

BALE BOOST⁺

RANGE

**BUILDS
BETTER
BALES**



VICCHEM

The Right Chemistry

BALE BOOST[†] RANGE

BUILDS. BETTER. BALES.

Quality hay production in Australia is an important market supplying an essential component for livestock production and the ever expanding export hay market. Producing high-quality hay whether for domestic livestock consumption or export requires the right climatic condition both in growing the crop and at baling time when rainfall, heat and humidity can all seriously affect the final product.

From the development of Hasten and other leading adjuvant products, Vicchem has developed a range of products to assist hay production more effectively.

Bale Boost consists of a unique Hayspray 300 applicator with a range of Hay adjuvants to manage moisture and retain leaf quality in hay production.

The products being Dry Down, Bale Shield and Leaf Retain, each bring new and beneficial aspects to hay production. These products have been developed through Vicchem's R&D team from established technologies in Vicchem's proprietary portfolio.

The Bale Boost product guide outlines the features and benefits for each product in the Bale Boost range, to "build better bales"



Peter Jones, Technical Manager Vicchem



BALE SHIELD[†]

Bale Shield is a propionic acid-based preservative that can be applied at point of baling (via baler applicators) OR directly into the windrow helping to minimise the infield mould population of freshly cut hay and any build up that may occur with poor climatic conditions. Mould which can seriously affect hay quality and even lead to spontaneous combustion



LEAF RETAIN 990[†]

While Leaf Retain is used to temporarily increase the moisture content in cut hay so that the baling process time can be extended when it's normally too hot, increasing production efficiency and further reducing the production risk.

To achieve the full benefits of Leaf Retain, the product needs to be applied directly to the hay windrow via the Hayspray Applicator



DRY DOWN 550[†]

Dry Down is based on Vicchem's long history of drying technology (some 80 years) and has been formulated to be applied to a windrow of freshly cut green hay (via the Hay spray Applicator) speeding up the drying out time so that hay can be baled sooner, limiting the time that cut hay is at risk of rainfall and subsequent weather damage before baling

INTRODUCING HAYSPRAY 300 BALE BOOST⁺ APPLICATOR

Vicchem in conjunction with innovative spray manufacturer Interlink have adapted technology from horticultural applications and developed the HAYSPRAY 300 spray unit for Fodder Conservation.

The combination of hydraulically driven airblast directed via multi positional split vane hands and multiple nozzles per hand have proven to be successful in achieving penetration and coverage into and onto Hay windrows.

Vicchem has successfully trialled this Hayspray 300 spray technology over the past two seasons with in-house trials along with a specialist Lucerne and Oaten hay grower. The current version has 2 models the Hayspray 300 Bolt On version designed to attach to existing broadacre sprayers and the Hayspray 5000/300 3 Row unit which is a standalone tractor drawn unit capable of spraying 3 windrows in a single pass. **For more information see page 7**



Vicchem Hayspray 300 prototype unit in action



Vicchem Hayspray 300 prototype unit in action



BALE SHIELD⁺ BALE BOOST

PRODUCT DESCRIPTION

Bale Shield Hay Preservative is a propionate based, pH neutral, non corrosive, hay preservative formulation designed for use at point of baling with after market preservative applicators OR applied in windrow immediately post cutting via the Hayspray Applicator (see Product information) to minimise the impact of mould growths



PRODUCT OVERVIEW

Bale Shield Hay Preservative is a buffered non-corrosive hay preservative formulation (pH neutral) designed to enable baling of hay crops at higher moisture levels

- Moulds greatly impact the value of any hay once allowed to occur
- The heat created by moulds can create spontaneous combustion in stored or stacked hay
- Mouldy dusty hay when fed to livestock can be detrimental to animal health and can cause respiratory issues
- The main ingredients in Bale Shield are also produced in the rumens of ruminating animals (cattle and sheep) and the caecum of equines
- The key ingredients of Bale shield are also used as preservatives in some human consumption foods to assist in mould prevention and to increase shelf life. Weather damaged hay may also have increased risks whilst in hay stacks or stored in hay sheds



Jeff Dalton - Lucerne & Oaten Hay Farmer Swan Hill VIC

I have been using Bale Shield for the past 12 months as and when required by the moisture level of my hay at baling. I apply Bale Shield to minimise any chance of mould as I value add a lot of my hay. I have found the product to be very easy to use.

The impact on any livestock from mouldy and or dusty hay can be quite detrimental hence I don't take any chances.

KEY BENEFITS

Bale Shield Hay Preservative at point of Baling

- Enables baling at higher moisture levels whilst minimising heating or mould impacts when used as recommended
- Baling at higher moisture levels may result in higher feed value hay
- Easy to use and apply and doesn't block application equipment

IN WINDROW APPLICATION

- BALE SHIELD CAN BE APPLIED TO THE WINDROW IMMEDIATELY POST CUTTING via the Hayspray Applicator
- Recent trials prove that an application of Bale Shield into the windrow immediately post cutting (applied via the Hayspray Applicator unit) may bring about immediate reduction of in field mould populations and provide extended mould control during the curing process thereby minimising mould population growth and enhancing the hay quality in doing so

USAGE RATES

Typical use recommendations NOTING different rates for various baler types

- **BIG SQUARE BALERS**
 - for Dew Moisture between 12-16% apply 1.5L/MT, 16-22% apply 2 L/MT, over 22% Do Not Bale.
 - For Stem Moisture between 12-16% apply 3 L/MT, 16-22% apply 3.5 L/MT, over 22% DNB
- **ROUND & SMALL SQUARE BALERS**
 - For Dew Moisture between 12-16% apply 1.25 L/MT, 16-22% apply 1.75 L/MT, 22-26% apply 3 L/MT, over 26% DNB
 - For Stem Moisture between 12-16% apply 1.75 L/MT, 16-22% apply 3 L/MT, 22-26% apply 4.25 L/MT, over 26% DNB
- Ensure that the Preservative application equipment on the baler being used is capable of adjusting the rates of preservative applied as and when the moisture level of the crop varies ie. variable rate control. Correct rate application rates and coverage are essential to achieving the desired outcome

SUGGESTIONS FOR USE VIA HAYSPRAY APPLICATOR

Typical use recommendations

- APPLICATION RATES WHEN APPLYING VIA THE HAYSPRAY APPLICATOR are: apply 1L/T of estimated dried hay/Ha with 100L/T for the 1st T/Ha and a minimum of 60L/T thereafter.
- Operate the airblast of the Hayspray Applicator unit at levels to ensure that good product coverage is achieved up to the point where windrows are disturbed during the application process

LEAF RETAIN 990⁺ BALE BOOST

PRODUCT DESCRIPTION

Leaf Retain is a specialty product containing wetting agents and humectants designed to attach to surface moisture. Leaf Retain should be applied just prior to baling of legume hay to minimise leaf shatter and extend baling time especially in adverse weather conditions. Application of the product should ONLY be undertaken using the Hayspray Applicator. (see Product information on Hayspray Applicator)



PRODUCT OVERVIEW

Even perfect baling conditions can cause a 4% reduction of yield and protein via leaf loss at point of baling in legume hay

- Protein levels of legume hay can be adversely impacted as the leaf represents 75% of the protein
- Leaf shatter occurs during all parts of the baling process but can be excessive if hay is over cured or conditions are too hot for fine leaves to remain intact with the stalks
- Leaf Retain when applied in certain conditions (35-60% RH) will temporarily raise the moisture levels of windrowed legume hay by 1-2%
- Raising moisture levels in other hay crops has not been extensively trialled hence product rates and water rates may require adjustment.



Jeff Dalton - Lucerne & Oaten Hay Farmer Swan Hill VIC

I have been using Leaf Retain for the past 12 months as and when required. There are several circumstances where an application of Leaf Retain has literally saved paddocks of Lucerne hay and similarly for a paddock of Oaten hay recently. Retaining leaf in any legume hay is paramount to a quality product. The Hayspray Applicator achieves great coverage for this operation.

KEY BENEFITS

- Provides extended baling hours by raising humidity levels in windrow
- Increases leaf retention in legume hay when conditions are adverse to, or would normally prevent baling
- May provide for successful baling of windrowed crop residues when conditions would normally prevent baling
- Successful baling of over cured windrowed pasture and cereal hay
- May assist in the pod shatter of windrowed small grain crops (ie. Canola) when applied immediately prior to harvesting

USAGE RATES

Typical use recommendations

- Application rates of 1 L/T of dried hay/ha should be used
- In 100L/Ha of clean water for the 1st T/ha and a minimum of 50 L/ha for every T/ha thereafter - (eg. for a crop expected to yield 3T/ha you would apply a minimum of 200 L/ha)
- Leaf Retain requires a minimum time applied of 10 minutes to achieve penetration and soften the leaf, at RH levels of 60% you may be able to successfully apply as far as 2 hours ahead of baling

SUGGESTIONS FOR USE

Typical use recommendations

- Leaf Retain should only be applied to the windrow via the Hayspray Applicator (see Product Information for the Hayspray Applicator)
- All product testing and trials have been carried out with this form of application method
- Operate the airblast of the Hayspray 300 unit at levels to ensure that good product coverage is achieved up to the point where windrows are disturbed during the application process
- Leaf Retain can be applied during hours of darkness however the action of the product requires sunlight
- Leaf Retain is compatible with Bale Shield preservative and could be applied in the same pass

DRY DOWN 550⁺ BALE BOOST

PRODUCT DESCRIPTION

Dry Down is designed for faster hay curing. It is a specially formulated additive that should **ONLY** be applied to hay windrows using the Hayspray 300 Applicator Unit. It can enhance the speed of the daily drying rate and allow earlier baling. Dry Down promotes quicker drying/curing by modifying the leaf and stem surface waxes which in turn allows moisture to permeate more effectively and rapidly from the hay

PRODUCT OVERVIEW

Changing weather can negatively impact hay production

- Dry Down has been introduced to assist in reducing the time between cutting and baling, potentially offering significant benefits for Australian Hay producers
- Weather damaged to hay brings about reductions in hay protein, feed value and financial return
- Weather damage also brings about subsequent increases in harmful microbial action resulting in mouldy hay of poor value and with subsequent feeding risks to livestock
- Weather damaged hay may also have increased risks of combustion whilst in hay stacks or stored in hay sheds



KEY BENEFITS

- Help reduce curing/drying times of cereal and legume hay crops
- Can decrease curing time reducing weather damage potential
- May lower harmful microbial build up and subsequent hay damage
- Faster drying results in retaining greater leaf matter and subsequently increased feed values
- Offer faster curing of windrowed oil grain crops such as Canola
- Dry Down may reduce or negate the requirement for alternative mechanical treatments designed to decrease curing time

USAGE RATES

Typical use recommendations

- Apply 1-2L/T of Dry Down per tonne of hay yield, directly into the windrow via the Hayspray 300 Applicator immediately post cutting or within 24 hours of cutting. Use higher rates the more cellular and mature the hay crop
- Water rates per tonne of hay should be a minimum of 100L/T for the 1st Tonne of yield and 65 litres per tonne of yield thereafter ie. for a crop expected to yield 2.5T/Ha you would apply 200L/Ha
- Higher water rates should be considered in excessively hot conditions
- Avoid the use of hard water and water with high colloidal clay or algae content

SUGGESTIONS FOR USE

Typical use recommendations

- DRY DOWN SHOULD ONLY BE APPLIED DIRECTLY INTO THE CUT HAY WINDROW VIA THE Hayspray 300 Applicator, cold frosty conditions should be avoided
- Dry Down should not be mixed with or applied with any "actives" (ie Glyphosate)
- Operate the airblast of the Hayspray 300 Applicator at levels to ensure that good product coverage is achieved up to the point where windrows are disturbed during the application process
- Dry Down is compatible with Bale Shield when in water solution
- If a rain event of greater than 12-15mm occurs a re-application is required. Consideration should be given to the addition of Bale Shield in these instances, for mould control

HAYSPRAY™ APPLICATORS

HAYSPRAY 5000/300 3 ROW UNIT

PRODUCT DESCRIPTION

The Hayspray 5000/300 3 Row unit is a stand alone tractor drawn Haysprayer for the even incorporation of the range of Vicchem Bale Boost hay products into multiple windrows in a single pass

PRODUCT OVERVIEW

Hayspray 3 row units have been introduced to achieve coverage and penetration into and onto multiple hay windrows in a manner not utilised in Australia previously, providing significant benefits for Australian hay producers

Providing previously unattainable penetration and coverage of products into a Hay windrow

Hayspray 5000/300 3 Row Standard Specifications

- 5000 litre Poly tank on tall wheels for windrow clearance
- 3 row design adjustable from 3-5mtr row centres
- Dual Hydraulic drive fans per row
- Self contained Hydraulic oil supply and pump (pto drive)
- High capacity product pump (hyd drive from tractor)
- Height control sensors on each wing
- Hydraulic wing fold for transport
- In cab rate controller
- 12 adjustable hands with 72 nozzles per row



MACHINE QUOTES

Complete the Hayspray 5000/300 unit questionnaire at your local Ag Chem outlet or download it from the Bale Boost Hay Products section on the Vicchem website www.vicchem.com

- Completing the questionnaire and forwarding to Vicchem baleboostcentral@vicchem.com will provide enough essential information for our Bale Boost Sales team to in turn provide

HAYSPRAY 300 BOLT ON UNIT

PRODUCT DESCRIPTION

The Hayspray 300 BOLT ON unit has been specifically designed to be attached to existing boom sprayers and provide the even incorporation of the range of Vicchem Bale Boost hay products into a single hay windrow

PRODUCT OVERVIEW

Hayspray bolt on units have been introduced to achieve coverage and penetration into and onto a single hay windrow in a manner not utilised in Australia previously, providing significant benefits for Australian hay producers at a low cost entry point

Providing previously unattainable penetration and coverage of products into a Hay windrow

Hayspray 300 BOLT ON UNIT - Standard Specifications

- Main frame with hydraulic height control (from tractor or sprayer)
- Single row unit with dual hydraulic fans (from tractor or sprayer minimum of 75L/min required)
- Attachment points for hydraulics to fan drive and return line. NOTE: the return line must return to tractor or sprayer supply unrestricted ie. to case drain or reservoir
- Attachment point for product supply line (from existing sprayer pump) and return line
- 12 adjustable hands with 72 nozzles per row
- Purchaser responsible to attach to existing spray unit



your nominated local reseller with a firm quote valid for 14 days. Vicchem support local resellers

- Vicchem has associations with most recognised Ag Chem outlets across Australia
- Machines are quoted ex the production factory located in Mildura Vic. Freight is your responsibility.

● VICCHEM WAREHOUSE LOCATION



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