

**Funded FY24 ARS-State Potato Research Proposals**

<b>Proposal Title</b>	<b>ARS Resercher</b>	<b>Cooperators</b>
Antagonistic interactions between insecticides, fungicides and foliar nutrient blends compromise the efficacy of tank mix partners (Year 2)	Halterman	Groves (U.Wisc), Gevens (U.Wisc)
Characterization of mechanics of a putative novel sprout inhibitor (CAD1) for discovery of genes/markers regulating tuber dormancy release	Yang	Fonseca (ARS), Blauer (WSU), Kumar (WSU)
Characterization of novel viruses pathogenic to the powdery scab pathogen <i>Spongospora subterranea</i>	Swisher-Grimm	Karasev (U.Idaho)
Determining the threat and spread of new and novel South American Ca.Liberibacter species to North American potato crops and wild potato germplasms	Cooper	Hansen (UC-Riverside), Halbert (FDACS, DPI), Lopes (U.SaoPaulo), Percy (U.BritishColumbia)
Determining viral functions of PcRV, a potato nematode virus	Zasada	Karasev (U.Idaho), Dandurand (U.Idaho)
Developing new tools to predict migration of insect vectors into potato crops	Swisher-Grimm	Crowder (WSU)
Discovery and Application of Click Beetle Attractants for IPM of Wireworms in Potatoes	Williams	Hanks (U.Illinois), Huseth (NCSU), Kuhar (VaTech), Millar (UC-Riverside)
Engineering bacterial biosensors to detect potato pathogens	Swingle	Casteel (Cornell)
Evaluating Verticillium wilt and black dot in potato, fungicide sensitivity, and development of genomic resources	Hansen	Pasche (NDSU), Frost (OSU)
Expanding the utility of Direct Dormant Tuber testing	Filiatrault	Pasche (NDSU)
Exploring Pathogenicity Factors of Phytoplasma Causing Potato Purple Top Disease in the Northwestern U.S.	Swisher-Grimm1	Zhang (St.Louis.U)
Identifying the sources of aphids and aphid-vectored viruses afflicting potato fields	Angelella1	Cooper.Jensen (CalAcad), Swisher-Grimm, Wohleb (WSU), Wenninger (U.Idaho), Duellman (UIdaho)
Immune priming with vitamins for potato disease control	Clarke2	Goyer (OSU)
Impact of crop growth environment and postharvest storage conditions on physiological age of seed tubers and their yield performance	Dogramaci	Shannon (U.Minn), Sarkar (ARS)
Integrative approaches to understanding how vector proteins affect plant defense and plant-insect interactions	Angelella2	Tamborindeguy (TexAM), Levy (Tex AM), Cooper
Managing fungal diseases of potato using small RNA and peptide applications	Halterman	Kabbage (U.Wisc), Rakotondrafara (U.Wisc)
Mediating insecticide resistance development in Colorado potato beetle: roles of histone deacetylase inhibitors (HDACis) and histone acetylase inhibitors (HAis)	Gunderson-Rindal	Chenn (U.Vermont), Gunn (U.Vermont), Groves (U.Wisc), Schoville (U.Wisc)
Molecular characterization of tuber necrotic potato viruses and evaluating the effectiveness of biopesticides in controlling powdery scab and PMTV	Abrahamian	Chikh-Ali (ColoradoSU)
Testing the efficacy of entomopathogenic fungi in controlling potato psyllid ( <i>Bactericera cockerelli</i> ) in potatoes	Angelella	Antwi (OSU), Frost (OSU), Cooper
The whirligig mite and new biological control opportunities in potatoes	Horton	Cooper (ARS), Waters (WSU), Ohler (WSU)
Tracking sources of Dickeya and Pectobacterium that lead to soft rot and blackleg outbreaks	Swingle2	Frost (OSU)
Uncovering the genetic traits underlying tuber greening resistance in potato	Anglin	Spear (UIdaho)
University of Maine Potato Dihaploid Yield Trial and Seed Increase	Collins3	Tan (U.Maine), Andrade (U.Maine)