

GENERAL CROP APPLICATION



TwinN consists of living microbes and it is vital that the application instructions are followed exactly to enable the microbes to establish themselves effectively. Once the microbes have been established in the crop they multiply and are generally very resilient to water stress.

1. APPLICATION

The application method must deliver the microbes into the moist root zone. These are some methods to apply TwinN:

- Under knife point using a tine and water injection system. This is used in cotton and various summer crops to deliver TwinN into the crop roots after crop establishment. Note that tines are available that can deliver several products at different depths in the soil and these are used to deliver TwinN and other products separately but in one pass over the crop. This method is very effective for dryland summer crops.
- For broad acre crops use very coarse streaming nozzles to deliver the TwinN solution to moist soil rather than a fine nozzle that creates a fine mist. Do not apply to dry soil.
- By air in rainy conditions or onto very moist soil. Application by air is also used onto rice after flooding.
- Drip and micro-sprinklers are a great way to deliver the microbes to tree and vine crops
- Via spray hose onto tree crops root zones when soils are moist in the orchard
- Trickle tapes for various crops
- Overhead irrigation/centre pivot systems for crops and pastures
- Via water run irrigation as is used to deliver urea in cotton and various broad acre crops
- Via flood water in rice

Select a method which will be convenient and will reliably deliver TwinN into the roots.

2. TANK MIXING TwinN AND OTHER PRODUCTS

Avoid tank mixing the microbes with toxic chemicals. Use non-chlorinated or de-chlorinated water (see Application Instructions) to apply TwinN and do not mix it with herbicides, insecticides, fungicides, fertiliser concentrates or other products unless they are listed as compatible with TwinN. If you want to co-apply TwinN with other nutrients contact your distributor or MAB to see if they are compatible with TwinN. If any mixing is planned apply both products into a full mixing tank to avoid exposure of microbes to concentrates. Other products can be applied 24 hours or more after TwinN is applied.

3. TIMING OF TwinN APPLICATIONS

Apply TwinN when the crop is actively growing. TwinN is typically applied early in the crop growth cycle so it has plenty of time to work. TwinN is also applied as a top up later in some crop systems, or if prices are good and a farmer is looking to maximise the yields.

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Bean	5-8 leaf stage
Blueberry	Apply at start of spring growth and again after harvest
Capsicum/chillies/eggplant	5-6 leaf and again at start of fruit development
Carrot	7 – 14 days post-emergence
Cotton	Start of squaring; or later in the crop cycle to boost yields if prices are good
Cucurbit	5-6 leaf stage
Cruciferea	5-6 leaf stage
Fruit and nut trees	At the start of active growth in spring; again after harvest (optional) to set up trees for the next season
Grapes	At the start of active growth in spring; For table grapes again at early bunch development (optional)
Ground nut (peanut)	5-6 leaf stage
Kiwi fruit	At the start of active growth in spring; again after harvest (optional) to set up vines for the next season
Lettuce	5-6 leaf stage
Maize (corn)	15 – 30 cm shoot height
Onion	5-6 leaf stage
Ornamentals	At the start of active growth and every 2 – 3 months after
Olive	At the start of active growth in spring; again after harvest (optional) to set up trees for the next season
Pastures	At the start of the growing season onto actively growing pasture (for low intensity pastures this is sufficient). Use a second application 4 months later or 2/3 of the way through the growing season. For very high intensity pastures consider 3 applications per year.
Potato	5-6 leaf stage; again at 4-6 weeks later (strongly recommended)
Pumpkin	5-6 leaf stage; 2 months later (optional)
Strawberry	5-6 leaf stage; 2 months later
Sugarcane	Plant cane - 15-50 cm high; Ratoon crop – at start of new growth
Sunflower	15-30 cm high
Tomato	5-6 leaf stage; 4-6 weeks later
Tobacco	5-6 leaf stage; 4-6 weeks later
Watermelon	5-6 leaf stage; 4-6 weeks later (optional)
Wheat, rice and other cereals	Early to mid-tillering stage; for heavy crops again at start of grain formation (optional)
FOR OTHER CROPS THAT ARE NOT LISTED HERE EITHER SELECT A CROP WITH SIMILAR GROWTH STAGES OR CONTACT MAPLETON AGRI BIOTEC AND WE WILL PROVIDE A RECOMMENDATION	

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How much nitrogen to cut with TwinN?



- For annual crops such as cereals, rice, canola (oil seed rape), maize (corn), sugar beet, cotton, sugarcane, vegetables etc, that use medium - high rates of N, cut N by 25 – 30% up to maximum cut of 30 U of N/ha.
- For tree crops that use moderate rates of N eg 100 – 140 kg N/ha cut N by 30 - 40% up to a maximum of 50 U/ha. Spread the cuts in N across the growing season.
- For tree crops at planting apply TwinN on top of any normal fertiliser applications in the first 1 – 2 years to drive very fast establishment and growth. Then revert to a 30 – 40% cut in N.
- For pastures cut N by up to 25%. Spread the cuts in N across the growing season. Do not vary the timing of N applications. For heavy N use pastures make smaller cuts initially and try larger cuts on a trial section.
- For bananas cut N by up to 25%. Make smaller cuts if the crop normally uses very high rates of N
- Organic producers should usually maintain all applications of composts, manures and other nutrient supplies at standard levels and use TwinN in addition.

Please contact Mapleton Agri Biotec with any enquiries – we are happy to provide advice to help growers get the best from TwinN.

