 – 09/30/14.

• Click the Next button to proceed to the first entry screen.
**Title:** Colorado Vegetable Crop Disease Management

<table>
<thead>
<tr>
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**Project Director**
Howard Schwartz
970-491-6987
howard.schwartz@colostate.edu

**Recipient Organization**
SAES - COLORADO STATE UNIVERSITY
1800 GRANT ST STE 600
DENVER, COLORADO 80203-1148
DUNS No. 018058920

**Performing Department**
Bioagricultural Sciences and Pest Management

**Non-Technical Summary**
Fungal, bacterial and viral pathogens and the diseases they cause on economically important vegetable crops can cause yield losses (quantity and quality) at a conservative level of 10 percent annually per crop in Colorado fields in the absence of timely integrated pest management strategies. During some years, environmental conditions generate foliar disease losses in excess of 15 to 20 percent on priority crops such as dry bean and onion, each of which has a direct value in excess of 40 to 50 million dollars annually to Colorado's economy and welfare. These pathogens can survive in previously infected crop debris and soil, be reintroduced annually via infested plant material or airborne particles or vectors, and be redistributed via water, implements and human activities. New crop infection and epidemic development are then dependent upon environmental conditions which persist during critical stages of the pathogen and its host plant throughout the year. Monitoring of the pathogen population, crop development and environmental conditions allow researchers to apply disease forecast models in support of timely scouting calendars and implementation of disease management strategies that are most economically effective and environmentally sensitive. The environmental component of this project is based upon continued access to and support of COAGMET which is a series of remote electronic weather recording stations situated in key irrigated production areas of Colorado. Disease management components that can be investigated and applied to each pathogen and its disease include crop rotation for 2 to 4 years, sanitation of previous crop debris, planting date, clean planting material, moderate plant density, fertility and irrigation practices, soil compaction alleviation, plant resistance, pesticide selection and timing, and harvest and post-harvest curing and handling. Results generated by this project will be utilized in integrated pest management programs that focus on foliar diseases of dry bean and onion in Colorado. Results will include: expanded understanding of the life cycle of each priority pathogen and disease in Colorado, e.g., white mold and bacterial wilt of dry bean, and viral diseases of onion; more effective and reliable disease forecasting models for each pathogen and its disease; more complete historical database of environmental variables from production regions in Colorado; COAGMET has generated continuous daily weather records at many sites since 1992; more timely disease management strategies, with emphasis upon the most selective pesticides when justified by disease forecast models, scouting and other IPM principles; more resistant and adapted cultivars of dry beans; and support for a timely technology transfer network (internet-based) that incorporates weather data, pathogen life cycle, disease sightings, crop development and other IPM components shared by researchers, extension personnel, crop consultants, and others.

**Accomplishments**

**Major goals of the project**
1. Monitor foliar disease spectra and determine what pathogens are impacting vegetable crops such as dry bean and onion grown in Colorado.
2. Identify and incorporate sources of disease resistance within commercially acceptable cultivars of dry bean in collaboration with bean breeders.
3. Investigate the epidemiology of priority foliar fungal, bacterial, and/or viral pathogens of these crops in support of environmental monitoring, disease forecasting and integrated pest management strategies in Colorado.
4. Implement timely disease management components that will be most applicable for the economical production of these priority crops in Colorado; emphasis will be on technology transfer (VegNet and AlliumNet web sites) of pest biology and management to clientele.
What was accomplished under these goals? (This narrative is required.)

Included on the first page are the "major goals of this project." This is non-editable because it is prepopulated with what you entered as goals for the project in Project Initiation. This is helpful when filling in the various fields on the accomplishments page, as anything reported on those fields should relate directly back to the goals of the project.

For this reporting period describe:
1. major activities completed;
2. specific objectives met;
3. significant results achieved, including major findings, developments, or conclusions (both positive and negative); and
4. key outcomes or other accomplishments realized.

For #3 and #4 above, remember that key outcomes/accomplishments are defined as changes in knowledge, action, or condition.

- **A change in knowledge** occurs when the participant (scientist, trainee, or citizen) learns or becomes aware. Examples of a change in new fundamental or applied knowledge significant enough to be included in a publication; methods and techniques; policy knowledge; improved skills; or increased knowledge of decision-making, life skills, and positive life choices among youth and adults.

- **A change in action** occurs when there is a change in behavior or the participants act upon what they have learned (adoption of techniques and methods or a change in practice). Examples of a change in actions include: application and actual use of fundamental or applied knowledge; adoption of new or improved skills; direct application of information from publications; adoption and use of new methods or improved technologies; use of skills by youth and adults in making informed choices; adoption of practical policy and use of decision-making knowledge.

- **A change in condition** occurs when a societal condition is changed due to a participant's action. Examples of a change in conditions include: development of human resources; physical, institutional, and information resources that improve infrastructure technology transfer; management and behavioral changes and adjustments; quantified changes in descriptive statistics (trade balance, export sales, etc.); better and less expensive animal health; changes in conditions (e.g., wages, health care benefits, etc.) of the agricultural workforce; higher productivity in food provision; quantified changes in quality-of-life for youth and adults in rural communities; safer food supply; reduced obesity rates and improved nutrition and health; or higher water quality (e.g., increased water clarity) and a cleaner environment (e.g., measurably reduced pollution).

**NOTE:** Include a discussion of stated goals not yet met. As the project progresses, the emphasis in reporting in this section should shift from reporting activities to reporting accomplishments (such as in later Progress Reports or in the Final Report of this project).

What opportunities for training and professional development has the project provided?

- Training activities are those in which individuals with advanced professional skills and experience assist others in attaining greater proficiency. Training activities may include, for example, courses or one-on-one work with a mentor.

- Professional development activities result in increased knowledge or skill in one’s area of expertise and may include workshops, conferences, seminars, study groups, and individual study. Include participation in conferences, workshops, and seminars not listed under major activities.

- If the research is not intended to provide training and professional development opportunities or there is nothing significant to report during this reporting period, click the "nothing to report" box.

How have the results been disseminated to communities of interest?

- Describe how the results have been disseminated to communities of interest. Include any outreach activities that have been undertaken to reach members of communities who are not usually aware of these research activities for the purpose of enhancing public understanding and increasing interest in learning and careers in science, technology, and the humanities.

- You may click the "nothing to report box"

What do you plan to do during the next reporting period to accomplish the goals?

- Describe briefly what you plan to do during the next reporting period to accomplish the goals and objectives.

- You may click the "nothing to report box"
Participants

- Project Director and Co-Project Directors: Both of these fields are prepopulated with the information originally entered in project initiation; any changes would need to be made through the "Project Change" module.

Actual FTEs for this Reporting Period

- Enter the actual Full-time Equivalent(s) (FTE) that supported this project over the course of this reporting period only (reporting period is one year or less; refer back to your cover page for the exact reporting period). Even in the Final Report, you should report FTEs for the final reporting year only.

Note: There is a "nothing to report" box under the text “Actual FTEs for this Reporting Period” field. You may click this box if there were no actual FTEs used to support this project for the reporting period being reported against.

An FTE is defined by the Government Accountability Office (GAO) as the number of total hours worked divided by the maximum number of compensable hours in a full-time schedule as defined by law. For most NIFA partners and places of employment, a full-time schedule as defined by law equates to 2,080 hours of work (52 weeks multiplied by 40 hours per week). Thus, a person who works 40 hours per week for 52 weeks towards a project equals 1 FTE. A person who works 20 hours per week towards a project for 52 weeks per year equals .5 of an FTE.

You may enter fractions of FTEs rounded to the nearest tenth. Make sure to separate the FTEs by type as indicated on the table provided: Faculty and Non-Students in the first column and Students with Staffing Roles in the subsequent three columns. Also ensure that the FTE categories are correctly populated, differentiating between the following:

- **Scientist:** A research worker responsible for original thought, judgments, and accomplishments in independent scientific study. This includes investigation leaders and project leaders and portions of the time of supervising scientists or staff assistants who meet the preceding definition. Examples: Professor, Associate Professor, Assistant Professor, Scientist.

- **Professional:** A professional does not qualify as a scientist under the preceding definitions but may still significantly contribute to research activities. Professionals usually hold one or more college degrees and have otherwise qualified for employment in a professional category. Generally, professionals have a high degree of research activity responsibility but do not hold principal investigator status or equivalent at the reporting institution. Examples: Department Head, Resident Director, Statistician, Analyst, Assistant Director, Dean.

- **Technical:** Technical Staff are associated with research efforts in a technical capacity and do not participate in the investigative aspects of the research. Examples: Lab Assistant, Mechanic, Carpenter, Machinist, Skilled Tradesperson.

- **Administrative and Other:** These are clerical and support staff who contribute to the non-technical support of the project. It is often difficult to assess an individual's clerical and labor support to any one project; they usually support groups of researchers of different projects in a broad manner, such as by ordering supplies, typing reports, managing bill payments, performing janitorial work. Examples: Secretary, Typist, Repairman, Janitor, Data Entry.

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</table>
**Target Audience**

- The target audience(s) you describe on this progress report should include only those that the efforts for this reporting period were focused upon. This may mean you are only listing a subset of all of the original target audiences you listed in your project initiation.

**Target audiences** include individuals, groups, market segments, or communities that will be served by the project. Where appropriate, you should also identify population groups such as racial and ethnic minorities and those who are socially, economically, or educationally disadvantaged.

**Efforts** include acts or processes that deliver science-based knowledge to people through formal or informal educational programs. Examples include: formal classroom instruction, laboratory instruction, or practicum experiences; development of curriculum or innovative teaching methodologies; internships; workshops; experiential learning opportunities; extension and outreach.

- You may click the "nothing to report box"

**Products**

- Identify the standard products/outputs that have been achieved during this reporting period. This includes only publications, patents, and applications for plant variety protection (PVP). You will report other types of products/outputs on the "Other Products" page.

- Report only the major publication(s) resulting from the work under this project/award. If this is NOT the first progress report you've submitted, do not include publications already included in any previously submitted progress report(s). There is no restriction on the number. However, agencies are interested in only those publications that most reflect the work under this project/award. See definitions below for the categories of publications.
  
  o **Publications** are the characteristic product of research. Agencies evaluate what the publications demonstrate about the excellence and significance of the research and the efficacy with which the results are being communicated to colleagues, potential users, and the public, not the number of publications.
    
    ▪ **Journal publications**: Peer-reviewed articles or papers appearing in scientific, technical, or professional journals. Include any peer reviewed publication in the periodically published proceedings of a scientific society, a conference, or the like. A publication in the proceedings of a one-time conference, not part of a series, should be reported under "Books or other non-periodical, one-time publications."
    
    ▪ **Books or other non-periodical, one-time publications**: Any book, monograph, dissertation, abstract, or the like published as or in a separate publication, rather than a periodical or series. Include any significant publication in the proceedings of a one-time conference or in the report of a one-time study, commission, etc.
    
    ▪ **Other publications, conference papers and presentations**: Identify any other publications, conference papers and/or presentations not reported above.
  
  o **Patent(s) and Plant Variety Protection(s) (PVP)** Identify inventions for which patents or plant variety protection (PVP) has been or will be sought. Include patent/PVP applications that have been filed with the patent or PVP office for more than 18 months. Include the date of application for an award of patent/PVP protection and/or licenses that have resulted from the research. Submission of this information as part of this Progress Report is not a substitute for any other invention reporting required under the terms and conditions of any award.

- You may click the "nothing to report box".

**Other Products**

- Enter the significant products/outputs achieved during the project duration as a result of the project's research, extension or education activities. NIFA considers the terms "products" and "outputs" to be synonymous.

- Other Products/Outputs are **activities, events, services, and products that reach people**.
  
  o **Activities** include: conducting and analyzing experiments or surveys, assessments, facilitating, teaching, or mentoring.
  
  o **Events** include: conferences, demonstration sites, field days, symposia, workshops, and trainings.
  
  o **Services** include: consulting, counseling, and tutoring.
Products include: audio or video products; curricula; data or databases; equipment or instruments; models; networks and/or collaborations fostered by the project or activity; physical collections or resources, new animal germplasm, or genetic maps; software; technology, methods, or techniques; train-the-trainer manuals; website(s) with the appropriate URL(s); information, skills, and technology for individuals, communities, and programs; or students graduated in agricultural sciences.

- You may click the "nothing to report box"

**Changes/Problems**

- Describe major changes/problems in approach and reason(s) for these major changes. If applicable, provide special and/or additional reporting requirements specified in the award Terms and Conditions.

- Major changes include:
  - major problems or delays that may have a significant impact on the rate of expenditure;
  - significant deviations from research schedule or goals;
  - unexpected outcomes;
  - or changes in approved protocols for the use or care of animals, human subjects, and/or biohazards encountered during the reporting period.

- You may click the "nothing to report box"
• If you have more than one project to report on, select the appropriate report and project. Follow the same steps as outlined previously.

• After all reports are reviewed and approved (you are completely finished with the report and do not need to edit it further), your department central contact should contact Jan at jan.iron@colostate.edu. The CAES Director's office will submit the reports to CRIS after review.

**Timetable**

By January 9  Principal Investigators complete AD-421 input to Department Head/Chairperson

January 16  Consolidated Department reports (paper printouts) sent to Dean's office

January 23  Control list signed by the Dean and sent to Jan Iron, CAES Director's office

**Note:** The Progress and Final reports are used to complete the CAES’ Annual Accomplishments Report, so please adhere to the timetable.

**Signatures.** There is a signature block on the attached Project Control List for the department head and dean to sign indicating all reports have been reviewed and submitted.

**Submission.** The CAES will review reports on the Web. Please return the SIGNED Project Control List to confirm your review of all reports.

If you have any questions regarding 2014 reports, please call Jan Iron at 1-7403. Any comments regarding the process, please call Jeffrey Steiner at 1-5371.