

# HASTEN<sup>+</sup> - COTTON

## SPRAY ADJUVANT

HASTEN-COTTON spray adjuvant is a blend of esterified cottonseed oil and non-ionic surfactants that has :

- Proven cost effective performance with a wide range of agricultural products,
- Excellent plant and insect penetrating and wetting properties,
- An internationally recognised tradename and reputation for reliability,
- Renewable material – Cottonseed oil – as its base raw material,
- A high quality formulation providing easy dispersion and stable emulsion characteristics, and
- International Patents granted.

### Product Description

HASTEN-COTTON is a unique spray adjuvant that has been designed to improve the efficacy of a wide range of agricultural products including; Defoliant, Insecticides, Herbicides (selective and non-selective) and Fungicides. The Active Constituent in HASTEN-COTTON is derived from Cottonseed Oil.

### Defoliant Applications

When HASTEN is mixed with certain defoliant products and applied in the field, the non-ionic surfactants in the HASTEN formulation help to retain spray droplets and ensure thorough coverage of plant surfaces. The esterified oil in the HASTEN formulation will retard crystallization of water soluble defoliants as water evaporates from spray droplets. It will also increase the penetration of systemic defoliants through a plant's epicuticular waxy surface leading to enhanced defoliation. It is this dual action of surfactant and esterified oil which makes HASTEN a very effective adjuvant with certain defoliation programs.



**HASTEN**  
Investing in Australian Cotton

#### TRIAL 1

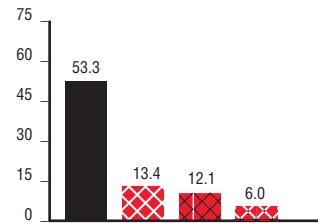
Control of Heliothis in Cotton - India 2004

**Insecticide:** Lambda Cyhalothrin 5% EC  
- 40g a.i./ha

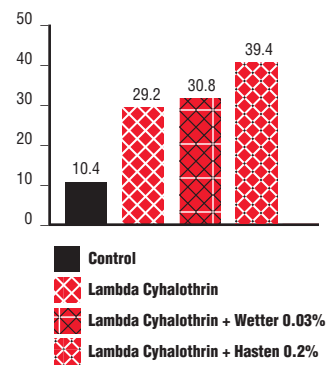
**Spray Rate:** 450-700L/ha

**Application:** 7 Applications over 37 Days

**Mean percent square damage  
6 days after 4th application**



**Mean number of healthy green bolls/plant  
5 days after 7th application**



#### TRIAL 2

Cotton Defoliation

- Queensland Australia 2004

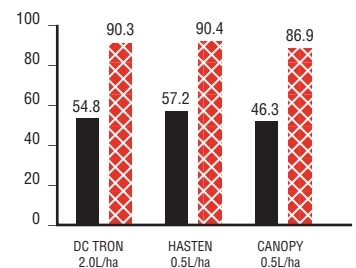
**Defoliants:**

DROPP\* Ultra (120g/L Thidiazuron, 60g/L Diuron)

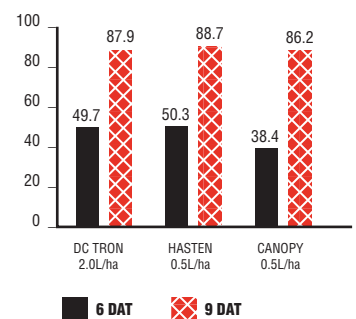
ETHEPHON\* 720 (720g/L Ethephon)

**Spray Rate:** 90L/ha

**Applied at 67% Bolls Open  
% Defoliation Using DROPP Ultra  
(200ml/ha)**



**% Defoliation Using DROPP Ultra  
(150ml/ha) + ETHEPHON (1.0L/ha)**



Cotton  
Applications

## Insecticide Applications

**HASTEN** is suitable for use with various insecticides used in Cotton. **HASTEN** can be used to increase the efficacy of systemic insecticides such as Synthetic Pyrethroid insecticides, Skope\* and Movento\*. See Directions for Use on **HASTEN-COTTON** label and on the Insecticide product label.

## Testing and Evaluation

**HASTEN** is a non-ionic formulation which makes it compatible with most defoliant. In fact, **HASTEN** has been used with defoliants around the world and has been found to be physically compatible with major defoliant products.

**HASTEN** has been tested and evaluated by universities, lifescience companies, research organizations and independent researchers over many years. It has been established that **HASTEN** is a very effective adjuvant for improving the performance of certain defoliation programs.

## Commercial Use

**HASTEN** is successfully used by farmers in many different countries around the world with a diverse range of agricultural products including defoliants. In Australia and the USA, **HASTEN** is recognised as a leading adjuvant by farmers, distributors and lifescience companies.

**HASTEN** is endorsed by major manufacturers for use with the following Defoliation products

- **DROPP\***, echem Thidiazuron 500 and other Thidiazuron products
- **DROPP\*ULTRAMAX**, eChem Thi-Ultra, and other Thidiazuron + Diuron products
- **ETee\*** Defoliant

## The Company

Victorian Chemical Company is committed to providing quality products and professional and friendly service, that our customers can confidently rely on to add value to their businesses. In order to achieve this goal we will continue to develop, our understanding of our customer's requirements, the operations of our company and our technical expertise.

## Suggestions for Use

**HASTEN** may be used in place of non-ionic surfactants or crop oil concentrates when permitted by defoliant labels. When using **DROPP® Ultra** in Australia, use **HASTEN** at 0.5 Litres per hectare. We recommend that a compatibility test be conducted before using **HASTEN** with other defoliants on a large scale.

When using with **Movento\* 240SC** or **Skope\* Insecticide**, apply **HASTEN** at 1.0L/ha. Typically, **HASTEN** is added to the spray tank at a concentration of 0.5-1.0% when spray volumes are between 50-100 Litres per hectare. In situations where the agricultural practice is to use a higher volume than 100 Litres per hectare, **HASTEN** is typically used at 0.5-1.0 Litres per hectare.

## General Information

The information contained in this bulletin is of a general nature. Further information is available regarding **HASTEN'S** use with Defoliants, Herbicides, Insecticides and Fungicides. Please visit our web site at [www.vicchem.com](http://www.vicchem.com) to also access Label and MSDS information.

## General Specifications

Appearance	Bright Clear Liquid
Specific Gravity (20°C)	0.9 g/ml
Colour	10 Gardner Max

\*Third Party Trademark

†Trademark Used Under Licence

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