

## 1986 RESEARCH PROPOSAL

Phil Westra

1. To evaluate the crop tolerance and weed control characteristics of new herbicides and herbicide mixtures that have potential use in potatoes, especially some of the newer post-emerge grass herbicides (VERDICT, ASSURE, TURBO, FUSILADE).
2. To evaluate the integration of commonly used herbicides into management systems that will provide improved control of weeds that currently escape complete control.
3. To evaluate current farmer weed management systems in the SLV, and determine if new management packages could improve weed control in potatoes while lowering the cost of production.
4. To evaluate the biology and ecology of problem weeds such as night-shades, pigweed, lambsquarter, sunflower, green foxtail, wild oat, and volunteer grains in potatoes.
5. To evaluate current and new potato varieties for herbicide tolerance.

### BUDGET REQUEST

Labor	\$ 800.00
Travel	1200.00
Supplies	<u>200.00</u>
Total	\$2000.00

## 1986 WEED CONTROL RESEARCH IN POTATOES

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PRINCIPAL INVESTIGATOR: Dr. Philip Westra  
Research & Extension Weed Scientist  
Colorado State University  
4 years of potato research experience  
in Ecuador, South America

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COOPERATING INVESTIGATOR: Mr. Mike Thornton, Horticulturist  
SLV Research Center

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DURATION OF PROPOSED RESEARCH: Spring of 1986 to Spring of 1987

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### OBJECTIVES OF THIS RESEARCH:

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1. To evaluate the crop tolerance and weed control characteristics of new herbicides and herbicide mixtures that have potential use in potatoes, especially some of the newer post-emerge grass herbicides (VERDICT, ASSURE, TURBO, FUSILADE).
  2. To evaluate the integration of commonly used herbicides into management systems that will provide improved control of weeds that currently escape complete control.
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  5. To evaluate current and new potato varieties for herbicide tolerance.
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PRIMARY RESEARCH SITE: SLV Research Center

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All herbicide evaluations will be conducted utilizing some form of a randomized complete block design with 3 replications. Plots will be 4 rows wide and at least 25 feet long. Yields will be taken from the center two rows of each plot. Herbicide ratings will be based on weed stand counts made in the control plots. All data will be subjected to statistical analysis on a computer in Dr. Westra's office, and research results will be provided in both written and oral form, if so desired, within 3 weeks of termination of the project. Dr. Westra has a project pick-up truck, and backpack CO<sub>2</sub> powered plot sprayer. A special attempt will be made to consult with potato growers during the growing season to help them with their weed control problems. Several good new herbicides with potential use in potatoes have been developed in the past few years; where possible, we would include these in our evaluation studies.

PROPOSED FUNDING FOR 1986 WEED CONTROL RESEARCH IN POTATOES IN  
THE SLV BY DR. PHILIP WESTRA OF COLORADO STATE UNIVERSITY

	CSU	REQUESTED FROM POTATO GROWERS
1. RESEARCHERS SALARY	\$ 2000	
2. PROJECT VEHICLE	3000	
3. CO-2 BACKPACK SPRAYER	700	
4. IBM FOR DATA MANAGEMENT	3000	
5. SLV PROJECT COSTS- LABOR, ETC.		\$ 800
6. TRAVEL, LODGING, MEALS		\$ 1000
7. MISCELLANEOUS SUPPLIES		\$ 200
TOTAL CSU CONTRIBUTION	\$ 8700	
TOTAL REQUESTED FROM SLV POTATO GROWERS		\$ 2000