

## **Research Project Proposal for 1999**

**Submitted to**

**SLV Research Center Committee**

**and the**

**Colorado Potato Administrative Committee Area II**

**Title:** Potato Pathology Program, Fungicide screening and evaluation trials

**Project Leaders:** Dr. Richard T. Zink, Extension Potato Specialist, CSU

Dr. Robert Davidson, Extension Seed Potato Specialist, CSU

### **Justification:**

The potato industry in the San Luis Valley is faced, now more than ever, with serious disease management challenges. Late blight will likely change potato production henceforth with substantial increases in fungicide costs. Early blight continues to be damaging and more difficult to control each year. Several seed borne and soil borne diseases such as pink rot, silver scurf, and *Rhizoctonia* require ever more sophisticated management schemes. Cultural practices and variety resistance notwithstanding, these potato diseases will be controlled with fungicides.

Fungicide efficacy trials are currently being conducted, however, in a less than ideal manner at the SLVRC (see attached reports). These trials have been the basis for the registration in Colorado of Maxim, Maxim MZ, Quadris, Ridomil Gold and other compounds still in development. It has become evident, however, with the onset of late blight and a growing stream of new products to be evaluated, that more trials using more sophisticated techniques are necessary to meet the needs of our potato industry.

Ongoing efficacy trials are now essential for maintaining current labels and justifying Section 18, LSN24c, and Section 3 labels for new products. Efficacy trials are intrigal to all potato production areas due to the requirement of local state specific data.

In this regard, we are requesting funds to expand and improve efficacy trials to make them a permanent part of our industry-directed research. Specifically we are asking for funds to purchase a tractor-mounted R & D plot sprayer (see attached cut sheet) and hire permanent technical support. Currently trials are done using part-time student help and a backpack sprayer. This is unacceptable from the standpoint of worker safety, precision and continuity from season to season.

Funds for the purchase of equipment are a one-time request. The funds requested for technical support will be matched from outside sources and should be considered by the committee to be an ongoing commitment. The person that fills this position will likely work full time from May to November and half time for the remainder of the year. This person will be shared between the potato certification program and the extension potato program assisting in industry-directed research and related activities. The matching funds for this position will come equally from the seed potato certification program (a current line item in their budget) and the extension potato program (agricultural chemical companies). No funds are being requested for hourly seasonal labor, general lab supplies, maintenance chemicals or upkeep on systems used in fungicide trials. Requests for funds for other specific projects will continue to be made as the need occurs. Such requests, however, will be for only equipment and supplies and not labor. An annual research report will be distributed to San Luis Valley potato growers.

**Project Status:** This is a new request

**Objectives:**

1. Expand overall research efforts.
2. Improve precision and continuity of research and efficacy trials.
3. Purchase a tractor-mounted R. & D plot sprayer.
4. Provide an annual research report to the industry.

**Funding Request:**

Labor, Research Associate	\$12,000.00
Equipment, R & D tractor-mounted sprayer	<u>4,500.00</u>
	\$16,500.00