Preliminary findings of prohexadione calcium residues on cherries Supplemental report – WFTRC 2025

Due to industry concerns about the lack of posted Maximum Residue Levels (MRLs) for prohexadione calcium in Codex and several key Asian export markets, combined with the relative dearth of information regarding those residues on cherries, the Washington Tree Fruit Research Commission (WTFRC) conducted extended testing of residues from two cherry trials where Kudos 27.5WDG was sprayed in 2025. Applications were made in both trials with a PTO-driven Rears Pak-Blast calibrated to 200 gal/acre with 12 oz of a non-ionic surfactant (Regulaid) and 16 oz of ammonium monosulfate (Bronc) per 100 gallons of water per standard industry practices. All fruit samples were held in cold storage (34 F) and shipped overnight to OMIC USA Laboratory (Portland, OR) for analysis of prohexadione calcium residues. Special thanks to Fine Americas and Kumiai America for helping support these trials.

TRIAL A: ROCK ISLAND SWEETHEART

This trial was established primarily to evaluate the efficacy of new formulations of prohexadione calcium for controlling shoot growth in cherry. These new products were compared to a standard program of Kudos 27.5WDG applied twice at industry standard timings in the spring; fruit was sampled from this standard treatment at typical Sweetheart harvest timing (78 days after full bloom), as well as 12 days earlier as a proxy for typical Bing harvest timing (66 DAFB). While these results only reflect single data points, they do suggest that prohexadione calcium residues may decline significantly as the cherry harvest season progresses.

Measured residues of prohexadione calcium on field run cherry fruit sprayed with Kudos WDG27.5 at 20 oz/acre during bloom and 16 oz/acre at shuck fall. 'Sweetheart'/G.6, Rock Island, WA. WTFRC 2025.

Sample timing	Measured residue	US MRL[1]	Lowest export MRL[1]
	ppm	*ppm*	*ppm*
June 5 (66 DAFB/Bing timing)	0.15	0.4	0.01 (THA)
June 17 (78 DAFB/Sweetheart timing)	0.02		

[1] Major export markets for Pacific Northwest cherries; 29 July 2025. http://mrldb.nwhort.org/#top_markets

TRIAL B: EAST WENATCHEE SKEENA

A prohexadione calcium product was included in WTFRC's annual cherry pesticide residue study for the first time in 2025. To generate the highest possible residues while still following product label guidelines, Kudos 27.5WDG was applied at the maximum rate (20 oz/acre) at the minimum preharvest interval (21 days before harvest) and retreatment interval (14 days). Fruit from this trial was sampled on July 1, roughly 3 days prior to commercial harvest of that block. Some of that fruit was immediately shipped overnight for processing at the analytical lab. After later conferring with industry collaborators, we decided to use some fruit remaining in our cold storage (34 F) from

that harvest sample to try to get a rough sense of how tenacious prohexadione calcium residues may be during the packing process.

Six days after the fruit was sampled from the field, some of the remaining fruit was packaged without any washing (field run) to serve as a control treatment; other fruit was subjected to a rudimentary simulation of a cherry packing process in the WTFRC lab. Fruit in that treatment were rinsed in the sink for 3 minutes to simulate hydrocooling and then floated in a large tub of water with gentle agitation for 10 minutes to simulate time spent in the dump tank and floating down a commercial packing line. Both samples were shipped overnight for processing by the analytical lab.

Residue levels show a modest decrease between the July 2 and July 8 dates of processing samples from the same lot of fruit, suggesting that prohexadione calcium residues may diminish during cold storage after harvest. Our unsophisticated simulation of a cherry cooling and packing process also produced a modest reduction of prohexadione calcium residues, as indicated in the table below.

Measured residues of prohexadione calcium on cherry fruit sprayed with 20 oz/acre Kudos WDG27.5 at 35 and 21 days before harvest. Samples harvested on July 1. 'Skeena'/K.6, East Wenatchee, WA. WTFRC 2025.

Treatment	Sample processing date	Measured residue	US MRL[1]	Lowest export MRL[1]
		ppm	*ppm*	*ppm*
Field run (no washing)	July 2	0.40	0.4	0.01 (THA)
Field run (no washing)	July 8	0.29		
Simulated packing (with washing)	July 8	0.23		

[1] Major export markets for Pacific Northwest cherries; 29 July 2025. http://mrldb.nwhort.org/#top_markets

Results of these trials are shared for informational purposes only and should not be construed as endorsements of any product, reflections of their efficacy in managing vegetative growth in tree fruit, or a guarantee of similar results regarding residues for any user. Cherry growers should consult their extension team members, crop advisors, and warehouses to develop responsible pest control and vegetative growth management programs.

Reports from other pesticide residue studies on apple and cherry which provide a broader context for these results are available on the WTFRC website at www.treefruitresearch.org. We encourage growers and consultants to stay abreast of current information on international MRLs, which often change in response to trade negotiations and/or political developments. For more information, visit the Northwest Horticultural Council website, www.nwhort.org.

WASHINGTON TREE FRUIT RESEARCH COMMISSION

For more information, contact Tory Schmidt (509) 669-3903 or email tory@treefruitresearch.com