

Timeline

Funding Start: 8/1/21

Funding End: 7/31/23

Research Objectives 1 & 2: Litchi Tomato vs Quinoa as PCN Trap Crops Field Trial

▪ Maintain 2 nd field trial	Aug 2021 – Sept 2021
▪ Terminate 2 nd field trial at 12 weeks, bring microplots to cold room for minimum of 8 weeks	Sept 2021
▪ Perform evaluations of cyst bag samples collected at 6-weeks and 12-weeks	Sept 2021 – Nov 2021
▪ Plant 2 nd trial bioassay of susceptible and resistant potato	Feb 2022
▪ Grow bioassay 12 weeks	Feb 2022 – May 2022
▪ Plant 3 rd field trial	May 2022
▪ Terminate bioassay, dry soil/root samples for cyst extraction	June 2022
▪ Extract cysts from soil/root samples, conduct evaluations of recovered cyst bags	July 2022 – October 2022
▪ Terminate 3 rd field trial at 12 weeks, bring microplots to cold room for minimum of 8 weeks	Sept 2022
▪ Perform evaluations of cyst bag samples collected at 6-weeks and 12-weeks	Oct 2022
▪ Plant 3 rd trial bioassay of susceptible and resistant potato	Jan 2023
▪ Grow bioassay 12 weeks	Jan 2023-Apr 2023
▪ Terminate bioassay, dry soil/root samples for cyst extraction	May 2023
▪ Extract cysts from soil/root samples, conduct evaluations of recovered cyst bags	June 2023-July 2023

Research Objectives 1 & 2: Litchi Tomato vs Quinoa as PCN Trap Crops Greenhouse Trial

▪ Plant greenhouse trial 1 (grown for 12 weeks)	Jan 2022
▪ Plant greenhouse trial 2 (grown for 12 weeks)	Feb 2022
▪ Terminate trial 1. Place pots into the cold room for an 8-week dormancy period and perform evaluations on the 12-week cyst bag sample	Apr 2022
▪ Terminate trial 2. Place pots into the cold room for an 8-week dormancy period and perform evaluations on the 12-week cyst bag sample	June 2022
▪ Remove pots from cold room, plant trial 1 bioassay with susceptible and resistant potato (grow for 12 weeks)	July 2022
▪ Remove pots from cold room, plant trial 2 bioassay with susceptible and resistant potato (grow for 12 weeks)	Aug 2022
▪ Grow bioassay 12 weeks	Jun 2022 – Oct 2022
▪ Terminate trial 1 bioassay, dry soil/root samples for cyst extraction	Sept 2022
▪ Terminate trial 2 bioassay, dry soil/root samples for cyst extraction	Oct 2022
▪ Extract cysts and conduct evaluations of recovered cyst bags	Dec 2022 – Mar 2023

Research Objective 3: Investigation of Crop Rotations for Reduction of PCN Over Time

▪ Maintain trial 1 (year 2) and trial 2 (year 1) in the field	Aug 2021 – Sept 2021
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<ul style="list-style-type: none"> ▪ Terminate trial 1 (year 2) and trial 2 (year 1). Trial 1 (year 2) microplots go to the cold room at U of I. Trial 2 (year 1) microplots go to a storage facility. Minimum 8-week cold period. 	Sept 2021
<ul style="list-style-type: none"> ▪ Conduct evaluations on end of season cyst bag and soil samples 	Oct 2021
<ul style="list-style-type: none"> ▪ Plant trial 1 (year 3) and trial 2 (year 2) in the field for 12 weeks. Conduct evaluations for beginning of season cyst bag samples 	May 2022 – Sept 2022
<ul style="list-style-type: none"> ▪ Terminate trial 1 (year 3) and dry soil for cyst extraction. ▪ Terminate trial 2 (year 2) and store microplots in cold room at U of I for 8 weeks. Conduct evaluations on end of season cyst bag samples. 	Sept 2022 – Dec 2022
<ul style="list-style-type: none"> ▪ Extract trial 1 cysts, determine impact on PCN populations 	Mar 2023 – May 2023
<ul style="list-style-type: none"> ▪ Plant trial 2 (year 3) bioassay with Russet Burbank in field and grow for 12 weeks. Conduct evaluations on beginning of season cyst bag samples. 	May 2023-Sept 2023
<ul style="list-style-type: none"> ▪ Dry and extract PCN cysts from trial 2 (year 3) bioassay and conduct evaluations on recovered cyst bags. 	Oct 2023 – Dec 2023

Objective 4: Outreach and Education

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| <ul style="list-style-type: none"> ▪ Present at Society of Nematology Meeting | Sept 2022 |
| <ul style="list-style-type: none"> ▪ Present at IAPP meeting | Nov 2022 |
| <ul style="list-style-type: none"> ▪ Present at Idaho Potato Conference | Jan 2023 |
| <ul style="list-style-type: none"> ▪ Publish newsletter on trap crops and crop rotation for PCN eradication | Jul 2023 |