



Welcome to

AHDB Potatoes Storage Forum

Storage Forum: 1st March 2016



an AHDB Potatoes initiative for sustainable potato storage



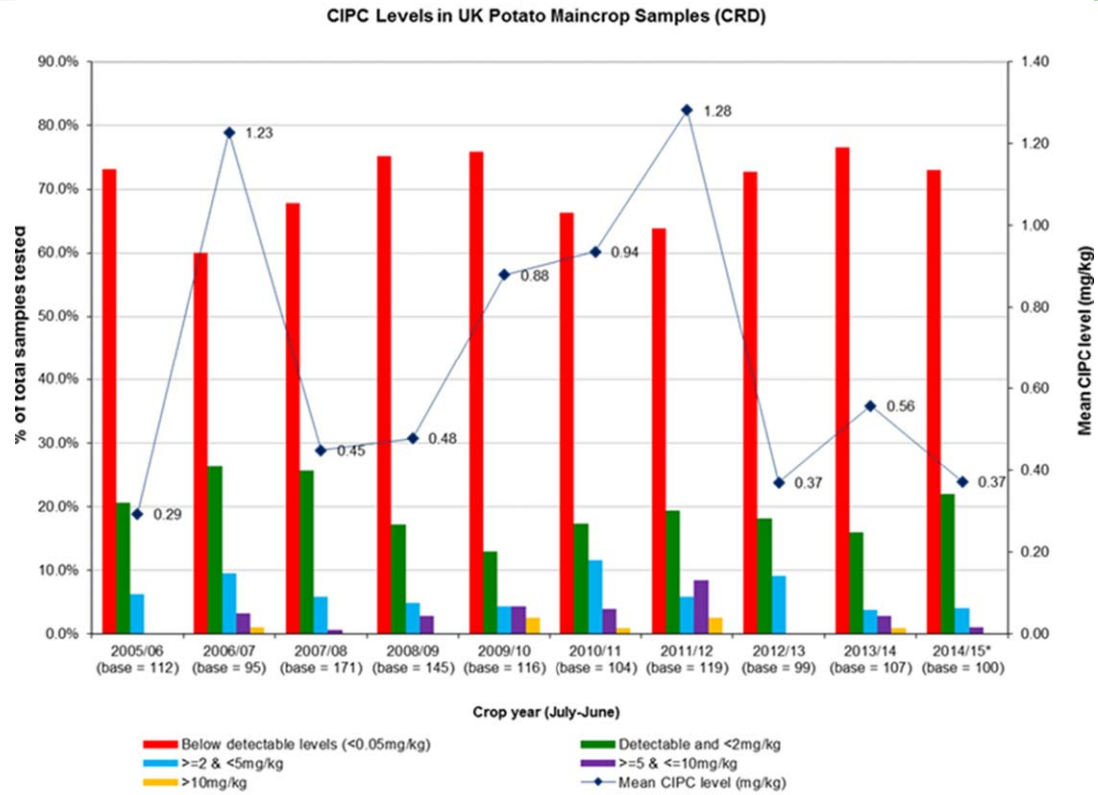
CIPC: how to 'Be 2017 Ready'

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AHDB Potatoes SBCSR

Storage Forum: 1st March 2016



CRD monitoring data



CIPC stewardship

- **Fogger Operators**
(NPTC PA1 & PA9)
- **Fogging Machine**
(NSTS)
- **BASIS certificate**
- **National Association of Agricultural Contractors applicators group**
- **Red Tractor Farm Assurance**
PICSG store checklist
- **Research & KT for best practice**

CIPC stewardship

Reduction in dose rates agreed with ACP (now ECP)

- Reduction related to risk
 - Processing – gradual
 - Fresh – more dramatic

USA CIPC product label rates

Application Rate

When treating long-term storage potatoes, the Standard Application Rate (1 lb) can be raised to 2 pounds active ingredient/600 CWT (60,000 lbs).

TIME MONTHS	STORAGE TEMPERATURE				
	40°F	45°F	50°F	55°F/1	60°F/1
1	80%	90%	100%	110%	120%
2	85%	95%	105%	115%	125%
3	90%	100%	110%	120%	130%
4	95%	105%	115%	125%	135%
5	100%	110%	120%	130%	140%
6	105%	115%	125%	135%	145%
7	110%	120%	130%	140%	150%
8	115%	125%	135%	145%	155%
9	120%	130%	140%	150%	160%
10	125%	135%	145%	155%	165%

/1- Rates for 55°F and 60°F are for processing potatoes only.
Chart assumes treatment soon after suberization time.

CIPC residue level in six stores at commercial outloading

store	Mean CIPC residue (mg/kg)	CIPC retained
L2	4.9	35%
M3	3.1	17%
W1	3.1	25%
C2	0.3	0.7%
M2	0.8	2%
CP-W	0.5	2%
CP-H	0.4	1%

AHDB Potatoes Project R483

CIPC stewardship

Reduction in dose rates agreed with ACP (now ECP)

- Reduction related to risk
 - Processing – gradual
 - Fresh – more dramatic

■ How much do we need?

Conditions on labels are changing: 2016-17

Limits for 2016-17 crops*

label term	fresh	fresh <°5C	processing
total dose	24 g/tonne	16 g/tonne	42 g/tonne
max ind dose	18 g/tonne	16 g/tonne	18 g/tonne
harvest interval	14 days	14 days	14 days

*active recirculation may be required from 2016 in bulk stores

Conditions on labels are changing: From 2017

Limits for 2017 crops onwards*

label term	fresh	fresh <°5C	processing
total dose	24 g/tonne	16 g/tonne	36 g/tonne
max ind dose	18 g/tonne	16 g/tonne	18 g/tonne
harvest interval	14 days	14 days	14 days

*active recirculation will be required in ALL stores from 2017

The final stage: Active Recirculation

Get active in your store:

1. Adopt active recirculation when applying CIPC
2. Ensure CIPC enters the crop directly, for example, by applying through a duct or covered plenum



How can we meet these limits? Alternatives

- Maleic hydrazide
- BIOX-M
- Ethylene

2016 or 2017?

- 1,4-dimethylnaphthalene (DMN/1,4-SIGHT)

2017 or 2018?

- 3-decen-2-one (SmartBlock)
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Sprout suppression Forum 2015

More effective CIPC use

PUS year	2002	2006	2010	2012
Stored total (mtonnes)	4.69	3.75	3.9	2.95
Basic treated total (mt)	2.40	1.69	2.03	1.68
CIPC %	94	94	88	89
Basic treated CIPC (mt)	2.26	1.59	1.79	1.50
Total a.i. (t)	79	55	36	31
CIPC %	91	90	85	92
CIPC a.i. (t)	71.8	49.5	30.6	28.5
t crop treated/t CIPC	31,421	32,093	58,379	52,463

FERA PUS Surveys
Each kilo of CIPC used is now treating many more potatoes

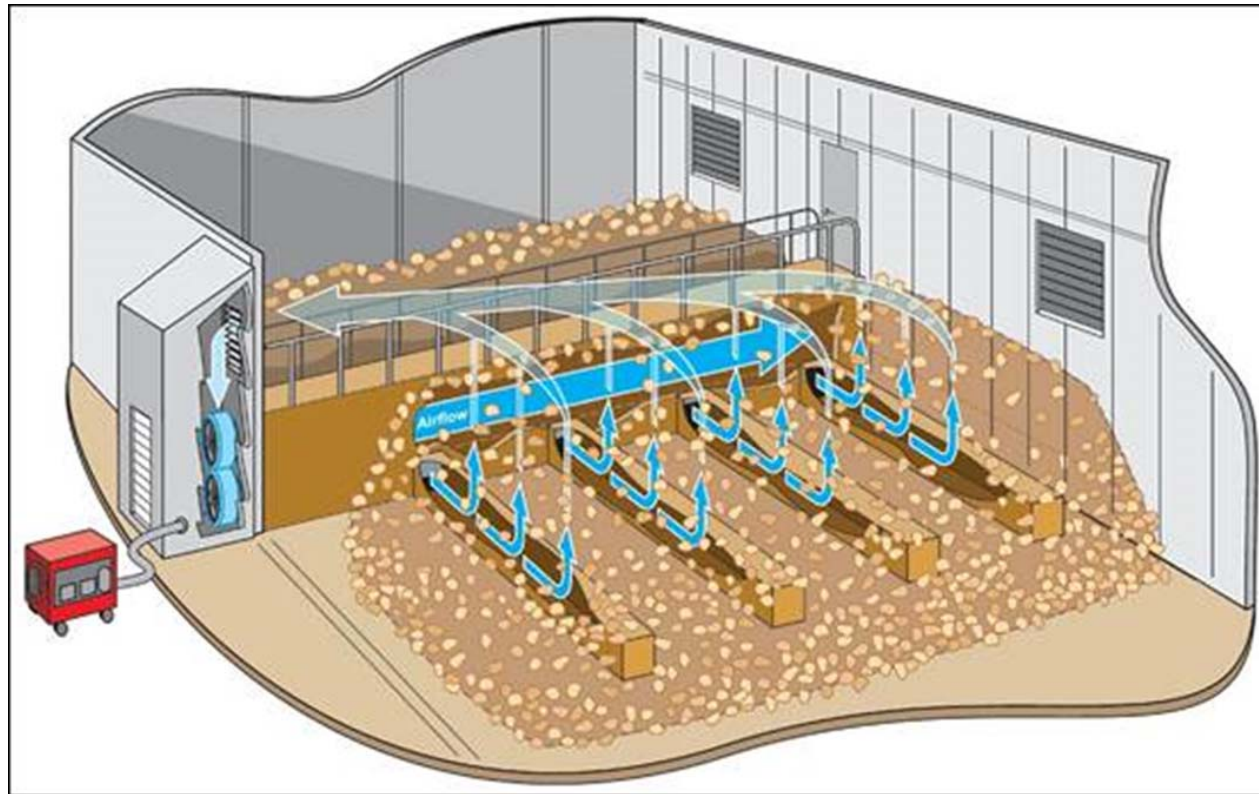


SPROUT SUPPRESSION 2020

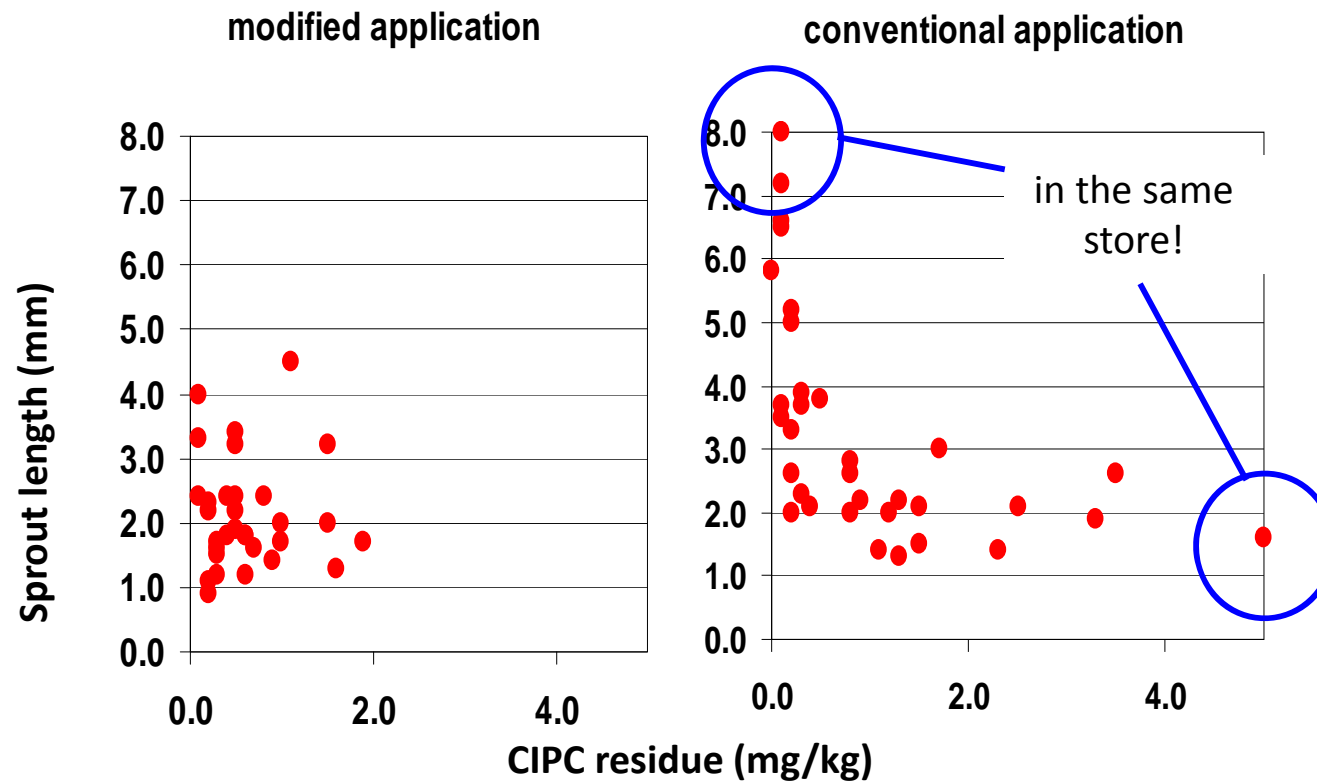


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Bulk stores are straightforward



Best practice in bulk

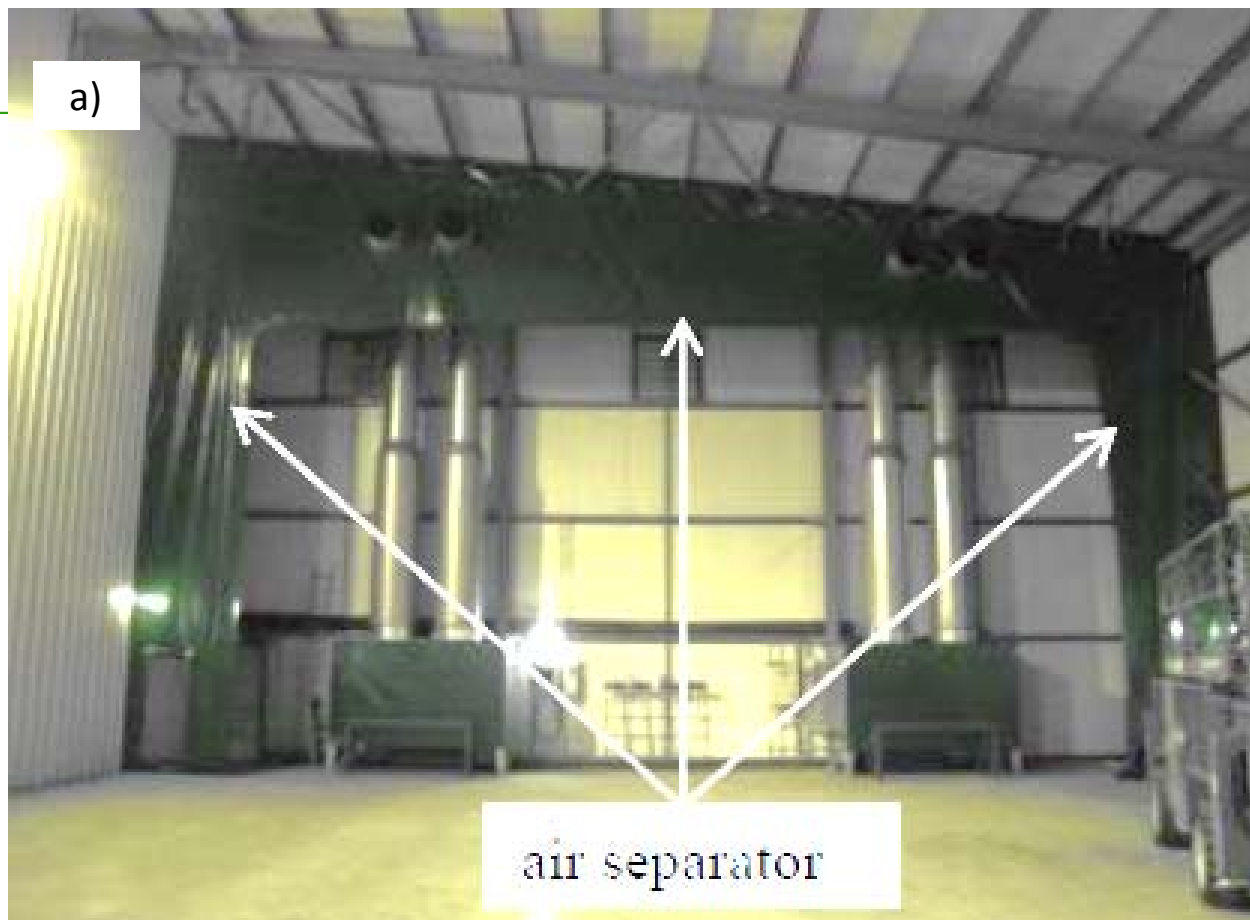


Modified treatment: MSS SproutNip, Close-coupled fogger and VFD operated fans



**‘Overhead throw’
box stores**

'Overhead Throw' store modification



'Overhead Throw' store modification



stairwell for access to top boxes

air separator curtain

recirculation fans

'Overhead Throw' store modification



Get active in your store:

1. Adopt active recirculation when applying CIPC
2. Ensure CIPC enters the crop directly, for example, by applying through a duct or covered plenum



Can anyone wishing to become BASIS (Stored Potatoes) qualified please email me at adrian.briddon@ahdb.org.uk
