

Inoculating Bean Seeds

What is it, and why do it?

Plants in the legume family (peas, beans, clovers, vetch, etc) are able to absorb nitrogen from the air and convert it into a form the plants can use. They do so via a symbiotic relationship with certain soil bacteria, usually various types of Rhizobacteria. The bacteria invade the plant roots and live off the plant's carbohydrates, while at the same time converting nitrogen the plant obtains from the air into a form the plant can use. These bacteria occur naturally in the soil, but often not in optimum quantities. Adding these bacteria to the soil or seed via inoculation will generally increase yield. In addition, if, at the end of the season, the plants are tilled into the soil, that nitrogen will be available to the next crop planted.

How and with what?

Each type of legume requires a certain type of bacteria, so it is important to choose the product that contains the right bacteria for the crop you want to grow. Several companies catering to home gardeners have a product that has a combination of several types of Rhizobacteria mixed with powdered peat moss for the most common home garden crops. For example, one from Johnny's seeds has the correct bacteria for green beans, dry beans, and lima beans, as well as peas. The most common recommendation on how to use it is to dampen the seeds, then sprinkle them with, or roll them around in, the inoculant powder immediately before planting. The inoculant is a living product and must be stored carefully. It has a limited shelf life of about one year. Unused portions should be refrigerated. You can't overdo it, higher amounts of inoculants have produced better results.

Don't use a nitrogen fertilizer if you inoculate: the plants will use it before they make any of their own. Using inoculants every 2 to 3 years is recommended, though many gardeners do so every year.

Idea: Share inoculants among neighbors

Johnny's seeds and others have combo inoculants food for several crops. A small package will treat up to 50 lbs of seed.

<http://extension.psu.edu/plants/crops/forages/successful-forage-establishment/inoculation-of-legumes-for-maximum-nitrogen-fixation>

<http://ohioline.osu.edu/factsheet/SAG-17>