

# Spring agronomy of winter oilseed rape

Winter Oilseed Rape is one of the most challenging crops to deliver consistent yield and margins. Although establishment is the key to a good crop, the spring is still full of potential pitfalls, writes Mike Gilbert, an agronomist for UAP in Kent and East and West Sussex.

The perfect crop needs to be pest and disease free but the correct canopy structure is a major part of this too. Your crop wants to be standing through the critical pod fill stage post flowering, intercepting and utilising sunlight energy. It is essential that the nutritional balance is correct so the leaves and pod stay green and healthy to build that yield.

The first step is to assess the potential canopy structure. For this we need to take into account the plant stand density and the size of the plants in early March. This year we have had some ideal crops with 30-50 strong well rooted plants per square metre. Although pigeons have done their worst, well rooted crops are growing away strongly. The other part of this equation is the variety and its potential height, bulk and stem strength. This season we have more bulky varieties, like Cabernet and hybrids Dimension and Excalibur having moved away from shorter and stiffer strawed varieties like Castille. Therefore, growth regulation at green bud will be more of the norm. GAI (green leaf area index) is the most common way of assessing this, crops with greater than 1.0 GAI benefiting from growth regulation but those less than 1.0 GAI not. In addition this growth regulatory effect has a major positive impact on root mass and depth which has been shown to have a major impact on moisture stress during pod fill – a factor not to be underestimated on some of our soils in the county. Be careful if pigeons have predated strong well rooted plants because they will bounce back and they will still retain more than 60% of the autumn captured nitrogen in their stems and roots. For growth regulation and increased rooting, use 0.6-0.8lt of Juventus (metconazole 90gms lt) if it's not required Provaro 0.6-0.75lts.

After you have assessed the canopy potential you can fine tune your nutrition. The key elements are nitrogen, sulphur and magnesium with boron of secondary importance. In Project Energise trials we have had good responses with up to 250kg of applied nitrogen as long as the sulphur input is in balance and the canopy can stand it. In our trials it has been best to apply all that nitrogen via the bag as late application of foliar N rarely gave a positive yield response unless the crop was way under its optimum N. On the chalk soils in the area, sulphur is very important and with a rape plant needing 20kg of elemental S (not SO<sub>3</sub>) for each ton of yield, these lighter soils deliver very little. A 4.5 tonne crop will need up to 90kg of S. Foliar Magnesium at green bud has also consistently given responses of 0.2-0.4 ton



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at a very modest cost and so is well worth including.

The next area for consideration is the fungicide program and, as already mentioned, some fungicides (Juventus) are also strong growth regulators. Our main considerations are Sclerotinia, Phoma and increasingly Light Leaf Spot, even in the South. The other thing that must never be underestimated is the plant health properties delivered by fungicides and their ability to maintain green leaf and pods through the essential grain fill period. With both Filan (Boscalid) and prothioconazole based products Kestrel and Provaro, we have seen yield responses in the absence of major disease pressure and this is put down in part to these properties. Sclerotinia can be the huge yield robber and we favour a two spray approach, green bud and mid flower. A green bud spray can give 40-60% control on its own and that takes pressure off the mid flower timing where we lack any real eradication. At mid flower I would again use the stronger triazoles Kestrel 0.75-1ltr or Provaro but in parts of the county where Sclerotinia pressure can be extreme, I would mix Kestrel or Provaro with ½ rate Filan.

The final part of the jigsaw is managing pest attacks; pollen beetle, seed weevil

and pod midge. Pollen beetle is only a real problem from green to yellow bud; in the South East we have the added complication of resistant pollen beetle another little headache from Europe.

If we are dealing with susceptible pollen beetle, then Alert (alpha cypermethrin) at 200ml per ha is about the most active material and can be included at green bud. If they are resistant – and there has been an increase in resistant populations in Sussex and Kent as a result of migrant populations crossing the channel, then Biscaya (thiacloprid) or Insyst (acetamiprid) would be possible choices. It is important to monitor populations and spray only once thresholds are reached as we want to avoid any further resistance issues. At mid-flower we are targeting seed weevil and pod midge. When the crop is in flower, it is important to take into account foraging bees; Mavrik (tau-fluvalinate) at 200ml per ha has the safest bee profile with good activity on seed weevil. The active is used in beehives to control varroa mite and it also has the advantage of in-flower safety in mixture with triazoles.

This looks like it could be a good year for oilseed rape if we can avoid the pitfalls and maintain the attention to detail. All we need then is that little bit of luck at harvest.