

Guidelines for Mixing Inoculants and Cleaning Applicators

Mixing inoculants in water:

- Add the inoculant powder slowly to water with continuous agitation. Adding the powder slowly reduces the tendency to form lumps. Never add water to the inoculant powder. Avoid adding the inoculant powder to non-agitated water.
- Premix the inoculant powder with 1-3 gallons of water. Never mix directly in applicator tank.
- The inoculant powder will disperse more easily in warm pre-mix water if it is available. Never use water warmer than is comfortable to the hand.
- Allow at least 1 minute of continuous agitation, rapid stirring or shaking – shaking is preferred, for the powder to disperse.
- Chlorinated water can be used to mix inoculants if the level of chlorine is less than 100 ppm.

Storage of unmixed product:

Crop-N-Rich Buchneri, Crop-N-Rich Stage 2

- Store unopened packets in a cool dry place. Refrigeration at 4°C (40°F) recommended. Shelf life is 18 months when stored as recommended. Use whole packages at one time.

Crop-N-Rich MTD/1 Water Soluble

- Tightly close container after product is opened. Store in a cool and dry environment if the product will be used again within the next week. Opened product stored between crops may lose viability.

Crop-N-Rich MTD/1 Dry

- Dry: Roll down the bag tightly. Open product should not be stored between crops.

Storage of mixed product:

- Product that is mixed with water will be stable for 48 hours. Keep water as cold as possible. Adding ice will help maintain viability. Ice should be added as “bottled ice” so as to not dilute ULV applications.
- Make sure applicator is empty before adding additional inoculant mixture to prevent biofilm (slime) from forming. See cleaning section below.

Cleaning of applicators:

Given enough time, a biofilm (slime-causing organisms) will become established in any applicator. Solutions are sometimes held in applicators much longer than recommended, particularly when there is a weather delay or between cuttings. Spray lines and strainer canisters are frequent reservoirs for biofilm organisms. A new solution in an applicator with an established biofilm population will clog more quickly (sometimes in just a few hours) than in a new or properly sanitized applicator. Slime-forming biofilms can be held in check with proper applicator sanitation.

Guidelines for proper sanitation of applicators:

- Thoroughly rinse and flush applicators with clean water between batches of inoculant solution.
- Sanitize applicators between cuttings or when an applicator will be stored more than 48 hours. Fill the applicator with water and add household chlorine bleach at a rate of 1-2 tablespoons (1/2 to 1 ounce) per gallon to effectively sanitize applicators. To prevent a reaction of bleach with trace amounts of the applicator’s contents (ex. baled hay acid), it should be thoroughly rinsed of its previous contents.
- Bleach sanitizes best in equipment that is already relatively clean. To be effective, this solution must have at least 20 minutes of contact time. Stronger solutions, up to 2 ounces of bleach per gallon of water, or longer contact times will remove heavier accumulations such as algae or mold.
- Applicators should not be stored for long periods of time with bleach solutions in them since it may weaken some plastics or corrode metals. The sanitizing solution should be circulated through the applicator spray lines, screens and nozzles.
- Applicators should be double-rinsed after sanitizing to remove all traces of the sanitizing solution.
- Spray lines and nozzles should be flushed with clean water.
- Crop-N-Rich water-applied inoculants contain an insoluble stabilizer, sodium silico aluminate. This patented ingredient is critical to the shelf life of the dry powder product. Once in suspension, this stabilizer is rendered inert and no longer critical to the effectiveness of the inoculant. This material may precipitate out of solution as a thin white film after a few hours of storage in a non-agitated system. This material has never been observed to plug or damage an applicator even under severe abuse conditions. Proper applicator management will limit accumulation of this precipitate.

