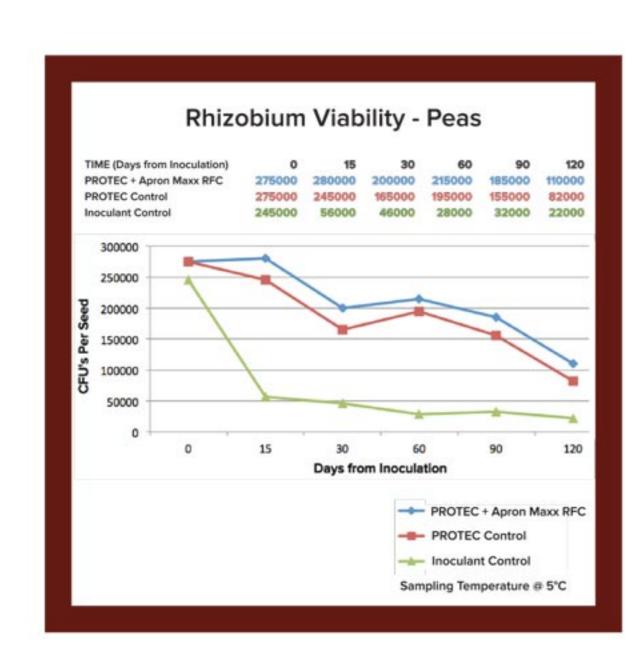


PROTEC is a multi-functioning liquid coating that provides a sugar based pre-inoculant as a growth promoter within the soil. It extends the shelf life of peat inoculants from the traditional 24 hours to 30 days. PROTEC helps to build the nodulation process, to ultimately maximize nodulation and nitrogen accumulation. PROTEC provides every grower with maximum confidence knowing they have a proper food source to give their inoculant the best opportunity possible.



# SHELF LIFE EXTENSION

PROTEC's key benefit is the extended shelf life (up to 30 days) for the rhizobia. The graph above shows the rhizobium viability by measuring the CFU's (Colony Forming Units) on the seed, unlike a direct microscope where you count all cells, dead and living. A CFU count is a estimate of viable living bacteria.



### **APPLICATION**

The PROTEC application process, which can incorporate all your seed treatments, will bring you savings in time and labour, giving you greater flexibility with your busy seed schedule. To ensure optimum yield, the seed treatment application begins with coating each bare seed with PROTEC which seals in the inoculant. This coating helps prevent seed cracking/damage, and also allows for greater flowability so that there is no plugging in your seeder.



## TWO LEAF STAGE

Pulses need a large amount of nitrogen to see optimal results. More nitrogen equals an increase in production, improved field health, more protein within the plant, and ultimately results in a higher quality crop and yield. The most crucial time for plant growth is in the early stages of development. When the inoculant is treated directly on the seed with PROTEC, it is able to use the nutrition immediatley, which leads to efficient nodulation.

"To combat increasing fertilizer costs, the natural choice is to grow pulse crops. The most important factor in growing pulses, is to have proper nodulation. The PROTEC inoculation system guarantees maximum fixation of nitrogen. PROTEC can give your plants the ability to tolerate the stresses of the growing season. This results in a stronger, healthier, and more productive crop; something your existing inoculation system can not consistently provide. YOU NEED THE BEST! PROTEC offers the best coverage, industry leading rhizobia numbers and viability, and the greatest convenience in handling, plus a 30 day shelf life. PROTEC guarantees that your plant will be making nitrogen earlier, longer, and more efficiently."



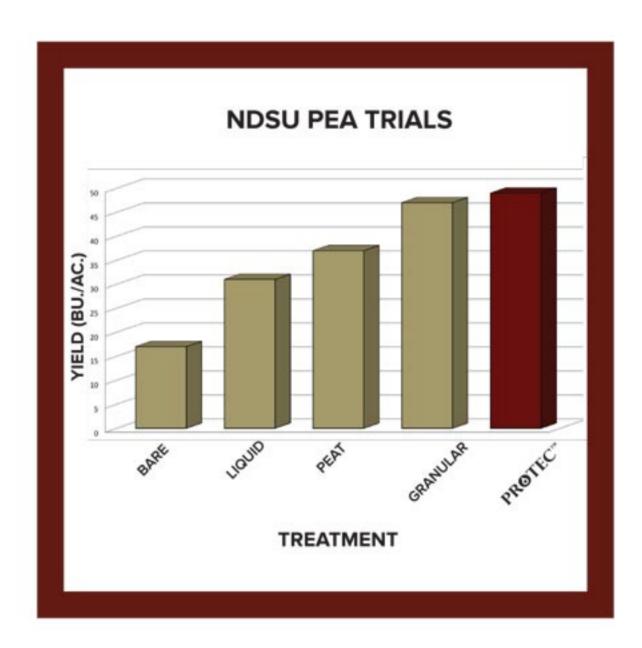
#### **NODULATION**

By extending the shelf life to 30 days the rhizobia typically contributes to the increased yeild and more nitrogen in the field for your next crop. By retaining a higher rhizobia count per seed we see faster nodulation, a greater number of nodules, less nitrogen taken from the soil, and more nitrogen put into the growing plant.



# **PLANT GROWTH**

As shown above, you can see the plants on the left (applied with PROTEC 15 days before seeding) demonstrates proper inoculation, exhibiting a much greener, fuller plant resulting in increased yield and profitability.



### **RESULTS**

From a trial study done by the NDSU (North Dakota State University), evidence shows that growers who use PROTEC receive optimum results and above average yield. PROTEC integrity is backed by scientific third party evidence.

