

# Winter Oilseed Rape establishment guidelines

With the viability of the crop in question for many growers, Dick Neale (Hutchinsons Technical Manager) offers guidance on the most successful ways to establish winter oilseed rape this season.

## To grow – or not to grow?

**The decision to grow, or not to grow, WOSR this autumn will largely revolve around the question of “can I control Cabbage Stem Flea Beetle”(CSFB), both at the adult feeding stage and the larval stage of the pest?**

Like black grass, one of the primary issues to understand is what the pest does at specific times and any parameters that may cause a certain reaction from the pest.

Again in 2016, we know we have significant numbers of larvae within the crop and these will be pupating in the soil during June. This will lead to adult emergence during July and feeding on weeds, lower leaves in WOSR and field boundaries. Monitoring numbers of adult beetles present in the harvested crop will give a clear indication of the potential problem in the 2016 autumn crop.

During August, the adults feed slowly and prepare for the mating season. In early September the adults move to new crops and

mate, this is when the aggressive feeding phase of the life cycle starts and the new crop is placed under most pressure.

A clear counter to this is to establish crops as early in August as possible, so that plants are sufficiently robust to cope with some feeding in early September. Adult feeding continues until egg laying commences, at the base of established plants, during late September and October. Predation and the onset of winter cause a rapid decline in adult beetle survival after October.

The eggs develop in the soil driven by temperature and eggs hatch from October to February. This is a key phase to monitor - the treatment threshold is 2 larvae per plant, or 50% of leaf petioles damaged.

Where high numbers of adult beetles are evident during the harvesting process, the question of **“should I grow WOSR at all?”** has to be asked.



Oilseed rape drilling using the Micro-wing

As with black grass and disease control in many crops, the agronomic optimums for yield have to be compromised in order to facilitate reliable control of the overriding issues.

In WOSR the optimum plant population, drilling date and avoidance of verticillium wilt are now being overruled by the need to get the crop past CSFB in the ‘hot spot’ areas of the country.

Frequently over looked when the mind is set on gross output, variety choice is vitally important for verticillium control ...soon to be a parameter on the AHDB Recommended Lists, and currently it should be a question for breeders to provide guidance.

Continue overleaf >>>

## >>> Adjusting seed rates

The optimum plant population for WOSR is, as we know, around 25-30 plants/m<sup>2</sup> established. This has been facilitated by seed rates from 45 seeds/m<sup>2</sup> and for a 5g TSW seed lot this would equate to 2.25kg/ha.

However, there is an increasing need to calculate seed rates much along the lines we have developed now in cereals for black grass control and late sowing.



Oilseed rape established with minimal soil disturbance appears less susceptible to Cabbage Stem Flea Beetle attack

<b>Target plants established pre winter 50/m<sup>2</sup> =</b>	<b>2.50kg/ha</b>
<b>Seedbed loss 10%</b>	<b>0.25</b>
<b>Loss to slugs 10%</b>	<b>0.25</b>
<b>Loss to adult CSFB 50%</b>	<b>1.25</b>
<b>Total seeding rate</b>	<b>4.25kg/ha</b>
	(85 seeds/m <sup>2</sup> for a 5g seed lot)

The agronomic parameters have changed and for Hybrid seed (sold in 50 seed/m<sup>2</sup> packs) more packs would be required to meet the above criteria.

Conventional seeds are sold in 4 million seed packs (100 seed/m<sup>2</sup>) so there is still room to adjust here to 5 – 6 ha's, bearing in mind the weight calculation above.

The above calculation is a logical approach to the issues we now face. One thing to avoid is applying significantly higher seed rates than these, because having far too many plants results in thin, weak stems that will allow easier entry for CSFB larvae, compared to fewer, larger more lignified stems.

WOSR is very capable of regulating its own plant population over winter. Any population below 85plants/m<sup>2</sup> pre-winter will self-regulate to a spring population of around 45/m<sup>2</sup> by the spring, so if losses to CSFB and slugs amount to only 40%, the resulting higher plant count will not be agronomically detrimental.

### Establishment cultivations

The next parameter to address is establishment cultivation. A minimal amount of soil movement is vital to allow adequate control of black grass via the herbicide propyzamide. Any amount of subsoil movement is detrimental to propyzamide effectiveness (including 'low disturbance' legs). Shallow soil movement has been seen to deliver a significant reduction in larval infestation of the rape crop ...although not always a reduction in adult feeding pressure, which is more driven by drilling date.

This reduction in soil movement also reduces the mineralisation of nitrogen within the seedbed and, when early drilling, this prevents rapid and excessively large growth, which is a good thing. Nitrogen, however, is a vital component in the successful establishment of WOSR, as the crop has a high requirement during the establishment phase.

### Nitrogen availability can be judged by:-

- Previous WOSR establishment success
- Previous crop yield ...i.e. 12+ tonnes/ha wheat yield will have 'emptied' the upper horizon N reserve
- Straw removed?
- Dry soil
- Field history (background fertility)
- Organic manure/digestate application.

**Primary P** placement fertiliser is extremely useful and it is becoming clear that soil Index is not the main driver for use ...it is more about the ability of the plant to extract P and the soil's ability to release P. Some N is also applied, but only a very small quantity.

Where nitrogen is needed as a priority, Hutchinsons has found that one of the most effective ways of treatment during a dry August sowing period is to mix 10kg/ha of technical grade urea directly with the seed. This product is used in horticulture and the 25kg bags make it very easy to mix with seed in small batches and to transport from field to field. The product is technical grade and is coated - this prevents it from being rapidly hygroscopic and in a sealed tank will last at least 3 days without degradation. Mixing will obviously blow the urea directly down the pipe with the seed.

The drill needs to be calibrated to deliver 14.25kg/ha of total seed/fertiliser mix and as the granule and seed sizes match well there are no separation issues.

### Treatment of CSFB

With the release of Neonicotinoid seed dressings (even for limited use this season) undecided at the time of writing, all growers will have to be timely with their treatments for adult feeding and the key timing is as the crop begins to produce its first leaves.

### The need to switch to absolutely minimal soil movement to be successful in crop establishment cannot be emphasised enough.

Although there is no available trials' data, there is much anecdotal evidence to suggest that spraying the adults during the hours of darkness does help significantly, largely because the pest is most active and can be hit with the spray.

As with treatments for black grass, success comes from effective application. It is vital to create a degree of swirl and spray movement just above the soil surface to get spray deposition around and under plants and on to the soil.

Operating at 20kph, with booms set at 75-100cm, just does not work! The spray sheet breaks up and 'swirls' way before it is at soil level, leading to unwanted drift and limited control.

Efficacy critical applications should be applied in 100l/ha water volume through flat fan or angled flat fan nozzles, with booms at 40-50cms above the crop, with forward speeds from 8-12kph.

**Your Hutchinsons agronomist will be happy to offer further guidance on successful winter oilseed rape establishment.**



# Cropping Planning and Decision Making

**Matt Ward (Services Leader) outlines the potential strengths and weaknesses of individual crops within a well-constructed autumn cropping plan.**

**As with every autumn, this year most growers will understandably be concentrating on what wheat variety to grow and for what end market. However, the need for alternative cropping strategies, borne out of the need to address weed control issues or attempts to control costs, means that cropping plans this autumn have not become any easier.**

## **Outlining the priorities**

Increasingly, planned rotations that help manage the risks posed to the profitability of individual crops, be it black grass in Winter wheat or Cabbage Stem Flea beetle in Oilseed rape, rather than purely based upon a theoretical Gross Margin, are what is required. A third crop to comply with the crop diversification rules of the Basic Payment Scheme is also a consideration that cannot be overlooked.

Growers will have to prioritise the importance of the differing strengths and weaknesses of each crop choice before deciding which crops and how much to grow.

Are grassweeds the key focus or is it the expected Gross margin or the requirement for Ecological Focus Area? The main strengths and weaknesses of some crop choices are summarised overleaf (see table 1).

## **Oilseed Rape**

Oilseed rape will clearly be the main break crop for most growers with its prospects improving and indications of improved market prices, resulting in high gross margins and an excellent entry for first wheat. Early drilling with a vigorous variety, with adequate weed control and sufficient plant nutrition, can help provide the vigour the crop requires to help overcome the effects of Cabbage Stem Flea beetle. To achieve the best from this crop however, high levels of attention are required throughout the autumn.

## **Pulse crops**

Winter and spring beans or spring peas provide an excellent break crop opportunity for the next wheat crop, also qualifying for EFA as nitrogen fixing crops.

Peas are possibly the most competitive of these choices against black grass and have potentially the highest gross margin, but they can often be the most challenging to grow. Winter beans are perhaps more flexible, with spring beans often providing higher gross margin opportunities with contracts for human consumption, but black grass control can often be poor.

## **Cereal choices**

**Winter Barley** may fit the bill to replace second wheat crops where the primary concern is the increasing impact of late wheat harvests on the ability to achieve consistent oilseed rape establishment. However, of increasing importance, is the contribution to the black grass management strategy from growing 'Hyvido' barley varieties such as **Fletcher** and **Bazooka**. Growing costs for hybrid barley are higher than for conventional varieties, but those considering growing a conventional variety run the risk of reduced output while compromising black grass control.





	OSR	Winter Barley	Spring Barley	Spring Peas	Winter Beans	Spring Beans	Spring Wheat	Winter Oats	Fallow
Gross Margin	££££££	££££££	£££	££££	££	£££	£££	£££	
Growing Costs	££££	££££	£££	£££	£££	£££	£££	£££	
Following crop benefit	✓✓✓	✓		✓✓✓✓	✓✓✓	✓✓✓		✓✓	✓✓
Blackgrass control	✓	✓✓	✓✓✓	✓✓	✓	✓	✓	✓✓	✓✓✓✓
EFA (Ecological Focus Areas)			✓*	✓✓✓	✓✓✓	✓✓✓	✓*		✓✓✓✓

\* spring cereals allow use of over-winter cover crop option.

Table 1: Benefits and drawbacks from various cropping choices for harvest 2017

In this instance, and in severe black grass situations, spring barley might be a better fit with lower growing costs, better black grass control and improved workload pressure.

**Spring wheat** varieties may appear more attractive as they overcome logistical issues. However, spring wheat can be difficult to manage in a high pressure black grass situation due to the lack of herbicides registered for use. Spring cereals do offer an excellent opportunity to establish cover crops overwinter, helping to build fertility and qualify for EFA, but be careful that the EFA cover crop rules do not compromise your black grass management decisions.

**Winter oats** can provide a good gross margin, with a relatively low input cost, but the market can easily be over-whelmed, so are usually best grown on contract. They are a break crop and although they are extremely competitive, the restricted number of grassweed herbicide options does preclude them in many situations.

**Fallow option**  
Finally, leaving land fallow offers the opportunity to qualify for EFA and an excellent opportunity to control severe blackgrass populations; albeit research suggests fallow requires a following spring crop for best black grass reduction.

Fallow can provide an excellent opportunity for mole draining or any remedial drainage work, but it is the negative margin from fallow that remains the largest hurdle for most growers.

**Careful planning to ensure you make the right choice, for the right reasons, has clearly become more complex than ever. Discussing your thoughts with your agronomist before the final decision is made can often help steer you towards the most appropriate choice for your specific situation**



# Down but not out: Intriguing times for grain markets

**Jack Watts** (Lead Analyst AHDB Cereals & Oilseeds) provides an update on the world markets for wheat and oilseeds.

## Wheat

**UK grain prices have been in deflation for the last three years, with continued good global harvests in recent years eroding away the price highs of 2012/13.**

Much of the price strength in 2012/13 was due to the shortage of feed grain around the world. Since then though, production of Maize – the world’s increasingly dominant feed grain, has been strong and has pulled the rug from beneath the entire grain price complex (see Figure 1).

Until recently, wheat has struggled to keep pace with the decline in maize prices – despite strong production – hitting competitiveness for feed wheat demand. Now though, with slightly lower production in 2015/16 and poorer than expected output from South America, maize has in fact been providing a firming price, onto which feed wheat prices have consolidated. This, combined with a weakening in Sterling in the first half of 2016, has helped propel the fortunes of UK exports, after a very sluggish start. Indeed in April we exported almost 250Kt of wheat –

the highest level since 2010.

The competitive price and availability of UK wheat is enabling it to reach destinations such as Japan and the USA.

The growing influence of maize on wheat prices cannot be underestimated and will likely provide bigger peaks and troughs in price. Global feed demand for maize continues to grow in absolute terms and relative to that of wheat. Given that there are relatively few producing and exporting countries of maize, a weather issue for one country can lend noticeable price support and cause demand to spill over into wheat – as we have seen this summer. However, on the downside, we should not underestimate the yield growth potential of maize and its growing efficiency as an energy source for the global livestock industries (Figure 2).

This global maize / feed wheat dynamic is a really important factor to bear in mind when it comes to variety choice in the UK. Essentially when maize is in relative short supply and currency is favourable, the UK is able to export significant quantities of feed wheat. However, in periods of relatively good maize supply, feed wheat will struggle to find demand both domestically and abroad.

**Spot grain prices - monthly averages**  
(Source: AHDB)

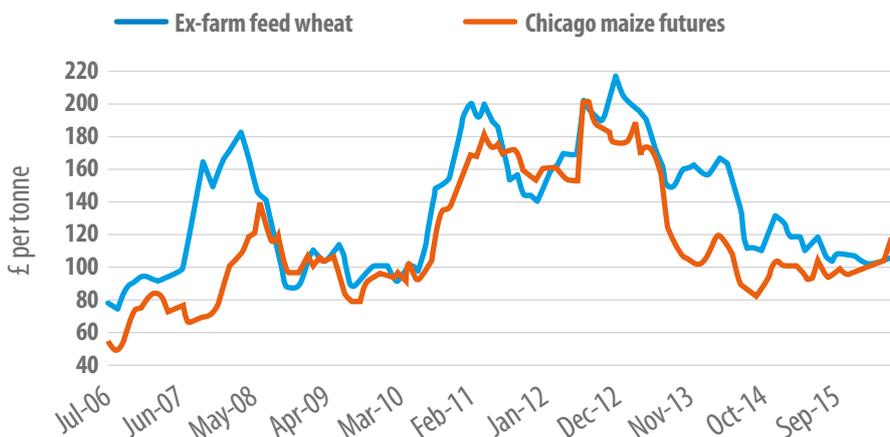


Figure 1: Spot grain prices 2006 - 2015

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>> The challenge is that this dynamic can change reasonably quickly and indeed faster than variety decisions can be made.

**The key to this is flexibility in the on farm economics and marketability of varieties i.e.**

- Competitive yields so that in comparison to a traditional 'barn filler' variety there is no detriment to the relative gross margin if it is sold as feed wheat.
- The potential to target a milling market if a premium is on offer and minimising the need to compete with maize during periods of strong supply.

## Oilseeds

**Moving to oilseeds and the market situation is in some ways similar.** Less than ideal conditions in South America have put a check on soyabean supplies, with a deficit expected in 2015/16 for the first time since 2011/12 (see figure 3). Very early forecasts point to a deficit again in 2016/17, but it remains to be seen just how US farmers will respond to the price rises seen this spring.

Just like maize and wheat, soyabeans have a massive influence on OSR values in the UK and in £/t terms of course, currency is much more influential. OSR presents a real risk versus reward dilemma for UK farmers, with the elevated production uncertainty hampering the traditional methods of managing the overall price e.g. forward selling. It is evident that with lower values on offer, farmers are less willing to take on the elevated risk. As such, lower risk alternatives are being sought such as pulses, or even fallow.

Overall, 2016 is likely to be a tough crop to market, given that we start from a low base. In the shorter term, optimising costs and achieving a competitive selling average are important.

**To help keep abreast of the day to day market conditions, AHDB produces its Grain Market Daily report, which you can sign-up to from the website: [cereals.ahdb.org.uk/markets](http://cereals.ahdb.org.uk/markets).**

### Global feed demand for wheat and maize (Source: USDA)

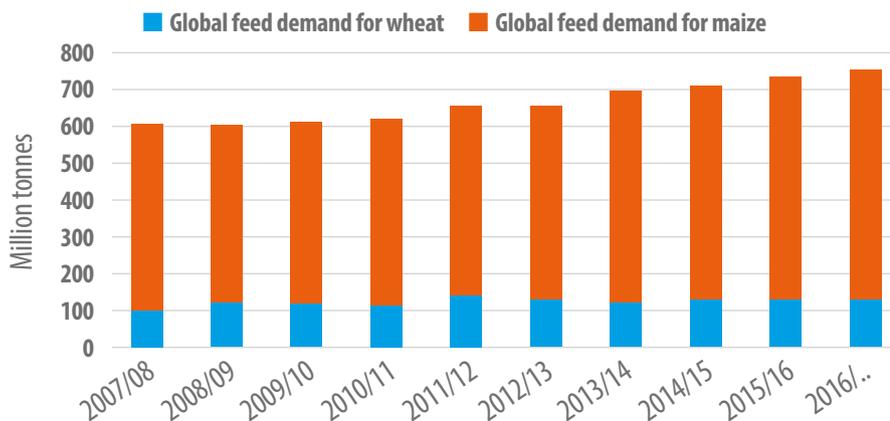


Figure 2: Global feed demand for wheat and maize.

### Global soyabean supply and demand (Source: USDA)

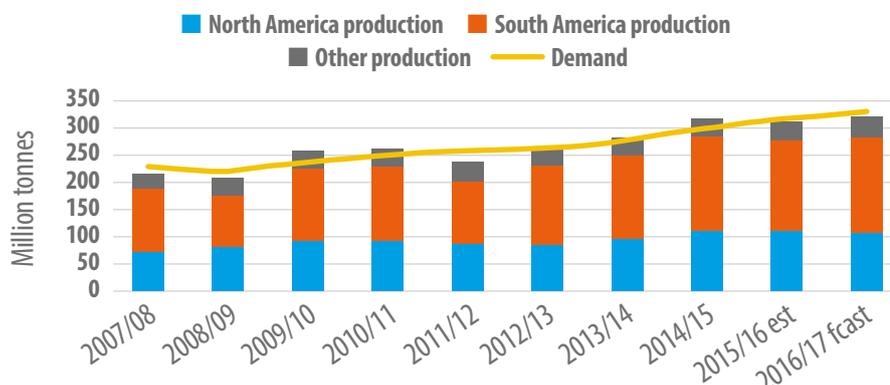


Figure 3: Global soyabean supply and demand.

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