

Maxicrop®

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Maxicrop (UK) Ltd technical update Oilseed Rape: 2012 trials summary

Research by Maxicrop UK Ltd in 2012 has shown some significant yield benefits from using a two spray programme of Maxicrop Triple on oilseed rape

Trials

The company has already shown benefits from using Maxicrop as a spring application and earlier trials had shown yield benefits of over 0.25 tonnes/ha. In addition, growers and agronomists have used Maxicrop as an autumn application to aid rooting and establishment.

Rooting & Establishment

Field trials were commissioned in 2011 to explore the benefits of a programme of Maxicrop Triple. Whilst oilseed rape produces a long tap root, it can sometimes be slow to root after emergence. This can make establishment more haphazard and can lead to an uneven crop. In addition to this, variable establishment and ground cover can increase the potential for damage by pigeons, leading to uneven crop development and lower yields. An autumn application of Maxicrop Triple can help stimulate root growth and development, aiding the uptake of nutrients and helping the crop to establish.



By helping to reduce stress in the developing crop, Maxicrop Triple can help maximise flower initiation and subsequent yield.

Flower Initiation

Yield potential is set when flower initiation takes place, usually by late November. Any external stress factors can divert energy reserves away from this process, potentially lowering crop yield. By helping to reduce stress in the developing crop, Maxicrop Triple can help maximise flower initiation and subsequent yield.

Spring Application

The second part of the programme is based on an application of Maxicrop at the onset of stem extension. At this stage, there is a lot of metabolic activity within the plant (cell division, cell extension, nutrient uptake and mobilisation and grain site formation). Any external stress factors at this key stage in the plant's development can use up valuable energy and reserves, with the risk of reducing yield potential. Maxicrop Triple can help the plant to overcome any stress factors at this stage and can aid the uptake and mobilisation of nutrients to ensure good yields.

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2012 Research

2012 research has shown yield benefits from both an autumn application and, more significantly, a two spray programme. The variety Compass, was grown on a light land site in the Vale of York and was evaluated to assess yield responses from both programmes, compared to standard field treatment.

The yield table below shows the results from both programmes, including total yield as well as oil yield. Yield results showed increases of between 0.3 and 0.8 tonnes/ha for the two programmes (8-27% increase). With oilseed rape at £390 per tonne, the extra yield is worth between £90 and £285 per ha after the cost of the Maxicrop programme.

Yield data. August 2012

Trt. No.	Timing 1 – applied 17.11.11 crop GS 15-17	Timing 2 – applied 26.03.12 crop GS 30	Moisture corrected yield (9%) t/ha		Percent yield response		Percent oil content		Oil yield (t/ha)		Percent oil yield response	
1	Standard Field Treatment	Standard Field Treatment	2.78	c	100.00	c	45.30	b	1.26	c	100.00	c
2	Maxicrop Triple 3.0 l/ha	Untreated	3.00	b	107.75	b	45.50	a	1.36	b	108.23	b
3	Maxicrop Triple 3.0 l/ha	Maxicrop Triple 3.01/ha	3.54	a	127.32	a	41.30	c	1.46	a	116.07	a
		LSD	0.202		7.082		0.000		0.086		6.704	
		Cv%	3.75		3.66		0.00		3.66		3.58	



Other field observations in the south east of England have also shown significant benefits from both an autumn application as well as a two spray programme. On this site (3.8 - 4.4 t/ha) yield increases ranged from 9% - 17% (0.3-0.6 t/ha).

Tissue Analysis

In addition to the yield benefits, tissue analysis in April showed significant improvement in boron levels in the leaf tissue, ranging from 8-20% increase. The treated plots seemed better able to scavenge more boron from the soil and mobilise it effectively.

Application Rates

Apply Maxicrop Triple @ 2.0- 3.0 litres/ha:

- At 3-5 leaves to encourage rooting, establishment and to minimise stress, aiding flower initiation.
- At the onset of stem extension to help minimise stress, increase leaf chlorophyll levels and aid mobilisation of nutrients and metabolites, leading to better grain site formation and yield.

Maxicrop Triple can be tank-mixed with most fungicides and insecticides for convenience and ease of application.