

**CIPC Residues Monitoring Group**

for the UK potato industry

*Chair: Adrian Cunnington Secretary: Andrew Curtis*

**Cleaning guidelines for reducing chlorpropham (CIPC) residue contamination from previously-treated potato stores and equipment**

***Objective: To reduce risk of on-going CIPC pick-up from store fabrics, structures and equipment to minimise residues found on future stored crops***

**The following steps can help to reduce traces of chlorpropham (CIPC) in previously-treated potato stores. This can lower the risk of exceedance of a maximum residue level.**

**Whilst there will continue to be a temporary Maximum Residue Level in potatoes (currently 0.35 mg/kg), other non-target crops have a lower tolerance with many set at the limit of detection (typically 0.01 mg/kg).**

1. **Key principles**
	* **Although stores will not have been treated in recent seasons, it is possible for residual CIPC, particularly in inaccessible parts of the store, to still pose a risk to the saleability of your crop. Around 25% of stores are still detecting measurable levels of CIPC which lost its approval in January 2020.**
	* All stores with a history of CIPC use should continue to be cleaned annually (see section 2) as residues are still being found in previously-treated stores**.**
	* Cleaning activities must include appropriate safety measures: always use personal protection equipment (PPE) and pay attention to safety when working at height.
	* Keep written records and pictures of what has been cleaned, how and when. Buyers of the potatoes may request a record of cleaning activities, especially if an exceedance of the tMRL is recorded.
	* Dry cleaning methods are preferred; always start with them. Only use water if no suitable dry cleaning method is available or if it is not sufficient for complete cleaning. When using complementary wet cleaning, an acceptable method of collecting water and disposing of it appropriately must be used to avoid dispersing contaminated waste water into the environment.
	* Care should be taken to minimise re-distribution of any residual CIPC. Any remaining loose materials should be removed promptly, by vacuuming. Sweeping and brushing generate dust, which risks re-distribution.
	* Cleaning must be carried out from top to bottom (i.e. roof to floor).
	* CIPC is only slightly volatile. Volatilisation will contribute to removal of CIPC, but this process is very slow. When the store is not in use for potato storage, doors and hatches should be left open to allow for continuous airing.
	* After cleaning, underfloor ducts should be subject to constant movement of air, either by running fans or by natural draft. A low air speed is sufficient.
	* Where possible, remove loose residual waste material by dry cleaning and then move store hardware (eg boxes or above ground ducts etc.) outside so weather action (sun, rain, wind, temperature) can also contribute to CIPC removal.
	* Cleaning efforts should continue to focus on positions within the store of highest contamination risk, like plenums and fans (see sections 2 and 5) or around historic application points.
2. **Clean all loose materials by brushing + vacuuming together** (not in sequence, but always combined) from any critical areas in the store. If stubborn deposits are still apparent, bearing in mind it is over 5 years since CIPC was banned, more aggressive methods (eg wire brushing) may be required.
3. **Wooden boxes**
	* Clean any stubborn contaminants by brushing.
	* If box contamination is a concern, try to store boxes outdoors for the entire period that they are not in use. Boxes should ideally not be close-stacked but do always take care to ensure that they are stacked safely.
4. **Lorries, farm transport, hoppers, conveyors, store loaders and/or box fillers.**
	* Outdoor wet cleaning with high-pressure water on a specific drained area, where wastewater can be collected, is preferred.
5. **Hotspots**

Exceedance risks from ‘hotspots’ depend on the type and location of historic CIPC application and on the fog distribution within the store when hot-fogging practices were used. Carefully consider the places where CIPC fog was applied or where accumulated deposits may still be found which were not removed by regular cleaning in recent seasons (floor and wall near fogging port, plenum, fans, refrigeration unit, roof-heater fans, anti-condensation fans etc.)