

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, via application to either foliage or roots. Here are three important principles to follow to get the best possible results from TwinN.

Avoid drying out of the microbes during application. If applying TwinN to the foliage by backpack, boom spray or aerial application apply it under conditions that will enable the foliage to remain moist for at least three hours after spraying. This includes late afternoon, early morning onto dew, in light rain or under humid conditions. If applying via the soil by irrigation, overhead spray or drip systems then ensure the microbes are able to enter a moist zone. Once established in the plant tissues or root zone the microbes are very tolerant of dry conditions.

Avoid 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 or other products unless they are listed as compatible with TwinN. If you want to co-apply TwinN with other nutrients contact your distributor to see if they are compatible with TwinN. For a summary of products that can or cannot be co-applied with TwinN see Compatibility Guidelines or ask your distributor.

Apply TwinN when you would usually apply nitrogen. A recommended starting point is to apply 50% of the normal rate of N fertiliser, plus TwinN, applied once or twice. Apply the N at the same stages of the crop cycle as usual. Many producers also test, in addition, a greater reduction down to 25% of normal N. Depending on soil fertility and crop needs most systems will produce long-term sustainable high yields at between 25 – 50% of normal N inputs. **Start at 50% and work downwards.** It is important to continue to apply other nutrients such as phosphorous, potassium and micronutrients. TwinN will improve the bioavailability of phosphorous and various micronutrients but you should still apply sufficient non-nitrogen nutrients that the crop can respond effectively to nitrogen from TwinN.

Crop	Application Timing
Apple	Just after flowering; Half way through fruit development; After harvest or prior to bud break to set up next crop
Bean	4-8 leaf stage; Early flowering
Berry	4-6 leaf stage ; 2 months later; 2 months later
Carrot	Post emergence; 6 weeks later
Cotton	4-6 leaf stage; before flowering, during boll formation
Cucurbit	4-6 leaf stage; 2 months later
Cruciferea	4-6 leaf stage; 2 month later
Cherry	Just after flowering; Half way through fruit development; After harvest or prior to bud break to set up next crop

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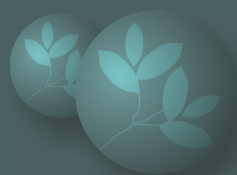


TWINN CROP APPLICATION TABLE cont'd

Grapes	Just after flowering; Half way through fruit development; After harvest or prior to bud break to set up next crop
Ground nut	4-6 leaf stage; During early flowering
Kiwi fruit	Just after flowering; Half way through fruit development; After harvest or prior to bud break to set up next crop
Lettuce	4-6 leaf stage; 6 weeks later
Maize	5 -15cm shoot height; Immediately before flowering
Nectarine	Just after flowering; Half way through fruit development; After harvest or prior to bud break to set up next crop
Onion	4-6 leaf stage; 6 weeks later
Ornamental	As often as needed
Olive	Just after flowering; Half way through fruit development; After harvest or prior to early new season growth to set up next crop
Peach	Just after flowering; Half way through fruit development; After harvest or prior to bud break to set up next crop
Pear	Just after flowering; Half way through fruit development; After harvest or prior to bud break to set up next crop
Pepper	4-6 leaf stage; 2 months later;
Potato	On emergence; At tuber initiation
Pumpkin	4-6 leaf stage; 2 months later
Seedling	Full emergence
Strawberry	4-6 leaf stage; 2 months later
Sugar cane	15-30cm high; Prior to crop becoming too tall to boom spray, At ratoon
Sunflower	15-20cm high; Before flowering
Tomato	4-6 leaf stage; 2 months later
Tobacco	4-6 leaf stage; 2 months later
Watermelon	4-6 leaf stage; 2 months later
Wheat	4-5 leaf stage; Late tillering or before flowering in irrigated areas or for heavy crops

Notes

1. Application timing is based on the recommended standard dose rate for TwinN as supplied in the product package.
2. Numbers of applications may be increased to suit specific cropping systems and soil/climatic conditions.
3. For fruit trees and other crops that have an establishment growth stage apply at planting and twice during each growing season until production commences.
4. TwinN can be applied in combination with reduced rates of nitrogen fertiliser. A common practice is to apply nitrogen at 25 - 50% of normal rates at planting then TwinN after emergence and again later in the crops development.
5. Normal applications of non-nitrogenous fertilizers should be continued.



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