

LIST OF PROCESSING INDUSTRY RESEARCH PRIORITIES

PLANT PROTECTION:

1. Late blight fungicide evaluation (including an improved understanding of phosphorous acid as part of a disease management strategy, considering risk management and economics)
2. Improved *Verticillium dahliae* detection. How can new diagnostic methods be put to practice in the field for decision making? How do test results align with field symptoms?
3. Pest monitoring and/ or improved management of pests such as late blight, Colorado potato beetle, potato psyllid, scab, wireworm, viruses causing tuber necrosis
4. Impact of soil amendments and fumigants on health and soil borne pathogens
5. Weed control (nightshade, wild buckwheat)
6. Late blight forecasting models

CROP MANAGEMENT / PHYSIOLOGY:

1. Field variability including mitigating factors within fields that reduce yield
 - a. New technology to track yield variability and quantify improvement
 - b. Nitrogen management
 - i. Nitrogen remediation
 - ii. Nitrogen infiltration
 - iii. Fertigation
 - iv. Nitrogen curve – is there an optimum nitrogen level before affects gravity
 - c. Sulphur remediation
2. Mustard biofumigation
 - a. Growing recommendations for maximum biomass
 - b. Verifying reduction in verticillium wilt and *V. dahliae* microsclerotia
3. Water Management Support
 - a. ADA recharge
 - b. Water allocation
 - c. Tile drainage
4. Use of new technology (VRI, Optix, Veris, UAV, yield monitors) for improved productivity
 - a. Use of technology to track yield variability
5. Irrigation Optimization
 - a. Optimizing VRI
 - b. Application and timing
6. Storage management (shrink / pressure bruise /humidification)
7. Salinity within crop rotation
8. Soil erosion
9. Soil compaction

SEED RESEARCH for processing industry

1. Seed Physiology
 - a. determination and manipulation of physiological age
 - b. agronomics of young versus old seed
 - c. agronomics of whole versus cut seed
 - d. managing larger tuber sets
 - e. Understanding and measuring the factors that contribute to potato seed vigour (other than physiological age) that may contribute positively or negatively to potato seed vigour
2. Understanding the impacts of phosphorus acid on seed

VARIETY DEVELOPMENT:

1. Varietal development and evaluation for the processing industry