RESEARCH PROPOSAL FOR 1991

Submitted to:
SLV Research Center Committee
and the
Colorado Potato Administrative Committee (Area II)

TITLE: Factors Involved in the Use of Sulfuric Acid Vine Desiccant in the San Luis Valley

PROJECT LEADER: Robert Davidson

PROJECT JUSTIFICATION: Sulfuric acid has become an accepted vine desiccant in the San Luis Valley. However, there are still many questions concerning the proper procedures for most effective use and results with acid and whether or not the ground spray rigs commonly used to apply the acid are clean enough to go into seed fields or between lots of potatoes, even after disinfection. This project will study these questions.

PROJECT STATUS: This is a new project.

OBJECTIVES FOR 1991: Four major points will be examined:

1) Does the spray rig applying the acid need to be disinfected, given the quick action and extreme killing power of sulfuric acid?

2) Will disease organisms stay viable in plant debris after spraying with acid (death curves over time will be calculated for Erwinia carotovora and Clavibacter michiganense pv. sepedonicum)?

3) Is it feasible to chop vines while green, follow up with an acid spray within a short time period and prevent potential disease spread?

4) What impact does acid have on soil spore counts of Alternaria solani and will counts increase or decrease with different treatment methods?

This work will concentrate on the potato pathogens Erwinia carotovora, Clavibacter michiganense pv. sepedonicum and PVX/PVS.

FUNDING REQUEST:

1991 Request $2000.00