BROADACRE

Recommendation for use of TwinN on broadacre crops.

TwinN is used on a number of broad acre crops in many countries. These crops include wheat, barley, oats, grain and grazing sorghum, sunflower, cotton, corn, soy bean and rice. TwinN application will enable substantial reduction of the rates of nitrogen fertiliser required to achieve the same yields and this means a substantial increase in profit margins per Ha. With rising cost of nitrogen fertiliser and increasing uncertainty of supply of fertilisers in many countries TwinN is a valuable tool to maintain productivity and profitability in high intensity broad acre production systems.

Cereals including wheat, barley, oats, rye

General Recommendations

Apply the normal rates of P, K and other nutrients. If these nutrients are limiting then the crop will be unable to respond to TwinN application. The amount of nitrogen fertiliser co-applied with TwinN will vary with the economics of the crop system. 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.** Different soils and crop systems will enable different reductions in chemical nitrogen application and producers will determine the optimum system for their situation.

Establishment

Apply up to 30U of nitrogen at planting and apply TwinN at the 4 or 5 leaf stage or up to early tillering. Producers can vary the initial application of nitrogen at planting, or omit it in fully organic systems. If no nitrogen is applied at planting ensure the first application of TwinN does not occur too late or the crop will not have sufficient nitrogen for strong early growth. For rice apply TwinN to the crop immediately after transplanting into the paddy.

Later growth/ flowering

If the cereal crop has high yield potential, such as in fertile, temperate conditions, or under irrigation, a second application of TwinN at late tillering to flag leaf stage will supply nitrogen for flowering and grain filling. For rice re-apply TwinN at floral initiation to set up the crop for grain filling.

Information for applying TwinN to cereals

Download the Application Instructions and follow them carefully.

> TwinN does not make P and K or other elements. These should be added according to your normal practice.
> Application methods should deliver the TwinN microbes onto foliage that is moist for a minimum of 3-4 hrs, or into moist soil, to enable them to establish and multiply. Once established they are resilient to normal crop conditions.
> Rehydrate TwinN strictly according to instructions.
> **Apply TwinN strictly according to the Application Guidelines in the package. Failure to apply the product correctly will produce poor results.**

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Avoid application under dry conditions

If using chlorinated water you must de-chlorinate it. See TwinN Crop Application Instructions. Do not mix TwinN with non-compatible chemicals. For a list of compatible and non-compatible chemicals visit Compatibility Table.

Foliar Application
Add the rehydrated TwinN to the mixing tank using at least 100 L water per ha. Apply by aerial, boom spray, or backpack. Use coarse nozzles. For row crops direct nozzles over the row (banding).

Irrigation
TwinN can be applied very easily and successfully through any irrigation system including centre pivot, drip, fertigation and any other. Application directly to the soil is fully effective.

Contact your TwinN Distributor for advice on how to maximize the convenience and efficacy of TwinN in your cropping system.

Corn, sorghum, sunflower, soy bean, canola

General Recommendations
Apply the normal rates of P, K and other nutrients. If these nutrients are limiting then the crop will be unable to respond to TwinN application. The amount of nitrogen fertiliser co-applied with TwinN will vary with the economics of the crop system. 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.** Different soils and crop systems will enable different reductions in chemical nitrogen application and producers will determine the optimum system for their situation.

Establishment
Apply up to 30U of nitrogen at planting and apply TwinN when the crop is at 15cm (6 inches). Producers can vary the initial application of nitrogen at planting, or omit it in fully organic systems. If no nitrogen is applied at planting ensure the first application of TwinN does not occur too late or the crop will not have sufficient nitrogen for strong early growth.

Later growth/ flowering
Apply TwinN again before flowering to supply nitrogen for flowering and grain filling. If using a boom spray apply before the crop gets too high, or apply through the irrigation system, or by air.

Information for applying TwinN
Download the TwinN Crop Application Instructions and follow them carefully.

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> Application methods should deliver the TwinN microbes onto foliage that is moist for a minimum of 3-4 hrs, or into moist soil, to enable them to establish and multiply. Once established they are resilient to normal crop conditions.
> Rehydrate TwinN strictly according to instructions.
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Avoid application under dry conditions.

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Foliar Application

Add the rehydrated TwinN to the mixing tank using at least 100 L water per ha. Apply by aerial, boom spray, or backpack. Use coarse nozzles. For row crops direct nozzles over the row (banding).

Irrigation

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Cotton

General Recommendations

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Establishment

Apply up to 30U of nitrogen at planting and apply TwinN when the crop is at 15cm (6 inches). Producers can vary the initial application of nitrogen at planting, or omit it in fully organic systems. If no nitrogen is applied at planting ensure the first application of TwinN does not occur too late or the crop will not have sufficient nitrogen for strong early growth.

Later growth/ flowering

Apply TwinN before flowering to maintain high yield potential and re-apply during boll formation.

Information for applying TwinN

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Irrigation
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