Summary Research Progress Report for 1989
and Research Proposal for 1990

Submitted to:

San Luis Valley Research Center Committee
and the
Area II Potato Administrative Committee

Title: Evaluation of Advanced Clones for Ringrot Expression

Project Leader: Monty Harrison

Project Justification: Bacterial ringrot continues to be a significant problem in the San Luis Valley for both seed and commercial producers. The unique environment in the Valley does not favor strong expression of ringrot symptoms. The possibility of releasing a new variety which either does not express ringrot symptoms under Valley conditions or which expresses them poorly exists. Such a situation could potentially expose ringrot free stocks to an undetected source of ringrot bacteria. It is, therefore, important to know the response of advanced clones to ringrot infection before they are released to producers as new varieties. This project is designed to provide this information early enough in the development of a new clone that it can be considered when that clone is considered for naming and release.

Project Status: This is a continuing project that has been functioning for several years. New clones are included annually and tested for an average of three years prior to release. The project should continue in the future under the direction of a different person since I will retire from CSU July 1, 1990.

Significant Accomplishments for 1990: Fifteen advanced clones were tested in 1989 and compared with three standard cultivars for their reaction to ring rot infection. Results showed that all of the clones were susceptible to ring rot but their reactions varied considerably with regard to the length of time from planting to symptom expression and the percentage of inoculated plants which showed symptoms by the end of the season.

Time from planting to symptom expression ranged from 56 to 100 days and the percentage of plants which showed symptoms by the end of the season ranged from 4.8 - 95.2 percent.

Seven clones showed symptoms about as early as Russet Burbank and Sangre, six others showed first symptoms 7-14 days later than Sangre and Russet Burbank and two clones showed first symptoms 29 - 39 days later than Sangre and Russet Burbank.

Ten of the 15 clones expressed symptoms in percentages of plants equal to or greater than Sangre and Russet Burbank (61.1 - 95.2%). Four clones produced symptoms in considerably fewer plants than Sangre and Russet Burbank (28.1 - 40.8%). One clone (CO 7918-11) showed symptoms in a very low percentage (4.8%) of inoculated plants.

Objectives for 1990: This project, if continued, will be under the leadership of another person.

Funding:

1989 allocation	$2350
1990 budget request	-0-