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AGRONOMISTS BRIEFING

Growing HEAR Rape

Premium Crops is promoting the production of High Erucic Acid Rape (HEAR) for harvest 2016 onwards. . With low OSR prices, HEAR with it's £35/mt premium and minimum of £300/mt, any '00' grower should consider switching.

In This Issue

- Is it really an easy transition from '00' to HEAR?
- How growing HEAR increases OSR profitability
- Are HEAR volunteers an issue?
- HEAR varieties and their agronomic characteristics vs '00'

Although HEAR offers the grower the chance to grow Oilseed Rape with up to £120/ha more margin there are some common objections to growing the crop that need to be discussed and overcome;

- It will ″poison the land″ and contaminate the land irrevocably preventing future production of '00' varieties on those fields.
- The yield will be poorer
- The agronomic factors of the varieties are worse

Over the next 2 pages you will find out how growers of '00' Oilseed Rape can easily switch to HEAR to enhance their profitability.

Is it really an easy transition from '00' to HEAR?

HEAR is Brassica napus, the same species as '00' and '000' Oilseed Rape. The difference lies in the oil profile. HEAR contains around 50% Erucic acid compared with less than 2% in '00' and '000' low varieties but in other respects it is identical:

- Same agronomy as '00' Oilseed Rape
- Same output per hectare as '00' Oilseed Rape
- Same full FOSFA 26a oil, moisture and admixture bonuses as '00' Oilseed Rape
- PLUS a **premium of £35/mt** over '00' Oilseed Rape and a **minimum of £300/mt**
- HEAR varieties have similar yield and agronomic characteristics to “00” varieties, which means that there is no agronomic disadvantage to the growing of HEAR.

Potential Contamination ”00” / HEAR

There are 2 sources of potential contamination: Pollination from neighbouring fields of Oilseed Rape (see next page) and Oilseed Rape volunteers in the same field.

Rotational effects

The viability of seeds in the soil seed bank declines over time and work has shown that after 3 years the viable Oilseed Rape seed bank will reduce by 95%. Control of Oilseed Rape in cereal crops is extremely efficient, so it is safe to assume that no more rape seed will be returned to the seed bank during other 2+ years of the rotation.

Minimising Volunteers

Timely harvest to minimise seed shed and correct treatment of Oilseed Rape stubbles to minimise seed dormancy reduces further potential risk. Glyphosate applied pre harvest may also reduce seed viability and the use of pod stickers minimise pod shatter.

Oilseed Rape seeds have little primary dormancy, so once they have adequate moisture they germinate immediately. The seeds can acquire secondary dormancy and the major way to avoid this is to keep the seeds in the light. Do not cultivate the Oilseed Rape stubbles until at least 4 weeks after harvest and preferably just before planting the following crop. This allows shed seed to germinate as soon as it becomes moist enough and this flush of volunteers can be killed off prior to sowing the following crop.

Some Reassuring History

HEAR has been grown in the UK since 1986, currently accounting for >25,000 hectares/year. In those 28 years there has never been a single instance of a '00' Oilseed Rape crop being rendered unsalable by in-field contamination of HEAR, or vice versa.

Cross Pollination

Oilseed Rape pollen grains are relatively large (PM25) with a sticky outer coating – these characteristics do not lend themselves to travelling long distances.

Cross pollination reduces exponentially with distance so the 80/20 rule applies (where the first 20% of isolation distance gives 80% of the reduction of cross contamination).

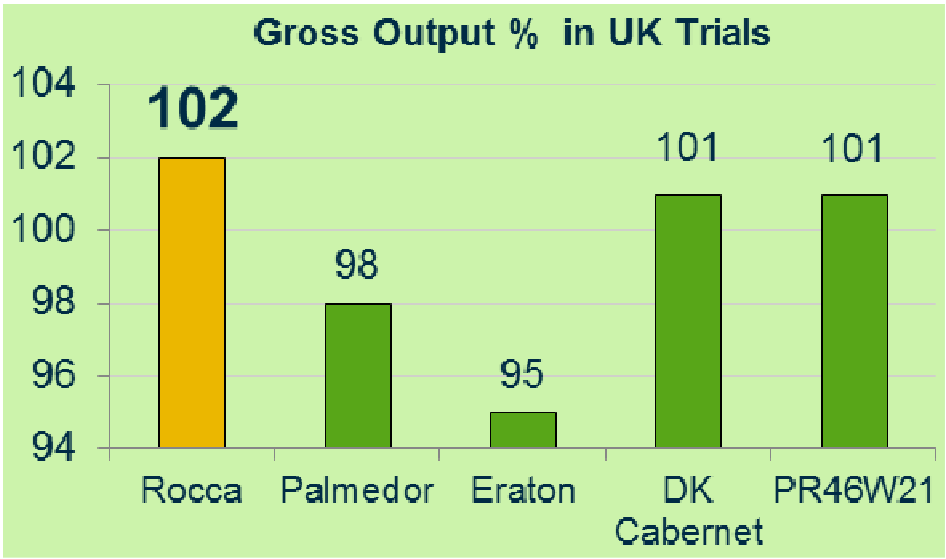
Integration of Cultivation for Minimising Oilseed Rape Volunteers

Cultivations over the rotation influences not only the Oilseed Rape seed bank but also the management of herbicide resistance of other weeds such as Blackgrass. Direct drilling/min-till increase the problems of herbicide resistance whilst being beneficial to the reduction of Oilseed Rape volunteers. Ploughing has the reverse benefits. Integration of the two cultivation systems can address both problems however. If ploughing in any one year, direct drill/min-till for the following few years. This will maximise the rundown of the viable seed bank over time whilst maintaining the benefits of burying resistant weeds to depth and allowing good chemical weed control in the shorter term.

Varietal Performance

New HEAR varieties have similar yield and in-field characteristics to "00" varieties, which means that there is no agronomic disadvantage to the growing of HEAR.

Palmedor has been the mainstay of HEAR production for the last 3 or 4 years, with the new variety Rocca available for 2016 harvest. This table shows their performance vs popular "00" standards.



Good Agronomic Features

		ROCCA	PALMEDOR	PR46W21
Plant Height (cm)	150	Medium	156	150
Autumn Vigour	6.4	V. Good	5.7	5.9
Spring Vigour	7.0	V. Good	6.5	6.7
Stem Stiffness at Harvest	5.8	Medium	7.1	7.0
Maturity	5.6	Med / Early	5.9	4.2

Good Disease Resistance

PH106 and Palmedor score well for both Light Leaf Spot and Stem Canker resistance and can therefore be grown successfully throughout the UK.

RESISTANCE TO		ROCCA	PALMEDOR	PR46W21
Light Leaf Spot	7	Good	7	5
Stem Canker	5	Med / Good	5	4
Verticillium	4	Medium	4	3
Downy Mildew	9	V. Good	6	Not avail.

In Summary

- HEAR varieties have a yield similar or equal to “00”
- HEAR varieties often have a higher oil content to give a greater bonus
- HEAR varieties are agronomically robust and no different to “00”
- HEAR volunteers do not pose a problem

As one of our growers said “We have grown HEAR for over 10 years and the premiums available have made it the biggest gross margin on the farm for many seasons. Why would you not grow HEAR?”

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