Canterbury Potato Liberibacter Initiative
Newsletter January 2026

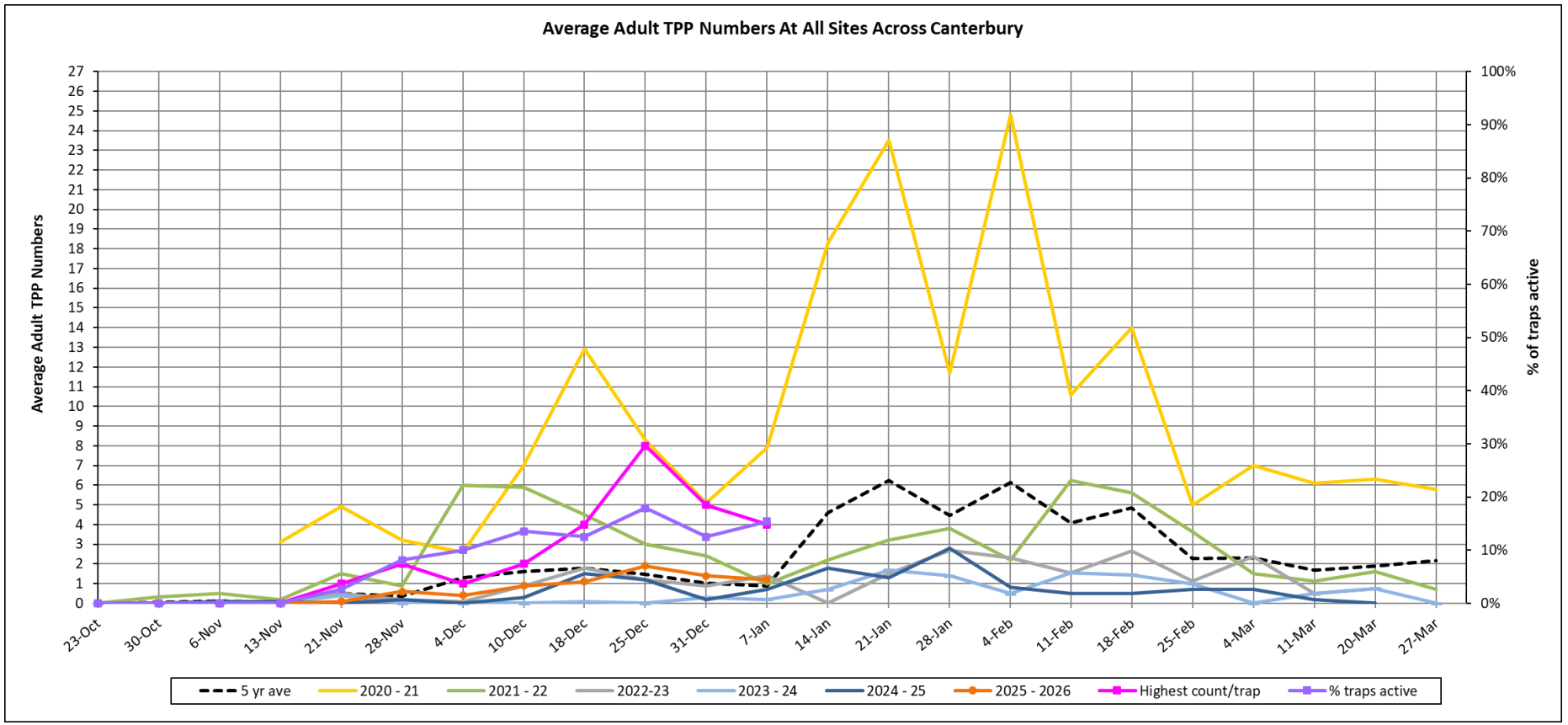
Dear Canterbury Potato Grower, Industry Members and Supporters.

Now we are into the start of a new year and with research projects as well as partial trials completed it is time to review and reflect on the past seasons since Canterbury Potato Liberibacter Initiative (CPLI) was formed.

Looking back to August 2021 when CPLI was established by like-mined farmers and industry representatives to find a way forward to combat the devastating impact of Candidatus Liberibacter solanacearum (CLso) bacterium causing Zebra chip in Canterbury commercial potato crops. In 2021 after the severe impact of CLso and decline in quality of the 2020/21 season potato crop it is a very positive outcome that the following 4 seasons since 2020-21 have all had the lowest incidence of Zebra Chip in the commercial potato crops since trapping data was collated and reported on from the 2014-15 season onwards for the past 11 years.

The past 4 seasons since 2020-21 have consistently had low Tomato Potato Psyllid (TPP) counts throughout the whole season, and the past season (2024-25 season) has seen the lowest TPP trap counts over the whole season since we started collating the trap data.

This does show that with all the initiatives that have been enacted by potato growers and seed growers with advice from agronomists as well as through industry - CPLI it has made a difference. But of course, the work is not complete as we still have not found a cheap solution to TPP and CLso in the Canterbury potato crops although we believe we are getting closer as our knowledge increases from dealing with this pest and disease.


Average Adult TPP Numbers At All Sites Across Canterbury
Average Adult TPP Numbers
% of traps active
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
23-Oct
30-Oct
6-Nov
13-Nov
21-Nov
28-Nov
4-Dec
10-Dec
18-Dec
25-Dec
31-Dec
7-Jan
14-Jan
21-Jan
28-Jan
4-Feb
11-Feb
18-Feb
25-Feb
4-Mar
11-Mar
20-Mar
27-Mar
5 yr ave
2020 - 21
2021 - 22
2022-23
2023 - 24
2024 - 25
2025 - 2026
Highest count/trap
% traps active

CPLI Research Projects updates

Project No.	Project Title	Lead Organisation / Trial Type	Project Status
1	Laboratory testing the efficacy of contact insecticides	Plant & Food Research	Delivered
2	Systemic resistance	Plant & Food Research	Delivered
3	Biological control	Lincoln University	Delivered
4	Systemic acquired resistance	Plant & Food Research	Delivered
5	TPP lure and traps	Lincoln University	Delivered
6	Calcium propionate	Lincoln University	Delivered
7	Border plantings	Grower trials	Delivered
8	Liberibacter bioassay	Lincoln University	Delivered
9	Boxthorn removal		Delivered
10	Biocontrol release		Delivered
11	Psyllid trapping and gut content analysis	Plant & Food Research	Delivered
12	Integrated Pest Management (IPM) in potatoes	Plant & Food Research – IPM Technologies – McCain Foods	Ongoing

Boxthorn removal

Over the past 18 months two huge stands of Boxthorn have been removed at both the North Rakaia huts and at the South Rakaia huts. A big thank you to Robin Oakley for his support as we removed from the stand at the North Rakaia huts and also at South Rakaia to Brendon Dolan, a Dairy farmer and the South Rakaia huts association for their support to allow our contractor to remove the Boxthorn over 2.9 kms of land and beach frontage.

Thanks goes the Environment Canterbury for their support in the removal of the Boxthorn from beach reserve as well as Ian Densem and his contracting team that cleared and burned the heaps of Boxthorn - only burning it when the wind took the smoke from the fires out to sea.

The removal and burning of these 4 and 5 metre high stands of Boxthorn eradicated a huge overwinter habitat for TPP in both these areas. There are still sporadic Boxthorn plants remaining between North Rakaia huts and Lake Ellesmere, however one of the largest blocks has been removed. The Boxthorn removed over 2.8 kms at South Rakaia is the entire stands of Boxthorn in this area and in total 20 large piles of Boxthorn were burnt.

Ongoing management of regrowth spraying will be handled by North and South Rakaia hut owners with CPLI collaboration.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Calcium Propionate

Other project undertaken over the past year included the assessment of Calcium Propionate (CP) sprayed on the potato crop in a controlled shade house environment at 1% rate as a repellent against TTP. This work has been completed, and the results indicate that CP doesn't stop CLso in potatoes, but it may influence TPP feeding duration. However, further research is required to determine whether CP, along with other products, can function effectively as a repellent.

On farm Calcium Propionate commercial trial
A field trial was conducted on a Russet Burbank crop, where half of the paddock was sprayed following a standard spray program (insecticide applied every 10 days), and the other half was treated with CP alone. In the CP treatment, insecticide use was reduced, with CP applied at every spray while every second insecticide application was omitted.

In-field assessments focused on different psyllid life stages as well as beneficial insect populations. There appears to be little difference between the two treatments. All data has been compiled, with analysis centred on evaluating yield response and nutrient composition of the tubers.

As this was a field trial conducted under low insect pressure, the results cannot be directly attributed to the effects of CP alone. Consequently, greater emphasis needs to be placed on laboratory based studies.

Nutrient analysis of the tubers showed no differences between treatments, suggesting that foliar application of calcium propionate did not result in increased calcium levels in the tubers.

Paul Horne visits New Zealand

Potatoes New Zealand and Vegetables NZ hosted Dr Paul Horne in New Zealand at the end of February 2025. During his visit, he led several grower workshops at Lincoln University, Massey University, and in Pukekohe, and held one-on-one meetings with growers across Canterbury, Manawatu, and Pukekohe.

Dr Horne is an applied entomologist with extensive expertise in Integrated Pest Management (IPM) and is the owner of IPM Technologies Pty Ltd, an Australian company based in north-east Melbourne. He shared insights on integrated pest strategies, their application in vegetable crops, and current pest control practices, while exploring opportunities to improve these systems through IPM.

The Canterbury component of the visit included a meeting with a McCain grower group, during which the CP commercial trial and several other McCain research trials were visited and discussed. Following Dr. Horne's visit, the concept of establishing a commercial production site in Canterbury that strictly follows an IPM approach was proposed.

TPP/ CLso Seminar

Potatoes New Zealand, Tomatoes New Zealand (TNZ) and Te Ahikawariki (VICE) co-hosted a TPP/ CLso Seminar on 26 June 2025 in Pukekohe to update growers and industry professionals on the latest research findings related to TPP and the impacts of CLso on solanaceus crops. The CPLI group was happy to share any findings and learnings from the South Island.

A recording of the seminar has been made available on the Potatoes New Zealand website and the TNZ YouTube channel for those who were unable to attend.

Psyllid trapping and gut content analysis

Work continues understanding why west of Darfield remains a TPP hot spot.

This past winter the CPLI group decided to run a psyllid trapping and gut content analysis around this hot spot area to determine what host plants TPP feed on when potatoes are not present (i.e. winter) to inform pest and disease management practices. Plant & Food Research provided sweep net training, and they could not run the gut content testing as only one TPP was found. The low number of TPPs observed may be due to a low population year, weather events, or natural population fluctuations, though the exact reason cannot be confirmed.

Integrated Pest Management trial

An Integrated Pest Management (IPM) trial is currently underway to establish a 10-hectare commercial production site in Canterbury, based on a strict IPM approach. The trial is managed collaboratively by Plant & Food Research (BSI), IPM Technologies (Paul Horne), McCain Foods (Sarah Newton), the commercial grower, and Seed & Field.

The site was planted on 18–19 October 2025. Crop scouting is carried out by BSI, with Paul Horne travelling to the site for additional assessments. Fruitfed Supplies is responsible for trapping and monitoring, with hot and cold testing also being implemented. Weekly meetings are scheduled following each monitoring session to support informed decision making.

Within this trial, only insecticide use is managed under the IPM programme; the fungicide programme follows the grower's standard recommendations.

A Lincoln University IPM site has also been established at the Biological Husbandry Unit (BHU) as a training site for Paul Horne to teach students the principles of crop scouting and the decision-making process. Recording sessions will be conducted and shared for educational purposes.

International linkages established with PATAFest and Texas A&M AgriLife Research

Jessica Vereijssen has been appointed as the Potatoes New Zealand representative on the PATAFest Advisory Board, strengthening international collaboration on the prevention and management of CLso.

PATAFest is a European research project (€6 million) focused on protecting potatoes from pests and post-harvest diseases by applying a range of strategies to detect, treat, and control CLso. CLso is currently an exotic disease in Europe and has not yet been detected there.

In August 2025, John Jackson resigned from CPLI and from his role as Chair, nominating Sarah Newton of McCain Foods as his replacement.

The voluntary levy collection from Canterbury growers and processors has now ended, marking the official conclusion of CPLI. However, the CPLI group will continue to meet to oversee the allocation of remaining CPLI funds and the ongoing investment of Potatoes New Zealand funds.

The CPLI Group Committee would like to wish Canterbury potato growers, industry members, and financial supporters a prosperous 2026, with a safe and plentiful harvest ahead.

Kind regards

CPLI Committee