

Oilseed Rape Stick or twist?

How do the alternatives stack up?



Neil Watson (Hutchinsons Technical Manager)

For growers considering abandoning oilseed rape, Neil Watson (Technical Manager) helps evaluate alternative break crops.

It is that time of year to pause and stand back from the hustle and bustle of the cropping decisions, reflecting on the season in the cold light of the day, what has gone well and what has not.

It is important to learn from those experiences whilst still fresh in our minds, before ploughing head long into another year. Before getting into the finer detail of fine-tuning agronomic decisions, we start with the bigger picture items, such as cropping/rotations. Every season provides its challenges, this year is no exception.

For many, oilseed rape continues to provide a cornerstone of consistency as the main break crop within the rotation, yet equally for some, there are question marks over its future. This year beyond most we have seen opposites regarding the fortunes of the crop, almost exclusively down to the vagaries of cabbage stem flea beetle.

Generally, in the North and West, the crop has never looked so well. Indeed, all the pointers suggest it could be a record yielding year... Yet a good deal of the Central, Eastern and to a lesser extent the Southern regions have been plagued by the vagaries of this pest. For many it has been as universally bad as it has been for some years. Crops either written off early from the adult

grazing in the autumn, or the larvae devastating the potential for the crop in the spring. The combine will be the ultimate arbiter. It is for this latter group, specifically, I pose the question how do the alternatives stack up? With continuing high prices of oilseeds, even with a reduced output, it still may favour our continued involvement with the crop.

To quote an old adage, "the grass always seems to be greener on the other side of the fence". I suggest we step back for one moment and critically evaluate the alternatives starting with the economics. There are various means of doing this from gross margins to net margins, to the impacts on the rotation, each step adds more credibility yet

often misses the relatability and achievability of such a change. The concept of “comparability in yields” (equivalents needing to be achieved) is a more practical and relatable starting point. It uses the same inputs as the process of creating gross margins, such as individual crop variable costs and commodity prices. The only difference is you are benchmarking alternative margins against your present break crop (in this case, oilseed rape). Looking at the comparative yields that need to be achieved to match that from your present crop.

Let us start by illustrating the concept as laid out in **graph 1** (based on the data contained in table 1). I am just using standard figures contained in Hutchinsons gross margins booklet.

By firstly using a single comparator crop (Winter Beans in this case), you will get a clearer understanding of how it works before progressing further. Firstly, just concentrate on graph 1. It shows the relationship between margin and yield of the comparator crop, it is not rocket science. The vertical Y axis representing the margin per ha of each crop and the horizontal line the X axis representing yield.

Indeed, the formula in red (a function of an excel spreadsheet illustrating this relationship states $Y = 235x - 466$). Y (equates to the margin per ha of the comparator crop) which is a function of (X), the Yield of that same crop, times price (£235/t) minus variable costs (£466/ha).

The simplistic assumption is, as yield increases, variable costs remain constant (in the real-world costs are likely to increase marginally as yields increase). However, let us not lose sight of what we are trying to achieve, we are only looking at a comparative tool to start the whole process rolling.

The next step is to input the equivalent margin of our existing break crop, in this case oilseed rape (the red horizontal line), specific to a 3t/ha crop. The intersection point between the two crops is the comparator yield equivalent (in this case winter beans.) So, in our example a 3t/ha oilseed rape crop needs an equivalent yield of a winter bean crop to be 3.7t/ha (given the variable costs and commodity prices used), the question you then need to ask yourself is, how achievable is that?

Graph 2 illustrates the same concept with multiple break crops, so it becomes a scenario of what might be the most likely to be achievable of the various alternatives. Beyond the economics there are a plethora of other factors to consider, before making your final decision.

As you might expect the graphs and data behind them are based on a simple spreadsheet. Thus, allowing you to explore in the real world multiple different scenarios, for example where different parts of the oilseed rape field has differing yield potentials. Perhaps even apportioning costs associated with writing parts of the crop off at differing times of the year, thereby carrying the costs through to affect the overall OSR crop gross margin. You can even alter the commodity prices and variable costs of the alternatives crops you are exploring.

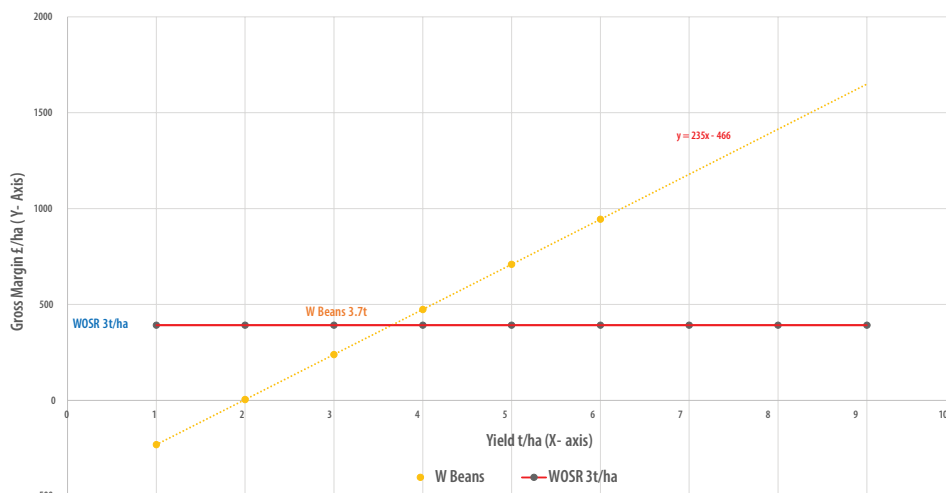
The whole point it keeps coming back to is this concept of “comparable yields” and the likely achievability of the differing alternatives.

Questions about this article?
Please contact us: information@hutchinsons.co.uk

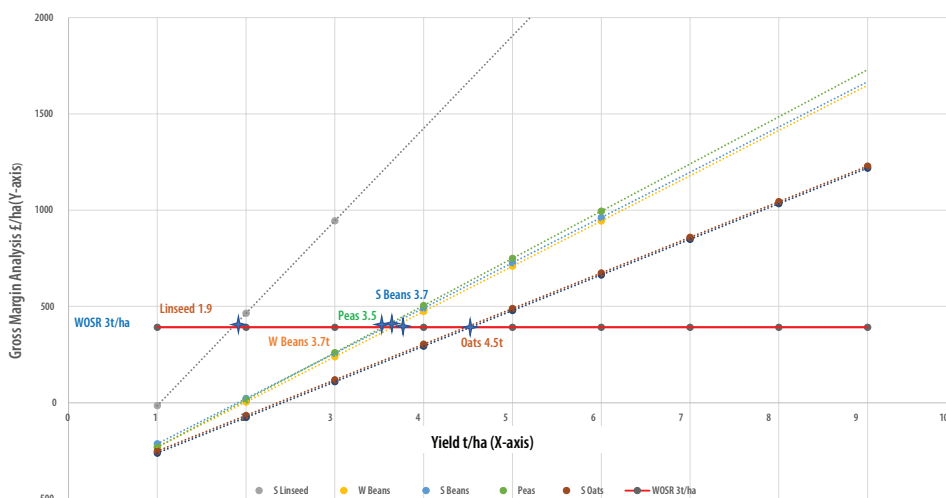
CROP	PRICE PER TONNE	VARIABLE COSTS
Winter Beans	235	466
Spring Beans	235	488
Spring Linseed	480	495
Peas	245	475
Spring Oats	185	436
Winter Oilseed Rape	385	763

Table 1: Variable costs and commodity prices for some alternative combinable break crops

Comparative Margin Analysis (based on comparable yield equivalents)



Graph 1: A single comparable yield of Winter Beans to a 3t/ha crop of OSR



Graph 2: Multiple break crops comparable yields to the 3t/ha of OSR

The grassweed challenge

*Grassweeds are once again front and centre of conversation for many growers and agronomists as heads rose relentlessly above crops in late May and into mid-June further North. Technical Managers, **Dick Neale** and **Cam Murray** discuss control measures.*



Dick Neale
(Hutchinsons Technical Manager)

“Where on earth did that lot come from, I thought control was pretty good...” is a regular comment.

Well, let us revisit the dynamics of the weeds and the facts underpinning control.

Black grass

Herbicide input and choice is often the starting point for criticism or debate.

- To stand still and not increase populations we need 98% control.
- Residual herbicides deliver between 60 – 90% control. For 90% control a stack or sequence of actives is needed, no single active or formulation of actives achieves more than 70% control in reality.
- Residual herbicides are impacted strongly by application timing and conditions.
 - Seed bed quality
 - Seedbed moisture or post application rainfall
 - Timing pre-em ...24-48 hours or 7 days post drilling?
 - Application coverage ...water volume, nozzle type, forward speed and boom height

- Active ingredient solubility, mobility and persistence - did these match conditions at the time?

High percentage control

To deliver high percentage control, we must present the lowest number of viable seeds to the herbicide. If a black grass head population is even noticeable in the field, it will generally be at around 100 heads/m² so has the ability to deliver 10,000 seeds/m² back to the soil ... that is seeds/m² which amounts to one hundred million seeds/ha - the numbers are phenomenal!

That is the crux of the matter when we ask ‘where on earth did that come from?’ 25 heads/m² in a previous crop would be barely noticeable and attached to maybe two surviving plants/m² from the autumn, but those 25 heads returned 2,500 seeds/m². You may have managed out 50% of those with stale seedbeds and natural losses and achieved 90% control with residual herbicides but that still leaves the potential for 125 surviving plants from that seed return alone.

Regardless of surviving plants in this example, the trials data and statistics are clear. 90% control of plants in the

autumn only equates to 57% control of heads in the following May. This is because the surviving plants are genetically the strongest, not only can they resist the herbicides applied but they have the greatest potential to produce tillers. Single plants carrying 25 tillers are now becoming common place compared to 9-10 tillers per plant 20 years ago. The goal posts are continually moving.

Seasonal factors are always at play, be they environmental or business decision driven. High values for wheat at planting undoubtedly encouraged a higher proportion of wheat plantings. More to plant means starting earlier with drilling and dry weather reduced the efficacy of both the chit achieved in stale seedbeds pre-drilling or the efficacy of early residual herbicides in dryer seedbeds.

Remember the numbers involved, any compromise to cultural control aspects results in massive seed return impact, and the greatest impact for long term control is preventing seed return.

Black grass covers a significant proportion of the UK, but Brome and Ryegrass are on the increase.





Cam Murray
(Hutchinsons Technical Support Manager)

► Brome

Again, it is a case of fully understanding the weeds ecology rather than blaming any one change in cultivation or cropping strategy.

The increase in brome has undoubtedly come about as the use of the plough has reduced, as ploughing is particularly effective at controlling bromes, but it is more the timing of cultivation that influences certain bromes to survive rather than the specific cultivation itself.

Whenever asked about brome the first response is which brome do you have, and now is the key time to identify your specific brome species or mix of species while the seed heads are in place.

The maturity profile or innate dormancy of barren brome is different to rye or soft brome and any specific timing of a shallow tillage input will have totally different outcomes for either of the two species.

Placing soft brome into darkness at shallow depth immediately post combining will effectively lengthen seed dormancy and prevent any growth for control pre-autumn crop establishment.

Barren brome however will respond positively, being ready to go straight after the combine so will grow for spraying off prior to autumn drilling.

Soft brome also has an in-built delay in establishment of a proportion of the population and a spring germination period must be built into any control strategy to successfully control this weed.

Ploughing buries seed beyond germination depth so works well on all species, however, what is ploughed down will be ploughed back up in subsequent years, so the plough forms part of the overall strategy, it is not the only strategy.

Control with contact herbicides

Brome species can still generally be well controlled with post emergence contact herbicides, but these are restricted to use in winter wheat, it is therefore vital that if the brome species identified is soft brome, which will need a very specific spring emergence timing of contact herbicide, winter barley would not be a wise crop choice. Think about all aspects of successful grassweed control throughout the rotation.

Application and timing of post em herbicides is critical. ALS chemistry, which most of the control is based around, needs the target hit and with excellent coverage, water volume should be higher than for other grass weeds as the target is more prostrate and hairy leaves harder to wet.

Resistance to residual herbicides is not a major issue within black grass or brome populations, the issues are more related to seed numbers simply overwhelming the herbicide in the case of black grass or mismanaging seed maturity or dormancy in bromes so that germination into residual herbicide is mistimed.

Get the cultural control right and the herbicides remain highly effective albeit that multiple active ingredient applications are most effective.

Italian Ryegrass

If you thought black grass was a yield robber, then stand back and admire the collateral damage Italian Ryegrass species can deliver. With the ratio of 1 plant/m² relating to a 1% yield loss it places itself as one of the premier grass weeds in relation to yield loss.

Although not as widespread as black grass, it is on the increase and must be dealt with via a very robust control strategy.

Italian ryegrass effectively only takes July off in terms of seed germination. Mid-winter it slows but in mild UK winters it can continue germination throughout the winter months and has a significant spring germination period from March to June, rendering spring barley far less effective than with black grass.

Again, the ecology of this weed indicates the folly of a big pre-em herbicide stack in the hope it will last and provide adequate control; it will not.

Sequencing of residual herbicide will be needed to counter the protracted germination of this weed, so field access is vital both late autumn and early spring. To that end cultivation strategy must be carefully considered so that tramline access is maintained during these periods.

Seed return, as in all grassweeds is a critical component of gaining control – high populations in the field need to be carefully considered as candidates for glyphosate treatment as another method of control.

A significant cultural control for ryegrass is to leave the field for a good couple of weeks after harvest, if you can, before any tillage, as birds are voracious on the seed left lying on the ground, so they can help you reduce overall numbers before looking to obtain a chit.

The other ryegrass specific 'must do' is seed resistance testing. Italian Ryegrass does develop true resistance to residual herbicides and therefore it is vital you understand which herbicides are effective on your population. The population profile to herbicide resistance does vary from field to field, so one test is rarely enough. If you do not know what you are fighting, then how can you possibly apply the correct chemistry?

If you have questions about grassweed control, please contact us: information@hutchinsons.co.uk

Questions about Summer Funding 2023

*There are plenty of funding opportunities on the table for growers this summer. With the recent release of the 2023 SFI Guidance, now is the time to consider whether a Mid-Tier Countryside Stewardship Agreement, Farm Wildlife Offer or Sustainable Farming Incentive (SFI) agreement could work for you. **Georgina Wallis, Hutchinsons Head of Environmental Services** provides some answers.*

What is on the table for 2023?

For most farms looking for a reliable revenue payment, a Mid-Tier Countryside Stewardship Scheme (CSS) and/or a Sustainable Farming Incentive (SFI) agreement could work for you. Applications for Mid-Tier CSS remain open to applicants until 18th August 2023, and the 2023 SFI application window is due to open in a controlled rollout format from August 2023. Remember that Mid-Tier applications are competitive but if successful, your new agreement would commence on 1st January 2024 and run for five years. Equally, with 23 actions available within the Sustainable Farming Incentive, it is possible to stack the SFI on top of an existing Countryside Stewardship agreement or use it to complement a new one.

I always recommend that growers investigate local funding opportunities. Often your local water company or similar will be offering funding to support catchment-friendly initiatives such as soil analysis, water management and biodiversity focused grant funding.

Let us focus on the 2023 SFI. What can you tell me about the application process?

The application window is not due to open until August with the exact date yet to be announced.

I would suggest spending some time understanding how an SFI agreement could benefit your farming business. With 23 actions available, there is something for most. The application process is online but expect to see limited availability in August as The Rural Payments Agency (RPA) test out the application process in a 'controlled rollout'. Once up and running, we can expect to see a rolling application window, with agreements commencing shortly after submission once approved by the RPA. The application should be more straightforward than its Countryside Stewardship counterpart, with online only maps and minimal upfront administration.

How does the SFI interact with other agreements?

The schemes listed are all administered by The Rural Payments Agency. As they work through the same system, there is interaction between them, and you cannot be paid twice to do the same option on the same piece of land. That being said, you can have an SFI and CS agreement which covers the same parcel for different environmental outcomes.

What sort of actions will I be expected to deliver?

Actions are now split up into themes with soils, nutrient management, Integrated Pest Management

(IPM), farm wildlife and more at the forefront of the 2023 offer. Expect to stack options on a parcel to build an agreement which suits you and your farm. A combination of soil management planning, cover cropping and nutrient management actions, for example, could work well for arable farms and grassland alike. The management payment of £20 per hectare for up to 50 hectares (capped at £1,000) will also be applicable to most agreements too, to support with upfront costs and management of the agreement.

What about tenants? Can the SFI work for them?

Absolutely. As long as the tenant has management control of the land for the three-year agreement, there is no need for the tenant to provide landlord consent.

I am already in an SFI agreement. How does this impact me?

If you already have a SFI arable or grassland soils standard on your farm, you will shortly receive a letter with further guidance from the RPA. All existing soil standard SFI agreements will be terminated, with a cancellation payment made to agreement holders based on the length of time remaining on the agreement and standards committed to for the agreement term.

Healthy Soils Connected: New Interactive Grower Training Groups



Georgina Wallis
(Hutchinsons Head of Environmental Services)



Jade Prince (Hutchinsons
Services Specialist)

Pilot SFI agreement holders will not see their agreement cancelled.

Any application top tips?

Simplicity is key! It can be tempting to overcook an application when a mixture of some of the simple options such as buffer strips, nectar mixes and winter bird food can offer just as much to nature and your bottom line. We can work together to choose the right option to bolster the little reserves of biodiversity on your farm - that is a win:win situation. Right option, right place.

What would be your recommendation to a new client in 2023?

Consider all avenues of funding and do not be afraid to look at a scheme which perhaps has not worked for you in the past. There have been some substantial changes to Countryside Stewardship over the past few years, including increased payment rates, increased flexibility, and reduced inspection pressure under domestic rules. Just because it did not work for you in 2018, do not rule it out now.

For more information, please contact our environmental specialists:
enviro@hutchinsons.co.uk

The demand for soil information, and practical soil and farming solutions from farmers has led the Hutchinsons Healthy Soils team to create 'Healthy Soils Connected' grower training groups. Jade Prince (Services Specialist) explains.

A healthy and resilient soil is essential for producing high quality crops in a sustainable way. Understanding the chemical, physical and biological aspects of your soil can increase overall productivity on farm and this is the exact aim of the Healthy Soils Connected grower groups.

Healthy Soils Connected are small, interactive grower groups which explore the importance of soil and plant relationships in a relaxed and practical setting.

Throughout the year there are five sessions available to each group:

- Fundamentals of soil health
- Practicalities of soil health
- Soil and plant nutrition
- Biology and the soil food web
- Farm management actions.

Each session has a classroom element to provide an enhanced understanding of soil functionality and a practical element, ensuring the information is transferable to in-field situations on your farm.

One of the growers who has already completed the programme told us, 'Great group! Was really useful to be able to chat and share ideas with the presenters and fellow farmers.'

A good mix of classroom work and outdoor practical was presented!

By the end of the five sessions each individual farming business will have actionable plans that will make an impact on the individual farming business and enable next steps. Another grower said, 'Great course, very well presented, with a lot of information to take away'. There is also the opportunity for add on sessions to review these actions.

Healthy Soils Connected groups are an excellent way to enhance your knowledge and then put this knowledge in to practice on your farm.

Contact your agronomist or the Healthy Soils team for further information.
e: soils@hutchinsons.co.uk
www.healthysoils.co.uk

For more information on any of our products or services, please contact your local Hutchinsons agronomist, or contact us at:

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2022/23 CPD Points Allocation reference numbers:
NRoSO NO471362f • BASIS CP/119476/2223/g