



## Trial Summary - Canola



<b>Trial date:</b>	2014
<b>Report:</b>	Efficacy of Enrich and NH Delta in oilseed rape
<b>Trial type:</b>	Randomised block design with three replicates (Plot size 3 x 24m)
<b>Product:</b>	C active foliar (Branded eNrich)
<b>Country:</b>	England
<b>Institution:</b>	ADAS
<b>Location:</b>	Boxworth (Cambridgeshire)
<b>Crop:</b>	Canola
<b>Variety:</b>	Cabemet
<b>Previous crop:</b>	Winter oilseed rape
<b>Soil type:</b>	Clay loam
<b>Irrigation:</b>	Rain fed
<b>Fertiliser:</b>	Control treatments            0kg N/Ha foliar 30kg N/Ha foliar applied C active treatments            30kg N/Ha foliar applied + C active

### C active

<b>Application:</b>	Foliar - F02/110 nozzles with 200L/Ha First application - Autumn GS 1,3 Second application - Spring
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### Influence of

<b>Conditions:</b>	The experiment experienced an unusual cold and prolonged winter, resulting in a smaller and more backward than usual crop throughout winter and spring.
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### Results:

**Table 1: Effects of Autumn Treatments on Crop Biomass, Crop N Content, Soil Mineral Nitrogen and Soil Nitrogen Supply**

Autumn treatment	Biomass (t/ha)	Crop N (kg N/ha)	SMN (kg N/ha)	SNS (kg N/ha)
Untreated control	0.352	16.4	28.3	44.8
30 kg N/ha AN	0.365	16.2	36.7	52.9
eNrich + Push UPP	0.369	17.3	32.4	49.8
30 kg N/ha + eNrich + Push UPP	0.531	25.4	33.9	59.4

**SMN**- Soil mineral nitrogen (kg N/ha) is the nitrate-N plus ammonium- N content of the soil within the potential rooting depth of the crop.

**SNS** - Soil nitrogen supply is the SMN + estimate of total crop nitrogen content + estimate of net mineralisable nitrogen.



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**Table 2: The Effects of Treatment of Crop circle Measurements of NDRE, NDVI and CCI**

Autumn	Spring	NDRE	NDVI	CCI
Untreated control	Sub-opt Ammonium nitrate (AN)	0.0622	0.158	0.394
Untreated control	Recommended AN	0.0586	0.149	0.394
30 AN	Sub-opt AN	0.0572	0.143	0.399
30 AN	Rec AN	0.0682	0.173	0.394
eNrich	Sub-opt AN + eNrich	0.0719	0.189	0.382
eNrich	Rec AN + eNrich	0.0637	0.164	0.387
30 AN + eNrich	Sub-opt AN + eNrich	0.0727	0.186	0.392
30 AN + eNrich	Rec AN + eNrich	0.0696	0.178	0.391

**NDRE** – Normalised difference red edge index **NDVI** – Normalised difference vegetation index  
**CCI** – Canopy chlorophyll content index

**Table 3: Effects of Treatment on Oilseed Rape Yield**

Autumn	Spring	Yield (t/Ha)
Untreated control	Sub-opt Ammonium nitrate (AN)	2.69
Untreated control	Recommended AN	2.93
30 AN	Sub-opt AN	2.45
30 AN	Recommended AN	3.04
eNrich	Sub-opt AN + eNrich	3.03
eNrich	Rec AN + eNrich	2.97
30AN + eNrich	Sub-opt AN + eNrich	2.93
30AN + eNrich	Rec AN + eNrich	3.22

**Recommended** – 240kg N/Ha (Spring application) **Sub-optimal** – 120kg N/Ha (Spring application)



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- Yield:** There was a trend for eNrich to increase yield from 2.78 to 3.04 T/Ha
- There was a trend for eNrich to increase yield for every combination of autumn and spring ammonium nitrate rate, by an average of 0.26T/Ha
- Economics:** Canola price - \$500/1000kg  
C active increased yield by \$131.57/Ha
- Conclusion:** The increase in crop biomass and hence N content at end of winter due to application of eNrich suggest that eNrich is effective in increasing availability or uptake of autumn applied ammonium nitrate in oilseed rape. The increase in spectral reflectance indices NDRE and NDVI in March due to eNrich supports this finding. The non-significant trend for eNrich to increase yield by 0.26 T/Ha is also promising.

Full trial reports can be supplied on request.



Thinkbio would like to acknowledge and thank AgriBio for their assistance in conducting this trial.  
[www.agribio.co.uk](http://www.agribio.co.uk)

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