

AGRICULTURAL EXPERIMENT STATION

Request for 2007 Proposals for potato research funded by the Colorado Potato Administrative Committee, Area II, and by royalty funds from CCPGA potato cultivars.

Program Scope :

- **Potato breeding and genetics**
- **Potato production practices (e.g. seed tuber treatment/planting, soil fertility, irrigation/water management, pests - weeds, pathogens, insects)**
- **Postharvest physiology/storage**
- **Nutritional characteristics/human health benefits**
- **Basic biological mechanisms**
- **Marketing**

For 2007, grower-identified priorities include :

- **Sprout suppression in stored seed potatoes, especially the use of DMN.**
- **Drip irrigation**
- **Rio Grande Russet storage considerations**
- **Management approaches for increasing stem numbers in Canela**
- **Human health benefits, especially as associated with new cultivars**
- **Silver scurf control**
- **Screening new cultivars for disease expression and resistance**
- **Cultural practices (compost tea, green manure crops, etc.) for disease (pink rot, corky ringspot) control**

The start date for funded projects will be spring 2007.

The following information should be included in proposals :

- **Title.**
- **Investigator name(s) and department(s).**
- **Nature, scope, objectives of proposed research.**
- **Methods and facilities, including any resource needs at the San Luis Valley Research Center.**
- **Relationship of proposed research to overall problem for potato growers.**
- **Potential for leveraging results to obtain additional outside funding.**
- **Timeline and expected short term (1 yr) and longer term (3-5 yrs) outcomes.**
- **Detailed annual budget (personnel, materials and supplies, travel, equipment, services) and a budget justification. Indirect costs are not applicable.**

Submit proposals, electronic copy only (Word or WordPerfect) by February 26, 2007, to :

Director

Agricultural Experiment Station

Colorado State University at
Lee.sommers@colostate.edu

Additional information about the proposal review process, especially as that involves presentation to members of CPAC and CCPGA will be sent soon.

Subject: FW: Potato royalty & CPAC RFP

From: "Wallner,Stephen J" <Stephen.Wallner@ColoState.EDU>

Date: Mon, 18 Dec 2006 11:01:14 -0700

To: "Anthony J Koski (Tony.Koski@ColoState.EDU)" <Tony.Koski@ColoState.EDU>, "Bartolo,Michael E (EID)" <Michael.Bartolo@ColoState.EDU>, "Caspari,Horst W (EID)" <Horst.Caspari@ColoState.EDU>, "Cecil Stushnoff (stushnof@lamar.colostate.edu)" <stushnof@lamar.colostate.edu>, "Christine M Dianni (cdianni@lamar.colostate.edu)" <cdianni@lamar.colostate.edu>, "Davidson,Robert D (EID)" <Robert.Davidson@ColoState.EDU>, "Essah,Samuel YC (EID)" <Samuel.Essah@ColoState.EDU>, "Goetz,Bradley C (EID)" <Bradley.Goetz@ColoState.EDU>, "Harrison Hughes (hghughes@lamar.colostate.edu)" <hghughes@lamar.colostate.edu>, "Holm,David G (EID)" <David.Holm@ColoState.EDU>, "James Klett (jeklett@lamar.colostate.edu)" <jeklett@lamar.colostate.edu>, "Joe McGrane (mcgrane@lamar.colostate.edu)" <mcgrane@lamar.colostate.edu>, "Johnson,Zachary S (EID)" <z.Johnson@ColoState.EDU>, "Jorge Vivanco (jvivanco@lamar.colostate.edu)" <jvivanco@lamar.colostate.edu>, "Larsen,Harold J Jr (EID)" <Harold.Larsen@ColoState.EDU>, "Matthew K Rogoyski (rogoyski@lamar.colostate.edu)" <rogoyski@lamar.colostate.edu>, "pmartin@lamar.colostate.edu" <pmartin@lamar.colostate.edu>, "s.jayanty@lamar.colostate.edu" <s.jayanty@lamar.colostate.edu>, "Weiqin Jiang (jiangw@lamar.colostate.edu)" <jiangw@lamar.colostate.edu>, "Yaling Qian (yaqian@lamar.colostate.edu)" <yaqian@lamar.colostate.edu>, "Zongjian Zhu (zhuz@lamar.colostate.edu)" <zhuz@lamar.colostate.edu>

From: Wallner,Stephen J

Sent: Monday, December 18, 2006 10:59 AM

To: Peterson,Gary A; Holtzer,Thomas O (EID); Davies,Stephen P (EID); Bush,Daniel R (EID)

Cc: Sommers,Lee E

Subject: Potato royalty & CPAC RFP

Colleagues,

The attached RFP calls for potato research proposals to be funded via the Colorado Potato Administrative Committee (CPAC), Area II, and/or the royalty revenue generated by CCPGA (Colorado Certified Potato Growers Association) potato cultivar sales.

Please inform any of the researchers in your department who may have an interest in submitting a proposal.

As noted in the RFP, the proposals are to be submitted to the Director, AES, by February 26, 2007.

Thank you,

Steve & Lee

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Steve,

This is a laundry list of the projects that the CPAC Research Center committee wished to see monies from the royalties used to support. They also had suggestions for the individual or parties most likely to succeed with these projects (just communicating their ideas);

-Use of compost and compost teas to reduce pink rot, silver scurf, Rhizoctonia, etc. In particular, the levels needed for effective control and the types. This is something that the growers find near and dear to their hearts, but not necessarily very easy to measure. Several of the larger growers, however, use compost and compost teas at some level within their operations. (Rob, Agro)

-Use of DMN (Amplify) to reduce pressure bruising in storage and/or its effect on sprouting and potential drawbacks in the following year's crop. Many growers, both seed and commercial use this compound to help control sprouting during storage and, as a side use, to reduce pressure bruising (it reduces respiration rates in the tubers during storage). However, recent evidence from Idaho would suggest that this compound may age the tubers (physiologically) and create the situation where smaller potatoes are produced the following season. Not sure why this would happen, but it does seem to be real. Additionally, several growers at the meetings indicated that they would be willing to share their experiences and provide access to storages which currently are using DMN. (Sastry, Rob, Samuel)

-Provide information on ways to assist Canela Russet in a more even germination and sprouting during the planting season. This particular cultivar has had some issues with consistent, uniform sprouting and too few stem numbers during growth. Both of these factors can limit its yield and may reduce its success within the industry. (Samuel, Dave)

-Provide information on ways to store Rio Grande Russet long term. (Dave, Sastry, Rob)

-Use of formaldehyde to reduce powdery scab (PS) spore loads on tubers prior to planting. There may be more than one way to skin this cat. Growers are trying to keep PS from moving into their fields. We are working on methods to remove the spore balls and be able to test to verify that this has actually occurred. Dave Radtke had excellent success with this particular technique this year and would like to see further explorations into these procedures.

-Use of Calcium to reduce pressure bruising and reduce in-field issues with such things as "buckskinning" (reds developing a type of physiological russet which reduces the red color in storage). Much work has been completed in Wisconsin regarding this type of approach. So far, they have been unable to really show that increasing Calcium in the tuber has the kind of large scale impact they have been seeking. (Samuel, Rob)

-Development of more appropriate, grower oriented and grower evidence, management sheets for the new cultivars currently being touted by the Cultivar Development program. (Dave, Rob, Samuel)

I hope this helps. I did not put them into their major categories, but you might consider listing under plant pathology, physiology, storage and extension.

3/19/07 - CPAC Research sub committee

2007 Project Proposal for the CPAC Research Committee - Area II, San Luis Valley, CO

Investigator (s)	Project Title	\$ Amount	\$ Funded
Bush, Daniel R	Manipulation of Sucrose Transport and Yield in Potato.	\$ 34,500.00	—
Davidon, Robert	Potato Disease Management	\$ 25,000.00	25,000
Dillon, Merlin	Using Bio-control Green Manure Crops to Enhance Potato Production	\$ 5,600.00	6,100
Essah, Samuel	Development of cultivar specific management profiles for new and existing potato cultivars	\$ 30,000.00	25,000
Holm, David	Potato Breeding and Selection for Colorado	\$ 60,500.00	60,500
Ingham, Russell	Management of Nematodes on Potato in the San Luis Valley, CO	\$ 30,150.00	25,000
Jayanty, Sastry	Sprout suppression in stored seed potatoes, especially the use of DMN	\$ 38,500.00	38,500
Manter, Daniel	Controlling diseases in potato storage by exploiting induced resistance in different potato cultivars.	\$ 40,500.00	—

Sub-Total: \$ 264,750.00
Grand Total Funded: \$ 180,100

Leaves ~ \$ 10,000 for SLVRC Equipment

Funding approved
 will - W-
 Kent - 2 used