

MILESTONES

Projects, Activities, and Milestones	Personnel (State)	Year				
		1	2	3	4	5
CAP 1 –Camelina Biofuels						
		X				
Make rhizosphere collection of bacteria	Timothy Paulitz (WA), Jed Eberly (MT), Susanne Tringe (CA), Qing Yan (MT), Elle Barnes (CA), Hao Peng (CA)	x				
Sequence rhizosphere microbiome with amplicon sequencing			x	X		
Complete metagenomic analysis of rhizosphere bacteria grown with 10 camelina lines grown under low and high N conditions					x	X
Complete metabolomics study on selected bacteria from collection						X
Complete field analysis of camelina lines to select high and low NUE lines					x	x
CAP 2 – Cyst Nematode Management						
Initiate studies to obtain preliminary results for grants	Ole Becker (CA), James, Borneman (CA), Tim Paulitz (WA), Gretchen Sassenrath (KS), and Tessie Wilkerson (MS)	X				
Complete studies to obtain preliminary results for grants			X			
Write and submit grant proposals				X		
Initiate studies for funded projects					X	
Continue studies for funded projects						X
CAP 3 – Enhancing efficacy of biopesticides:						
Conduct preliminary experiments in growth room studies to survey soils and substrates for biocontrol agent survival and disease suppression, measure soil physiochemical properties	Anissa Poleatewich (NH), Gretchen Sassenrath (KS), Johan Leveau (CA), Jay Hao (ME), Ken Frost (OR), Tim Paulitz, (WA)	x	x			
Collect and screen biocontrol isolates. Identify top performing biocontrol isolates				x	x	
Complete greenhouse and field studies. Analyze data to identify effects of substrate properties on biocontrol agent efficacy.				x	x	x
Develop extension materials; deliver to farmers and industry through field days, popular press, and media. Prepare scientific publications						x
CAP 4 Soil Health in Potato Production.						
Coordination of sampling protocols and treatments	Timothy Paulitz (WA), Jay Hao (ME), Ken Frost (OR)	X				
Conduct field experiments (3 sites, 12 treatments)		X	X	X	X	X
Sample bulk and rhizosphere soils for assessment		X	X	X	X	X
Describe relationships between agricultural practices, soil health indicators, crop health, yield and quality				X	X	X
Identify redundant soil health indicators				X	X	X
Identify soil health indicators linked to greater microbial community diversity, healthier plants and higher yields					X	X
Results fed into extension and outreach activities (Obj. 4)		X	X	X	X	X
CAP 5. Measuring the impact of soil health on soybean disease (KS and MS)						
Implement test plots in research fields; collect soil samples from test plots and production farms	Chris Little (KS), Gretchen Sassenrath (KS), Tessie Wilkerson (MS), Tim Paulitz (WA),	x	x	x	x	
Assess soil health factors and microbial activity		x	x	x	x	

Measure abundance of disease organisms			x	x	x	
Develop relationships between soil health factors, microbial activity, and disease prevalence				x	x	x
Develop educational programs and materials; deliver to farmers and industry through field days, popular press, and media			x	x	x	x