

RESEARCH PROPOSAL FOR 1985

David G. Holm

1. The potato breeding and selection program will be continued. Advanced clones will be tested in yield trials.
2. Development of virus-tested seed stocks of the most promising clones will be continued and the clone bank will be expanded.
3. The Colorado Western Regional Trial will be conducted again.
4. The Sangre line selections will be tested again to compare performance.
5. The yield response of potato clones to nitrogen application will be determined by yield component analysis.
6. Micropropagation will be examined as a technique to select potato clones for various characteristics such as drought tolerance and low nutritional requirements. This study will be done cooperatively with Mike Thornton.
7. The influence of physiological seed age on yield and yield components will be examined for Centennial Russet and Sangre.
8. Streptomycin-oxytetracycline seedpiece treatment studies will be continued cooperatively with Rob Davidson.
9. A seed increase of stem-cut stocks of flat leaf, yellow leaf, and pebble leaf mutations in Centennial Russet will be initiated. This seed will be used to plant a yield trial to compare these mutations in 1986.

BUDGET REQUEST

POTATO BREEDING AND SELECTION PROGRAM

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|----------------------|-----------------|
| Labor | \$2,700.00 |
| Travel | 600.00 |
| Equipment & Supplies | <u>1,400.00</u> |
| TOTAL | \$4,700.00 |

CULTURAL AND PHYSIOLOGICAL STUDIES

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|----------------------|---------------|
| Labor | \$2,500.00 |
| Travel | 200.00 |
| Equipment & Supplies | <u>600.00</u> |
| TOTAL | \$3,300.00 |

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| GRAND TOTAL | \$8,000.00 |
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RESEARCH PROPOSAL FOR 1985

Michael K. Thornton and David G. Holm

Post Harvest Evaluation of Advanced Clones

1. Evaluate blackspot susceptibility of advanced numbered clones from breeding program.
2. Evaluate weight loss during storage of advanced clones to determine relative storability. This will point out any storage weakness of potential new cultivars.
3. Evaluate dormancy and sprout growth of advanced clones during the storage season. This will identify clones which tend to break dormancy either very early or very late.
4. Evaluate fry color and texture of advanced clones to determine processing potential.

BUDGET REQUEST

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|----------------------|---------------|
| Labor | \$1,200.00 |
| Supplies & Equipment | <u>800.00</u> |
| TOTAL | \$2,000.00 |