

Best Practice Guidelines for the use of CIPC

CIPC (chlorpropham) is vital to the potato industry but the compound, the main treatment used for sprout suppression on stored potatoes in the UK, remains under **Stewardship** and will be reviewed in 2017. From 2017 product labels will permit a total dose of no more than 36 grams/tonne and will require active recirculation of fog through the crop, irrespective of store type. Users of CIPC need to be aware of forthcoming changes and, where necessary, modify stores to continue using CIPC on the 2017 crop.

BEST PRACTICE FOR STORAGE SEASON 2016-17

Best practice methods should be adopted in any stores using CIPC to ensure applications are as effective as possible for even distribution of the chemical. This will normally mean adopting the use of active recirculation of the fog and, as a minimum, taking steps to ensure CIPC enters the crop directly e.g. by applying through a duct or covered plenum.

Total dose	Fresh market: maximum 24 grams per tonne (but see cold storage limits below) Processing: maximum 42 grams per tonne (including fish & chip shop use)
Cold storage for fresh market	Where storage will ultimately be at 5°C or below, only one application should be made, before the crop temperature is reduced below 7°C.
Harvest interval	The latest time of application is 14 days before removal from store for sale or processing.
Advisors	Recommendations must be made by BASIS qualified advisors who have inspected the crop.
Equipment	Application equipment must be inspected and certificated annually by NSTS .
Applicators	Personnel must be qualified to NPTC PA1, PA9 and should be members of the NAAC CIPC Applicators' Group .
Stores	Store managers/owners must have inspected and reported stores as fit for application using the PICSG Store Checklist in the Red Tractor Assurance potato protocol .
Responsibility	Overall responsibility for CIPC use lies with the crop owner – not the store manager, CIPC applicator or BASIS advisor.

Full label rates are not normally necessary and should not be used except under exceptional conditions. If such applications are made, residue levels will be higher and more time will be required for those residues to decline prior to unloading. At cold temperatures, the decline is slower and therefore further limits have been recommended by approval holders for stores held below 5°C to minimise the risk of Maximum Residue Level (MRL) exceedance. BASIS advisors and users of CIPC should be aware that even modest doses (around 10-14 grams/tonne) applied under conditions where best practice modifications have *not* been adopted will increase the risk of an MRL exceedance. Consider using an alternative to CIPC if the storage period may be shortened by early unloading.

CIPC best practice

At store loading, remove as much soil as possible and do not overfill boxes. Avoid holding varieties with contrasting dormancies or storage temperature requirements in the same store and ensure crop is dry and cured and that initial application is made before dormancy break. Minimise sprouting pressure by pulling store temperature down quickly and holding at the lowest temperature that crop condition allows. Do not delay CIPC application if the crop is warm as more CIPC is needed where the initial application is made after dormancy break.

Prior to application, recirculate store air for a minimum of 6 hours to ensure temperatures are even. Take care not to introduce warm ambient air that may cause condensation on cold potatoes, concrete floors or metal ductwork etc. This is especially important, in refrigerated cold stores and in processing stores that are flushed for CO₂ control just before an application of CIPC is made.

Where possible, avoid making applications under windy conditions and when the store is not full – application efficiency will be significantly reduced.

Stores must be clearly labelled with a permanent sign where CIPC is used.

Best practice in bulk stores	Best practice in box stores
Bulk stores can only be effectively treated with CIPC by recirculating the fog. In UK type bulk stores this should be accomplished with fans at low-speed (after fitting an inverter). In continental design stores, where there are more fans, treatments may be made with fans at full speed. If in doubt speak with your NAAC CIPC contractor. Recirculation must take place until the fog has cleared.	In box stores with positive ventilation (e.g. letterbox or suction wall), fog should be recirculated at low speed with an inverter-controlled fan. In 'overhead throw' stores in particular, applications should take place into a covered walkway (plenum) to prevent fog rising into the roof space or by actively recirculating fog through the block of boxes, with short-circuiting prevented by the use of an air separator (curtain).
Wherever fans are used to recirculate CIPC fog, refrigeration coils and humidifier screens must be by-passed.	

The use of active recirculation is enabling an increasing number of users to successfully control sprouting with ever-lower doses of CIPC. Many are already achieving long term storage, even at warm temperatures, with levels of CIPC that are well within the limits that will exist under the new European regime from 2017.

It is important to discuss the appropriate use of CIPC for your storage with your BASIS advisor and/or NAAC applicator. Any exceedance of the Maximum Residue Level for CIPC is likely to result in additional sanctions on its use. BASIS advisors and store managers should ensure that the least amount of CIPC is used, and it is evenly distributed, by adopting best practice. To discuss best practice in your stores, call AHDB Crop Storage Research at Sutton Bridge on 0800 02 82 111.

For more information on CIPC treatment of stores visit www.cipccompliant.co.uk.

ALWAYS READ THE LABEL, USE PESTICIDES SAFELY



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