

YEN TRIAL HIGHLIGHTS IMPORTANCE OF MICRONUTRIENTS FOR OSR

At the invitation of Fram Farmers and our crop marketing partner ADM Direct, a sponsor of the Yield Enhancement Network (YEN) project, Ilex Envirosiences took part in the 2017 Oilseed YEN trial, creating a bespoke nutrition programme which significantly increased the crop's yield and profitability.

The purpose of the Yield Enhancement Network (YEN) is to help members to close the gap between their crops' current and potential yields. The concept is that to understand yields, crops should be regarded as converters of solar energy into edible energy and their performance analysed accordingly to highlight the limiting factors.

The approach is to consider the yield potential of the season and compare it to the actual yield achieved by looking at the development of a given crop, the basic resources available to it in terms of light energy and water, then to assess its success in capturing these and using them to form seed.

The biophysical potential of oilseed rape crops is set by incident light energy, rainfall and soil water storage, so in most regions of the UK the potential is there for oilseed rape to yield around 9t/ha. Leading growers often achieve over 5t/ha, but the UK average has been languishing around 3t/ha for a decade, highlighting the 'technology gap' in a crop where new techniques are needed to convert its bio-physical potential into increased yield.

Fram Farmers and ADM were interested in exploring the potential impact that micronutrients might have on oilseed rape yields, and invited Ilex Envirosiences to participate. A family-run British company, it has over 15 years' experience in manufacturing bespoke crop-specific nutrition products. The company is a pioneer in the use of phosphite technology and plant

biostimulant activators to enhance nutrient use efficiency in foliar fertilisers and nutrient seed treatments. It uses the latest developments in plant science and nutrition, combined with the highest grade raw materials in advanced formulations, to deliver nutrition in forms which are most readily available to plants. Ilex continues to grow and says that the high level of repeat business underlines the effectiveness of its products.

Working closely with independent agronomists and through organisations such as Fram Farmers, Ilex supplies UK farmers and growers with a comprehensive range of easy-to-use concentrated foliar fertilisers and seed treatments that optimise plant health and crop performance, with maximum efficiency and minimum environmental impact.

TAILORED NUTRITION PACKAGE

The YEN 13-acre site at J. A. Styles' Bocking Hall Farm, Helmingham in Suffolk was drilled with the OSR variety KWS Campus, with Ilex supplying a range of products to enhance yield and increase profit, the success of this strategy being confirmed at harvest.

"A key objective was to achieve good root development and strong crop establishment in a region where the soil is naturally deficient in Boron, so we applied 1.75l/ha of OilSeed Raiser, a tailored phosphite-based nutrient costing £11.80/ha, between the four to six-true leaves stages in October," John Allen, the company's Sales Manager explains.

OilSeed Raiser is a concentrated foliar nutrient solution based on proven Phosphite (PO₃) technology combined with a tailored nutrient package to help oilseed rape crops reach their full potential. Its unique formulation of macro and micronutrients has been specifically designed to boost growth, particularly during the key establishment period.

Essentially a brassica, oilseed rape has a nutritional requirement which is substantially different to that of other arable crops. For example, compared with cereals, oilseed rape requires up to 600% more Boron, 300% more Calcium, 300% more Molybdenum and 200% more Zinc.

The early application of vital nutrients, combined with the bio-stimulating action of the phosphite component in OilSeed Raiser, promotes both growth and activity in the plant's own natural defence systems. A well-fed crop with robust, healthy roots and leaves will have an increased natural ability to overcome disease, pests and stress.



Ilex recommend that OilSeed Raiser is applied to oilseed rape during the early stages of growth in the autumn to help the crop overcome pest attack or other stress factors that put it under pressure. Further applications can be made at any time from early spring to maintain healthy plant growth and alleviate symptoms of physiological and nutritional stress.

In March, the YEN crop received another 1.75l/ha of OilSeed Raiser at £11.80/ha, together with 1.75l/ha of Boron 15% (£11.62/ha). Also included in the tank mix was Ilex's ModipHy Xtra, a dual-action water conditioner which optimises the pH level to maintain the activity of spray solutions and maximise their uptake and performance in the plant. ModipHy Xtra results in more consistent product performance over a broad range of spraying conditions and crop situations, is widely compatible and suitable for use with most commonly-applied agrochemicals and foliar nutrients.

In March and April, a combination of MnPlus (0.5l/ha@£6.60/ha), MagPlus (2.0l/ha@£11.40) and ModipHy Xtra (450ml/ha@£4.80/ha) were applied to counter Manganese and Magnesium deficiencies. At the start of the pod fill in June, Ilex Foliar Boost went on at 1.75l/ha, costing £9.32/ha, to maintain the crop canopy and optimise pod fill.

The total cost of the products used in this programme amounted to £69.74/ha, although this did include the manganese and magnesium treatments which would have been applied as part of the farm's normal programme. Take these out and the additional cost of the Ilex programme amounted to £51.74/ha.

Where the farm's normal nutrition programme was used, the crop yielded 4.071 t/ha, compared with 4.742 t/ha in the Ilex-treated area, representing an additional 0.671 t/ha. Based on an OSR price of £315/t, the value of the additional crop amounted to £211.36/ha, which less the £51.74/ha cost of the programme generated an increased profit of £159.62/ha.

