



Pulse Agronomy Network~ Partnership in Industry

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1. Pulse Inoculants and Coatings

(Kevin Zaychuk- 20/20 Seed Labs)

For pulse crops the choices are increasing with new seed treatments and pre-inoculated seed products. **Use the right inoculant for your crop.** Not all inoculants are created equal. Ensure you have the *Rhizobium sp.* specific to your crop. Alfalfa strains will not nodulate peas and vice-versa.

Make sure it is alive and keep it alive. Inoculants contain live nitrogen-fixing bacteria, but vary widely in how long they remain viable once applied to the seed. Generally viability increases as one goes from a liquid to a peat-based inoculant to a pre-inoculated or granular product. You will not be able to determine *Rhizobia* viability through a visual inspection of an inoculant or inoculated seed. Use an accredited lab to determine inoculant viability. Always check the label for special handling instructions and expiry date.

The highest inoculant losses are not due to death of the cells but dusting-off during handling. **Keep the inoculant on the seed.** Ensure the inoculant sticks to the seed and remains there throughout the handling and seeding process. A pre-inoculated product is designed with this in mind. They use a polymer to help bind the inoculant to the seed and maintain or protect the viability of the *Rhizobia* bacteria as well. Handling the inoculated seed is more critical than the inoculant itself. Keep it cool, out of the sun and wind and plant it as soon as possible.

Seed treatments are very important in protecting the seed and seedling during the critical stages of early development; seed treatments can negatively affect inoculant performance. Some seed treatments are more *Rhizobium* friendly than others and formulation changes can affect inoculants differently. Ask the crop protection companies or inoculant companies for details on compatibility on an annual basis.

Check for nodulation early, several weeks after crop emergence. Nodule sites will vary between seed and in-furrow (granular) inoculation.

Seed-applied - nodules near the crown region, early N-supply to the developing plant, may slough-off during drought or stress situation.

In-furrow - nodules on lateral roots, develop later than crown nodules (roots must find granules).

No matter what system you use it is well documented that higher numbers of viable *Rhizobia* going into the ground equals better nodulation and N-Fixation. This also helps the selected commercial strains of *Rhizobia* out-compete the less effective indigenous strains found in the soil.

Announcements

1. **Northlands Farm and Ranch** March 24-27 at Northlands Park in Edmonton
2. **Peace Agronomy Update**, Wed. March 24, 2004 - Dunvegan Motor Inn, Fairview
To Register: Ag InfoCentre 1-866- 882-7677
Information: Paul Laflamme 780-538-5631 or Mike Hall 780-927-3713