

**YELLOW JACKET®**  
ENHANCED SEED COATING

**Reasons for using Yellow Jacket - Rhizobium coating:**

- A ready product – saves labour, reduces risks.
- Unique Rhizobium strain.
- Improved establishment under difficult conditions.
- Better use of available water and soil moisture.
- Increased disease resistance.
- Improved nitrogen fixation.
- Increased forage and protein yield.

 **BARENBRUG**

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 ROYAL BARENBRUG GROUP

**YELLOW JACKET®**  
ENHANCED SEED COATING

**Rhizobium  
coated seeds**  
**For guaranteed top yields of lucerne**



# Guaranteed top yields for lucerne with

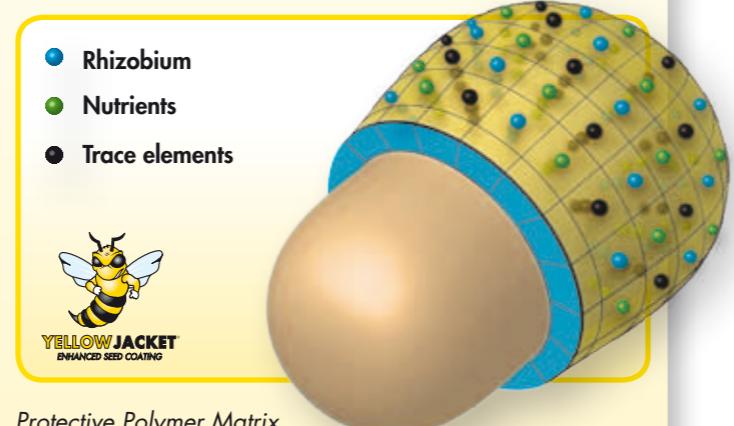


## YELLOW JACKET® ENHANCED SEED COATING

Yellow Jacket - Rhizobium coating is Barenbrug's enhanced seed coating for lucerne. Using new technology, high levels of effective Rhizobia are embedded in a protective polymer matrix. Together with a nutrient booster containing all essential minerals and trace elements, this product is designed to improve establishment and increase forage production.

### Protective Polymer Matrix

Barenbrug developed a new technology for the Rhizobium coating. This unique formula and procedure serve to incorporate the Rhizobium bacteria into a protective polymer matrix. A special mix with nutrients, preservatives and trace elements is also introduced into the matrix. In addition, optimal control during production, storage and transport ensure the high quality of the end product. This technology guarantees a high number of Rhizobium bacteria, together with perfect protection from stress factors, resulting in many powerful Rhizobia in the soil.



Protective Polymer Matrix

#### Unique Rhizobium strain

A new, unique Rhizobium strain was developed by Barenbrug for this product through the extensive selection of many strains under a wide range of conditions. The new strain has demonstrated perfect survival capabilities under tough conditions. This ultimately leads to more powerful Rhizobia in the soil. Extensive research and field trials at Barenbrug Research have shown that lucerne seeds with Yellow Jacket - Rhizobium coating benefit forage production, especially under tough conditions.

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All of our lucerne varieties are available with Yellow Jacket seed coating.

### Frequently Asked Questions

Why are Yellow Jacket - Rhizobium coated seeds better than just any farm-inoculated/pre-inoculated seeds? The Rhizobia in Yellow Jacket seeds are embedded in a polymer matrix around the seed. Extra preservatives and nutrients have been added to this matrix to increase shelf life and prevent the Rhizobia from stress. For that reason the number of Rhizobia on Yellow Jacket seeds is much higher than on seeds that have simply been farm-inoculated/pre-inoculated.

#### Why is a high number of Rhizobia per seed so important?

There is a strong relationship between the number of Rhizobia on the seeds before sowing and nodulation + nitrogen fixing in the alfalfa plants. A high number of Rhizobia will lead to more active nodules and more nitrogen fixing.

#### What is the optimal sowing rate for Yellow Jacket - Rhizobium coated seeds?

Barenbrug recommends using a sowing rate of a 25 - 30 kg/ha. This is the same as the sowing rate recommended for bare seeds.

#### Why do Yellow Jacket seeds establish better?

After sowing, the coated seeds are heavier and have better soil contact. The seedcoat attracts and holds moisture, so the seed germinates and establishes better than bare seeds. Yellow Jacket contains a nutrient booster, which stimulates the seedling and the activity of the Rhizobia. Finally, lime ( $\text{CaCO}_3$ ) from the coat lowers the pH around the roots, which results in better plant establishment and production.

#### Why is it always wise to use Rhizobia?

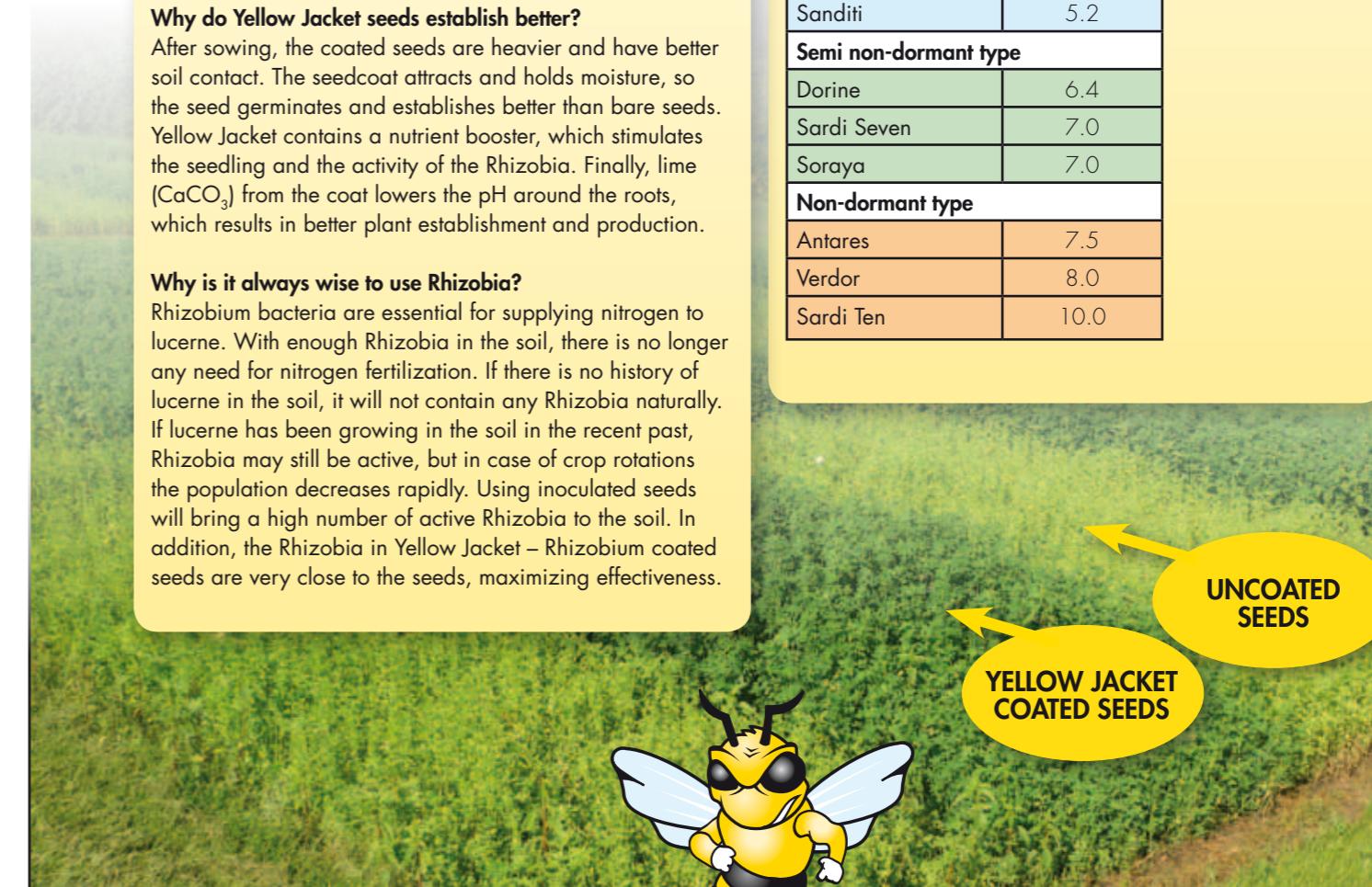
Rhizobium bacteria are essential for supplying nitrogen to lucerne. With enough Rhizobia in the soil, there is no longer any need for nitrogen fertilization. If there is no history of lucerne in the soil, it will not contain any Rhizobia naturally. If lucerne has been growing in the soil in the recent past, Rhizobia may still be active, but in case of crop rotations the population decreases rapidly. Using inoculated seeds will bring a high number of active Rhizobia to the soil. In addition, the Rhizobia in Yellow Jacket - Rhizobium coated seeds are very close to the seeds, maximizing effectiveness.

### Barenbrug lucerne varieties

Barenbrug has a widely extended lucerne breeding program. Our program is running in Northern-France (Flemish types), Southern France (Mediterranean types), Romania (continental types) and Australia (non-dormant types). The main goal of Barenbrug lucerne breeding is to obtain the maximum farm benefits from lucerne. Key characteristics of our varieties are digestibility, protein content, disease and nematode resistance, dry matter yield and persistency.

#### Overview of varieties

Variety	Dormancy class
<b>Flemish type</b>	
Artemis	4.5
Derby	4.5
Alpha	4.9
Alexis	5.0
Everest	5.0
Bardine	5.0
Sanditi	5.2
<b>Semi non-dormant type</b>	
Dorine	6.4
Sardi Seven	7.0
Soraya	7.0
<b>Non-dormant type</b>	
Antares	7.5
Verdor	8.0
Sardi Ten	10.0



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