



Cover Crops Guide

Revised 2025

Growing sugar beet gives you a great opportunity to deploy cover crops on your farm and reap the potential benefits they may offer.

With government schemes available, such as the sustainable farming incentive, which reward you for using cover crops it is important that the risks of using a cover crop are carefully assessed. BBRO has prepared this guide to help you balance the pros and cons of the most popular cover crops, as identified in the 2023 BBRO cover crop survey, and help you choose suitable species for your farming system. A mix of two to three cover crop species offers a balance between cost and performance, so selecting species which complement each other is a good approach.

The tables give an overview of the key aspects of each cover crop species highlighting both the benefits and risks they pose to the sugar beet crop and wider rotation. These are split into agronomic aspects and pest and disease risks. These are general observations and may differ depending on how the cover crop is managed and are presented for guidance.

We encourage you to talk to your agronomist based on this information and if you require more guidance to contact us via email info@bbro.co.uk or phone 01603 672169.



Agronomic Factors

Cover Crop Species		Fodder/Oil Radish	Tillage Radish	Stubble Turnip	Forage rape	Brown mustard	White Mustard	
Binomial name		<i>Raphanus sativus</i>	<i>Raphanus sativus</i>	<i>Brassica rapa</i>	<i>Brassica napus</i>	<i>Brassica juncea</i>	<i>Sinapis alba</i>	
Recommended sowing date (following cereal crop)		Jul-Sep	Jul-Sep	Jul-Aug	Jul- Aug	Jul- Sep	Jul-Sep	
N fixer	Y/N	N	N	N	N	N	N	
Option to graze	Y/N	Y	Y	Y	Y	Y	Y	
Biomass produced	Low-High	Medium	Medium	Medium	Medium	Medium	Medium	
Improves soil structure	Y/N	Y	Y	Y	Y	Y	N	
Rooting depth	Shallow-Deep	Deep	Deep	Deep	Shallow	Shallow	Shallow	
Frost resistance	Low-High	Medium	Low	High	Medium	High	Low	
Volunteer risk	Low-High	Low	Low	Low	Low	Low	Low	
Ability to control in sugar beet	Low-High	High	High	High	High	High	High	
Seed cost	£ - £££	££	££	££	£	£	£	
Standard sowing rate (as straight)	(Kg/ha)	15	7.5	5	10	5	20	

Pests & diseases

BCN host	Y/N	Y**	Y	Y	Y	Y	Y**	
FLN host	Y/N	Y	Y	Y	Y	N	Y	
VY host risk***	None-High	Low	Low	Low	High	Medium	Low	
Aphid risk****	Low-High	High	High	High	High	Medium	Medium	
Wireworm host risk	Low-High -Reduces	High	High	High	High	Low	Low	
Slug host risk	Low-High	High	High	High	High	Low	Low	
Leatherjackets	Low- High	Low	Low	Low	Low	Low	Low	
Pollen/Nectar source	Y/N	N	N	N	Y	Y	Y	

*Can be sown later but N fixation may be limited ** Use of resistant varieties can help manage BCN. If using a brassica cover crop on fields with suspected BCN infestations, you must use a resistant example. If looking to actively lower a BCN population you should aim to use a Class 1 Radish or Mustard. *** Limited data from BBRO hosting trials. ****From observations in BBRO inoculated glasshouse trials

	Black Oat	Rye	Italian ryegrass	Vetch	Crimson clover	Egyptian/ Berseem clover	Red clover	Phacelia	Buckwheat	Sunflower
	<i>Avena strigosa</i>	<i>Secale cerele</i>	<i>Lolium multiflorum</i>	<i>Vicia sativa</i>	<i>Trifolium incarnatum</i>	<i>Trifolium alexandrinum</i>	<i>Trifolium pratense</i>	<i>Phacelia tanacetifolia</i>	<i>Fagopyrum esculentum</i>	<i>Helianthus annuus</i>
	Jul-Sep	Jul-Sep	Jul- Sep	Jul-Aug*	Jul-Aug*	Jul- Aug *	Jul-Aug*	Jul-Sep	Jul-Sep	April-June
	N	N	N	Y	Y	Y	Y	N	N	N
	Y	Y	Y	Y	Y	Y	Y	Y	N	N
	High	High	High	Medium	Low	Low	Low	High	High	High
	Y	N	N	Y	N	N	N	Y	N	Y
	Medium	Shallow	Shallow	Medium	Shallow	Shallow	Shallow	Medium	Shallow	Medium
	Medium	High	High	Medium	High	Low	High	Medium	Low	Low
	High	Low	Low	High	Low	High	Low	High	Low	Low
	High	High	High	High	High	High	High	Low	High	High
	£	£	££	£	££	££	£££	££	£	£££
	20-75	50-70	30-35	85	15	12.5	15	10	70	25
	N	N	N	Y	N	N	N	N	Y	N
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	None	Low	Medium	High	Medium	Medium	High	High	Low	Low
	Low	Low	Low	Medium	High	High	High	Low	Medium	Medium
	High	High	High	Low	Low	Low	Low	Low	Reduces	High
	High	High	High	Low	Low	Low	Low	Low	Low	Low
	High	High	High	Low	Low	Low	Low	Low	Low	Low
	N	N	N	Y	Y	Y	Y	Y	Y	Y

The information within this table has been obtained from a wide range of sources in order to provide as much detail on each species as possible. However, performance will depend on a range of factors, such as sowing date, autumn conditions, companion species, sowing rate and method of destruction. The details we have outlined for each species are general observations for when each type is grown under optimal conditions.



Oil radish



Tillage radish



Brown mustard



Stubble turnip



White mustard



Forage rape



Black oat



Rye



Italian rye grass



Vetch



Crimson clover



Egyptian/berseem clover



Phacelia



Buckwheat



Sunflower