



# **FUNGICIDE PERFORMANCE SUMMARY FOR SMALL GRAINS**

## **PRODUCT DESCRIPTION:**

RANCONA Apex is a seed applied fungicide that provides excellent protection against a broad spectrum of seed/seedling diseases on wheat, barley, rye, triticale and oats. RANCONA Apex is micro-dispersion formulation that makes it easy to apply and helps to ensure uniform coverage of seed which optimizes disease control.

RANCONA Apex contains the broad spectrum fungicide ipconazole which is an exceptional systemic as well as contact fungicide that provides a superior disease protection package for seed/seedlings. The strengths of this dual action protection include control of smuts and common bunt along with superior *Fusarium*, *Penicillium* Dry Rot and *Aspergillus* protection compared to Raxil<sup>®</sup> MD and Dividend<sup>®</sup> XL.

## **RATE:**

RANCONA Apex is applied at 325 mL per 100 kg for barley, oat, rye, triticale and wheat. This low rate of RANCONA Apex controls true loose smut of barley; a rate of 433 mL/100 kg of barley seed can be applied to highly infected seed lots.

## **RANCONA APEX BENEFITS:**

- The broad spectrum disease protection offered by RANCONA Apex can optimize emergence and stand which translates to higher average yields than the untreated and commercial standards.
- RANCONA Apex is a “Ready to Use” formulation that applies uniformly to both warm and cold seed. The low active loading and excellent seed adhesion means that it has very low dust off potential.
- Labeled diseases for RANCONA Apex are:

<b>DISEASE</b>	<b>CROP</b>
<b>General Seed Rots, Seedling Blight and Damping off<sup>1</sup></b>	<b>Barley, Oats, Rye, Triticale, Wheat</b>
<b>Suppression of common root rot</b>	<b>Barley, Oats, Rye, Triticale, Wheat</b>
<b>Loose Smut/True Loose Smut</b>	<b>Barley, Oats, Wheat</b>
<b>False Loose Smut</b>	<b>Barley</b>
<b>Covered Smut</b>	<b>Barley, Oats</b>
<b>Common Bunt</b>	<b>Wheat</b>
<b>Leaf Stripe</b>	<b>Barley</b>

1-Includes *Aspergillus*, *Cochliobolus sativus*, *Fusarium* and *Penicillium*.



**Trace Brand Seed Protection Products**  
**Always read and follow all label precautions and directions.**  
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Dividend and RTA are registered trademarks of Syngenta  
Raxil is a registered trade mark of Bayer Crop Science.  
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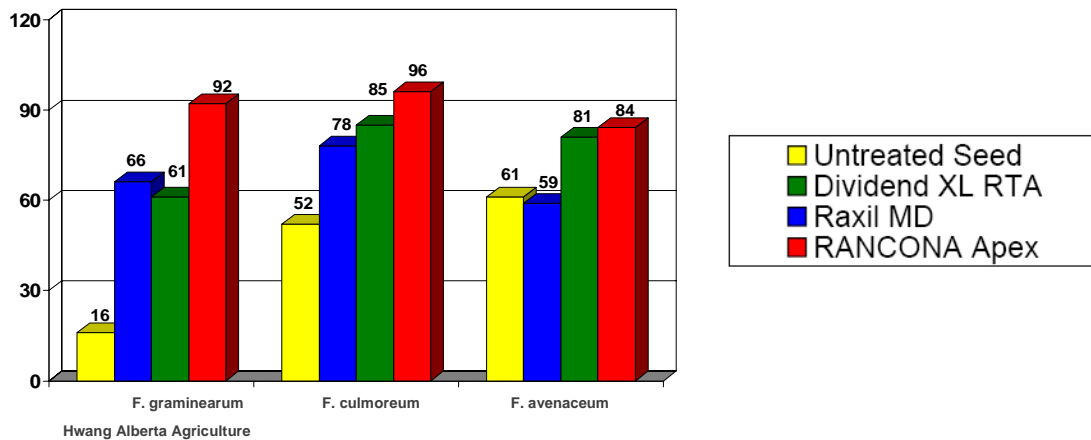


# Performance Summary: Wheat and Barley

## FIELD PERFORMANCE\*:

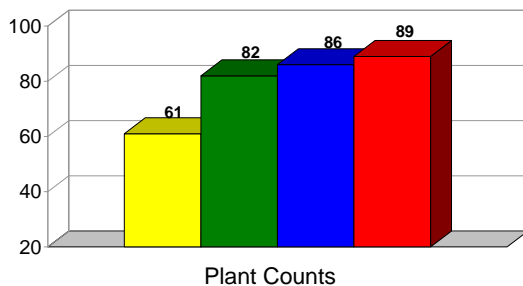
**Superior Soil Borne *Fusarium* Control:** *Fusarium* causes root rot and crown rot of all small grains. There are several different species of *Fusarium* that attack small grains with *F. culmoreum*, *F. graminearum* and *F. avenaceum* being the most common types. All three types of *Fusarium* can be soil borne and the systemic, longer lasting activity of ipconazole (the active ingredient in RANCONA) provides excellent early season protection from *Fusarium* species. The following are the results from an inoculated greenhouse study conducted to evaluate soil borne protection provided by RANCONA Apex against Dividend<sup>®</sup> XL RTA<sup>™</sup> and Raxil MD to different *Fusarium* types.

Percent Emergence of Wheat with Different *Fusarium* Inoculated into Soil

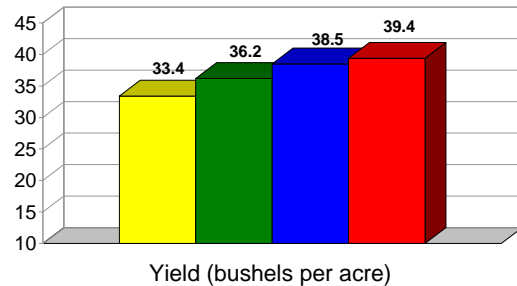


A field study examining the impact of soil borne *Fusarium graminearum* propagules impact on plant stand was conducted by North Dakota State University in 2007. To duplicate the impact of *Fusarium* infected seed blown out of the back of a combine infecting the subsequent planted crop, non viable *Fusarium* infected seed was planted along with regular seed. Stand was reduced greatly in the untreated seed in this trial. RANCONA Apex significantly increased stand and yield over the untreated seed.

Plant Counts Wheat (Fusarium Infected Seed)  
Mott ND



Yield of Wheat (Fusarium Infected Seed)  
Mott ND



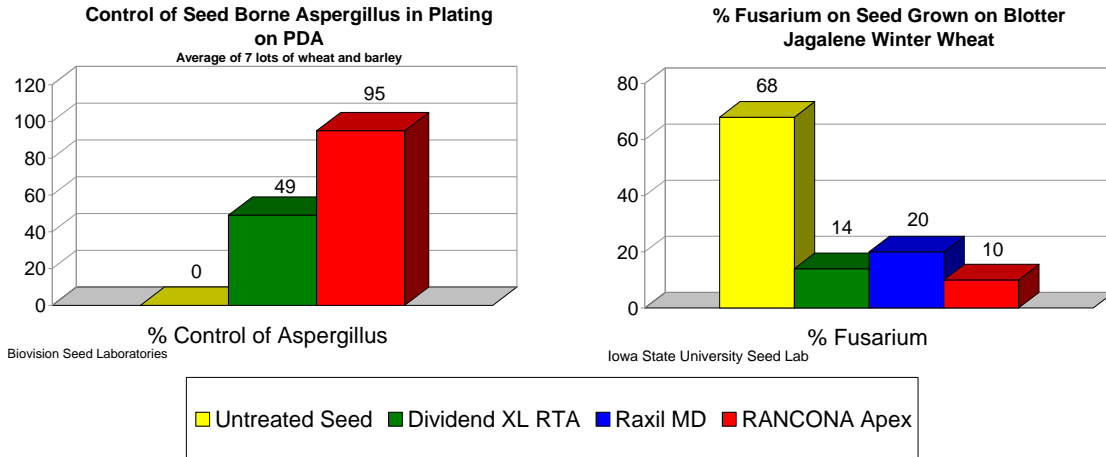
Legend: Untreated Seed (Yellow), Dividend XL RTA (Green), Raxil MD (Blue), RANCONA Apex (Red)

\* all products applied at label rate

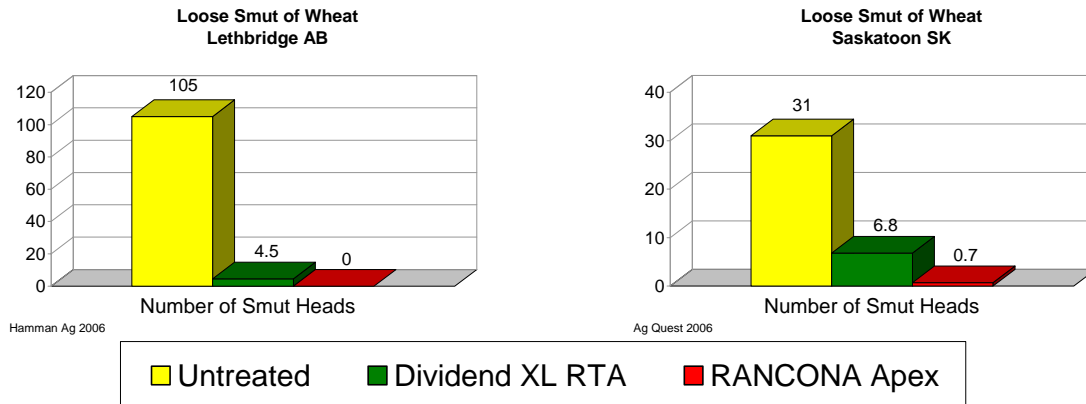


# Performance Summary: Wheat and Barley

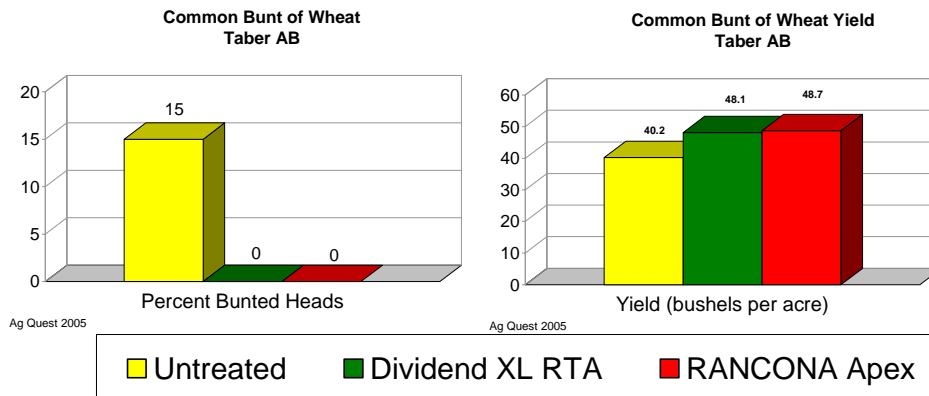
**Superior Control of Seed Borne Fungi:** RANCONA Apex provides a high level of control of seed borne diseases that potentially causes seed rot, damping off and seedling blight. RANCONA Apex provides protection from seed borne *Fusarium*, *Cochliobolus sativus*, *Penicillium*, and *Aspergillus*. Example results are shown below.



## Excellent Loose Smut Control of Wheat



## Excellent Common Bunt Control of Wheat

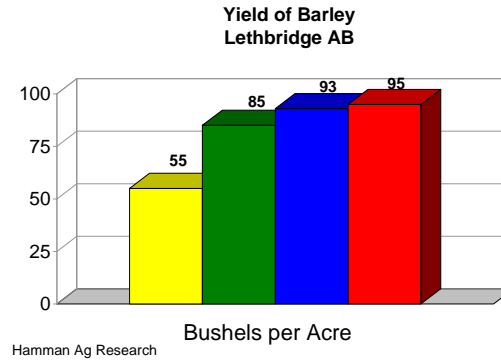
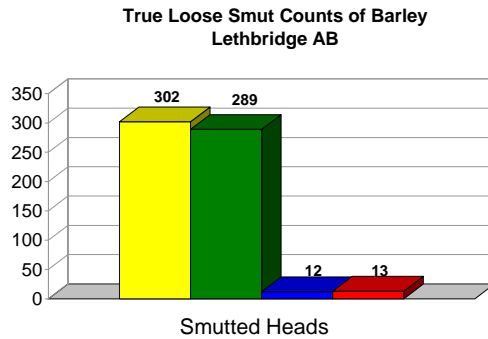


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# Performance Summary: Wheat and Barley

## Excellent True Loose Smut Control of Barley



■ Untreated Seed 
 ■ Dividend XL RTA 
 ■ Raxil MD 
 ■ RANCONA Apex

**Higher Average Yields:** All trials were conducted by independent researchers. Most trials had a high disease pressure resulting in the untreated seed to average much lower yield compared to all seed treatments. RANCONA Apex averaged higher yield than the untreated as well as having higher average yield for the two commercial seed treatments applied to both barley and wheat in trials conducted on the Great Northern Plains.

Treatment	Barley <sup>1</sup> Average Yield Bushels/acre	Wheat <sup>2</sup> Average Yield Bushels/acre	Bushel Increase Over Untreated Barley	Bushel Increase Over Untreated Wheat
Untreated Seed	72.4	53.5	0	0
Dividend plus Apron XL	84.0	56.5	11.6	3.0
Raxil	89.0	56.6	16.6	3.1
<b>RANCONA Apex</b>	<b>89.8</b>	<b>57.3</b>	<b>17.4</b>	<b>3.8</b>

1- Tests conducted in Alberta (N=4), Montana (N=1), Manitoba (N=2) and North Dakota (N=2). Average of 9 trials. Raxil T was formulation of Raxil used in trials.

2- Tests conducted in Alberta (N=5), Montana (N=5), Manitoba (N=2) and North Dakota (N=3). Average of 15 trials. Raxil MD was formulation of Raxil used in trials.



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