Nematode Control in Potato: 2026 Trial Results

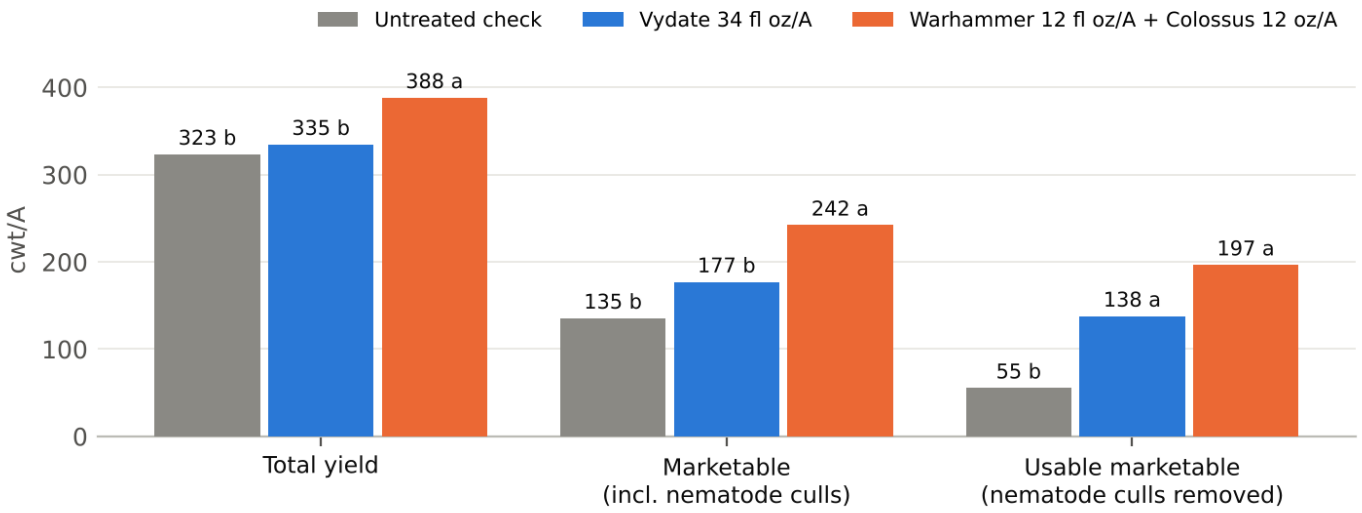
Warhammer + Colossus vs. Vydate for Columbia root-knot nematode · Ranger Russet · Eltopia, Washington

Bottom line

In a field with Columbia root-knot nematode pressure, the **Warhammer + Colossus** program produced **197 cwt/A of usable marketable potatoes**, compared with 138 cwt/A for the Vydate standard and 55 cwt/A for untreated ground. Both nematicide programs cut nematode culls by more than half. Warhammer + Colossus also gave the highest total and marketable yields, with no crop injury.

3.5×	**+59 cwt/A**	**58% → 23%**	**0%**
usable marketable yield vs. untreated check	usable yield vs. Vydate (not statistically different)	tubers culled for nematode damage, check vs. Warhammer + Colossus	crop injury on all 3 rating dates

Yield by treatment

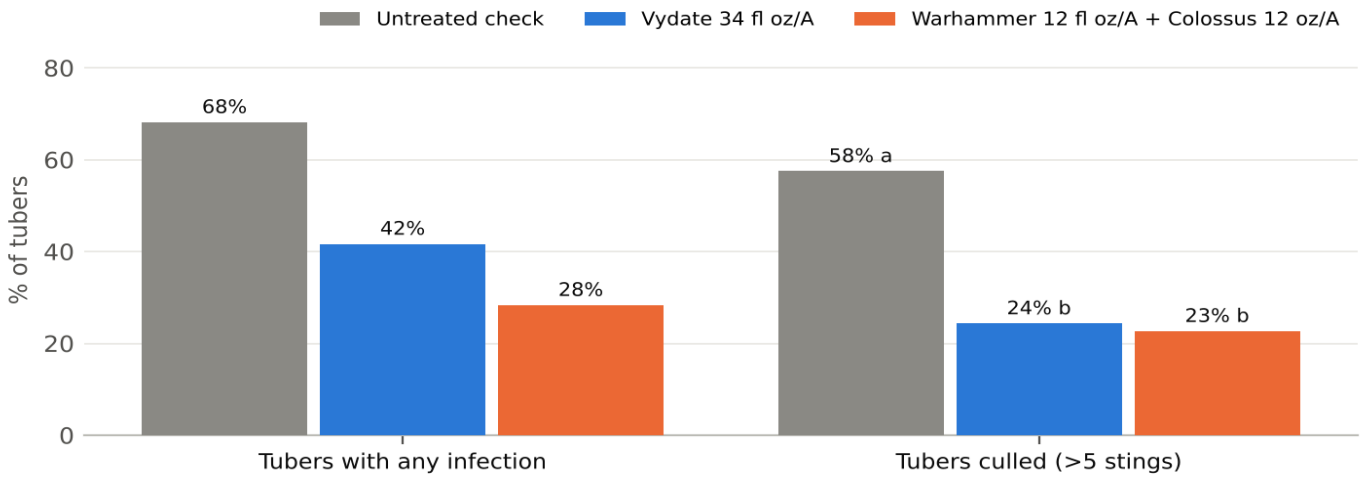


Means of 6 replicates. Bars in the same group that share a letter are not significantly different (Fisher's LSD, P = 0.10). 1 cwt = 100 lb. Usable marketable yield removes tubers with more than 5 nematode stings.

What growers should take away

- **Nematode damage is a quality problem first.** Total yield differed by only about 65 cwt/A across treatments, but usable yield differed by more than 140 cwt/A because untreated tubers were culled.
- **Warhammer + Colossus matched Vydate on tuber protection** (24% vs. 23% culls; 15 vs. 16 stings per tuber) and added more 4–6 oz and 14 oz+ tubers, which raised total and marketable yield.
- **Crop safety was clean.** There was no phytotoxicity, and vigor, specific gravity and solids were the same as the check. Early stand count was slightly higher with Warhammer + Colossus.

Tuber nematode damage at harvest



Lower is better. Letters show significant differences (P = 0.10). Infection incidence was not significantly different (P = 0.11), so it has no letters.

Full results

Measurement	Untreated check	Vydate 34 fl oz/A	Warhammer 12 fl oz/A + Colossus 12 oz/A	P value
Usable marketable yield (cwt/A)	55 b	138 a	197 a	.007
Marketable yield incl. nematode culls (cwt/A)	135 b	177 b	242 a	.014
Total yield (cwt/A)	323 b	335 b	388 a	.075
4–6 oz tubers (cwt/A)	40 b	41 b	78 a	.018
6–10 oz tubers (cwt/A)	45	61	78	ns
10–12 oz tubers (cwt/A)	21	44	33	ns
12–14 oz tubers (cwt/A)	14	21	26	ns
14 oz+ tubers (cwt/A)	16 ab	10 b	28 a	.075
Under 4 oz (cwt/A)	104	103	101	ns
Cull weight (cwt/A)	84	55	45	ns
Tuber infection incidence (%)	68	42	28	ns
Nematode culls, >5 stings (%)	58 a	24 b	23 b	.048
Severity (stings per tuber)	45.2 a	14.7 b	15.9 b	.019
Specific gravity	1.087	1.086	1.102	ns
Solids (%)	22.2	22.1	25.5	ns
Stand count, 1st (plants / 20 ft)	13.5 b	13.2 b	15.2 a	.012
Stand count, 2nd (plants / 20 ft)	23.0	22.8	23.0	ns
Soil nematodes, pre-plant (per 250 mL)	420	163	147	ns
Soil nematodes, post-harvest (per 250 mL)	1020	80	433	ns

Means followed by the same letter are not significantly different (Fisher's LSD, P = 0.10); no letters means the treatment effect was not significant (ns). Soil nematode counts varied widely between plots; untreated plots started with higher pre-plant counts.

Trial details

Location: Eltopia, WA; Taunton sandy loam, pH 7.5, 1.4% OM
Crop: Ranger Russet potato
Pest: Columbia root-knot nematode (*Meloidogyne chitwoodi*)
Design: Randomized complete block, 3 treatments × 6 reps; 12 × 25 ft plots

Applications

Vydate 34 fl oz/A: in-furrow Apr 28, then chemigated Jul 21, Aug 4, Aug 18, Sep 1
Warhammer 12 fl oz/A: same timing as Vydate
Colossus 12 oz/A: in-furrow Apr 28 only
Harvest: Early October; nematode ratings late October

Results come from one site in one year. Always read and follow product labels. **Contact:** Alan Schreiber, Agriculture Development Group, Inc., 2621 Ringold Rd., Eltopia, WA 99330 · 509-820-9827 · Trial sponsor: Blacksmith Bioscience.