

Why Grow OSR?

OSR is an excellent break crop in a cereal rotation resulting in increased yields of the following wheat of 1.5t/ha approx. The strong rooting OSR plants penetrate deeper than cereals improving soil structure. Grass weeds (eg. Sterile Brome) that are difficult and costly to control in cereals can be controlled conveniently in OSR. Harvest and market risks can be spread to another crop.

The projected margin for WOSR in 2010 is €177/ha @ 4.5 t/ha and a projected price of €280/t.

Aid/Marketing

There will be no Energy payment (was €125/ha) in 2010.

Best indications are for similar prices for 2010 as the 2009 harvest; however there are substantial differences between processors in the way price bonus/malus is formulated.

ROTATION

Soils: Free draining, medium to heavy soils are best suited to oilseed rape production. The crop fails to reach its yield potential on very light or water logged soils.

OSR is a brassica crop. OSR should not be grown on land where brassicas have been grown during the previous four years. Beet or crucifers (e.g. cabbages etc) should not be grown on land that had grown OSR on the previous three years. This is because beet and crucifers act as a host for Sclerotinia and also the OSR acts as a host for beet cyst nematode.

ESTABLISHMENT

Winter OSR should be sown from mid August (north) up to mid September (south), depending on location. Prepare a fine, firm, level seedbed. Sow to a depth of 1.5cm (0.5 inch). Ploughing followed by one-pass drilling technique is still popular but minimum tillage as for cereals is also satisfactory. Cheaper establishment techniques such as 'Autocasting' can be variable in results due to establishment problems. German and UK work suggests that for the highest yields, good establishment is critical for success.

Ideally cultivation should be done when soil conditions are dry as rape does not like compaction. However, the seedbed should be rolled as rape requires a consolidated seedbed and also to retain moisture.

Seed Rate

Recent Oak Park ('05-'07) work has shown that under good conditions, seeding rates should be 60-80 seeds/m² (lower rates are for hybrids). The effect of seeding rate on oil content was also statistically significant in Oak Park with the lower rates having the highest oil content. However, the differences were small (<1% oil content).

The target plant population (in the spring) is in the region of 30-50 plants/m², evenly spaced across the field. This spring population will allow sufficient light reach the base of the canopy and encourage branching and thus maximising pod numbers.

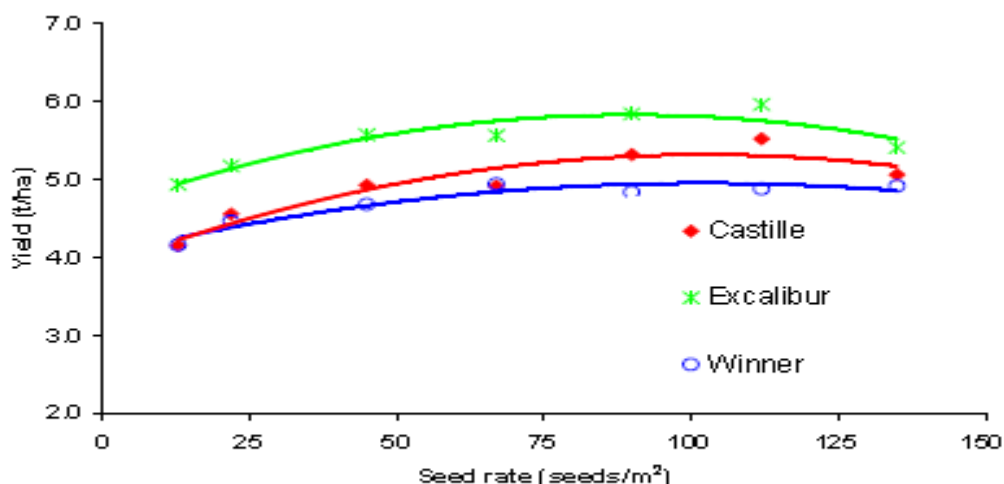


Fig 1. Effect of seed rate and cultivar on yield of oilseed rape at Oak Park in 2007.

(Taken from Oak Park Research Report 2007; Richie Hackett)

TGW can vary hugely (even within varieties) and drills should be set accordingly. Some varieties come in pre-defined seeds per pack which specify a seeding rate on the label.

Varieties

Yield, disease resistance, standing power and earliness of maturity are the most important factors influencing variety selection. The HGCA recommended list is our best guide to the most promising varieties and the DAFF 3 year yield data.

Main available varieties summary

	DAFF Data		HGCA 2010 Rec List (Northern)		
	Relative Seed Yield @ 9% mc		1-9; 9 being desirable for trait		
	3 yr mean 100=4.18 t/ha	1 yr result 2009 Harvest 100=4.37 t/ha	Resistance to lodging	Shortness of Stem	Light Leaf Spot
Osprey	105.3	103.4	-	-	-
NK Bravour	101.6	100.8	8	7	6
Flash	115.8	122.1	7	6	6
Lioness	-	-	8	7	6
Epure	108.2	108.1	-	-	-
Castille	100.7	94.8	8*	8*	5*
Catana	-	111.1	7	7	7
Excalibur	104.9	106.6	7	7	6
DK Cabernet	-	-	-	-	-

* Data from the 2010 HGCA List (East/West)

LIME & FERTILISERS

The pH for oil seed rape should be above 6.5.

Table 1 gives the Teagasc NPK recommendations.

The first split of N should be applied in late February and the remainder in the late March - early April. The first split should be about 30% of the total. It is unlikely that the application of N at sowing time is justified, but if it is used, it should not exceed 40 kg/ha of N. Fertiliser applications should not be combined drilled as this may delay germination.

P & K should be applied at sowing in Index 1, 2 but can be applied with the first split of N in Index 3, 4 soils.

Soil N, P, K Index	N	P	K+Na
1	225	35	65
2	180	30	35
3	160	20	25
4	140	None	None

Sulphur

Oil seed rape is responsive to the application of S. A dressing of 25-40 kg/ha S should be adequate. This should be applied as part of the fertiliser programme in the spring with either the first or second N application.

Magnesium

If soil Mg is low use magnesian limestone where the pH is low or 75 kg/ha of calcined magnesite or kieserite every three years.

Boron

Boron should be applied for oil seed rape, especially when the soil test is below 1 mg/l. Severe B deficiency causes stunting and brittle petioles, but relatively mild deficiency results in poor seed set and a reduction in seed numbers per pod and seed weight. These conditions can be induced by severe summer drought. Boron can be applied as part of the fertiliser with the P & K or as a foliar spray in the spring e.g. 5-10 kg/ha of Solubor or commercial equivalent.

Weed Control

Grass weeds, particularly volunteer cereals and wild oats, will knock yield of OSR substantially. ADAS trials show that 150 vol cereals/m² can half yield and just 20 cereals per m² can knock yield by 0.15t/ha while 150 broad leaved weeds will reduce yield by 8%.

Scutch should be controlled in the previous crop but graminisides may be used in the growing crop.

Weed control is costly ranging from graminicides at €30/ha to Butisan S/Katarman at €100/ha.

Pre-Sowing

The stale seedbed technique can be used in a minimum tillage rotation e.g. shallow cultivate and roll and then use glyphosate products to desiccate emerged weed before sowing.

Pre-Emergence

Butisan S (2.5 l/ha) can be applied within 48 hours of sowing.

Susceptible weeds include: Annual Meadowgrass, Chickweed, Forget-me-not, Groundsel, Marigold, Mayweeds, Parsley-piert, Poppy, Speedwells, Shepherds Purse and Red Deadnettle. Cleavers is moderately susceptible. Charlock and wild oats are moderately resistant.

Split-treatment - Apply 1.5 litres Butisan S per hectare pre-emergence. Follow with a post-emergence application of 1 litre of Butisan S per hectare. The split application gives improved control of shepherd's-purse, cleavers & poppies

Katarman (2.0 l/ha) is best applied pre-emerg. Similar restrictions as per Butisan. It has better Cleavers, Poppy and pansy.

Post Emergence

Graminicides e.g. Aramo, Falcon, Fusilade Max, Satchmo and Stratus Ultra can be used from the one true leaf stage of the OSR up to early flower bud stage. However, application is recommended early at the 2-3 leaf stage of the grassweed before the grass weeds are sheltered beneath the OSR canopy.

For season long control of volunteer cereals and grass weeds, a second application of a graminicide may be required, to control later germinating weeds or on thin crops.

Two-spray sequential programmes are very effective in minimum-tillage establishment systems, where the action of the drill can trigger large numbers of early volunteer cereals to germinate. If early weed competition is not too heavy, particularly in ploughed seedbeds, a single graminicide application later in the autumn may suffice.

Butisan S and Katarman can both be used post emergence provided weeds are not beyond the max susceptible growth stage e.g. Marigold, Speedwells and Annual Meadow grass up to 2-true leaves and Mayweeds up to 4- true leaves.

Kerb Flo at 1.75 L/ha is a soil acting residual herbicide. It controls grassweeds, vol cereals, wild oats and a range of broad leaved weeds. Cleavers is moderately susceptible up to 2-leaves. Apply as a soon as possible after the crop has 3 true levels in the October to January period. Weeds take 4-12 weeks to die.

Treflan cannot be used after 20th March 2009.

Dow Shield cannot be used after 30th May 2009.

DISEASE CONTROL

The main diseases of concern are Phoma leaf Spot (Canker), Light Leaf Spot and Sclerotinia. Other diseases include Alternaria Black Spot which can infect pods and result in pod shattering but generally doesn't warrant fungicide application. OSR is also susceptible to Club Root (Finger & Toe) but rotation will take care of this.

A fungicide programme for the control of the main diseases Phoma and Light Leaf Spot will involve 1-2 fungicide applications.

Monitor crops closely in October-December to identify Phoma and Light Leaf Spot symptoms.

Apply an autumn fungicide (50% rate) when 10-20% of plants show symptoms of Phoma Leaf Spot and/or when symptoms of Light Leaf Spot are found before stem extension or if 25% of plants show symptoms at early stem extension. A second fungicide will be required if re-infection of either disease occurs in the spring.

Suitable fungicides include Caramba, Folicur, Punch C or Proline. Oak Park trials have not shown consistent statistical differences between products.

Triazoles with PGR activity e.g. tebuconazole (Folicur)/metconazole (Caramba) have the added benefit of reducing plant height and reducing lush crop canopies. This effect will increase branching and allow more light to penetrate the canopy after flowering.

Sclerotinia can occasionally be a problem in OSR. It also occurs in peas/beans, potatoes and some horticultural crops. Spores produced from soil borne resting spores infect OSR petals which then adheres to the leaves and stems. Assess risk to current OSR crops by taking account of previous infections, rotations and current weather.

Fungicides have very limited curative activity against Sclerotinia, so protectant applications e.g. Amistar should be used. Spray timing is more critical than product choice. The optimum is usually early to mid-flowering. Well-timed treatments are very effective; late sprays provide limited control.

In France, fungicide resistance has impaired Sclerotinia control in oilseed rape, particularly when using MBC fungicides alone.

PESTS

Slugs and pigeons can attack rape. Control slugs where anticipated by the application of metaldehyde pellets eg. Matarex or methiocarb pellets eg. Draza. Pigeons are usually only a problem on late sown crops. Shooting is the best method of control.

Flea Beetle "shot-holing" of young leaves is occasionally a problem but control is only warranted on late sown backward crops. The feeding action of aphids in the autumn

can cause serious losses to newly sown OSR and also spread viral diseases. Control Flea Beetle and aphids where appropriate with contact insecticides e.g. Karate.

Pollen Beetle are sometimes a problem at the green bud to flowering stage, control with Karate when numbers exceed 15-20 beetles per plant.

HARVESTING

Harvesting of winter OSR usually takes place around the end July-early August. The crop can be direct combined or swathed. Dessication e.g. Roundup and direct combining is preferable in weedy crops. Swathing is favoured in exposed locations.

Direct Combining, No Dessication, Pod Sealant

Lowest cost but higher moisture content and latest harvest.

Dessication and Direct Combining

Glyphosate products applied first around 14-21 days before harvest. Translocated so complete dessication. Controls scutch grass and perennial weeds. Use 20 gallons water/ac. Diquat products applied slightly later than glyphosate 7-10 days before harvest. Applied when all seeds in the bottom pods are brown/black and seeds in the middle pods are reddish to dark brown. Use a high water volume (30-40 gallons/ac) if possible, as spray is contact only. Pods become more brittle than with Glyphosate products.

Use high ground clearance tractor/sprayer as losses can be significant when dessicating.

SWATHING

Done approximately 6-7 weeks after the end of flowering. The seeds in the top pods are turning from green to brown, the middle pods are mainly brown and lower pods are darker brown. Need to leave 20-30cm stubble. Combining will take place 7-14 days later when all seeds are black depending on weather and site. Swathing will not control weeds as they are only cut. Suits exposed fields that are weed free.

Cost of swathing €15-20/ac depending on location from contractor.