

Agrovista
exclusive



Alvius wheat

CASE STUDIES 2023

Agrovista introduced Alvius autumn 2022 as a later drilling wheat type at a time when many farmers were aiming to drill winter wheat up to two weeks earlier than normal and many sizeable farmers had chosen to pull potatoes out of the rotation altogether.

What benefit could Alvius bring to the market in such a changing economic and agronomic environment?

“Had the seed arrived on time* I would have drilled this on better drained soils in November” said John Taylor, Clopton Suffolk, seed grower of Alvius autumn 2021. As it was the seed missed the drilling slot by one week and that land was consequently drilled with KWS Firefly ultimately yielding 9.67 tonnes per hectare following sugar beet. The autumn of 2021 turned into a very wet winter and the seed crop was eventually drilled on 3rd February 2022, after later lifted sugar beet into less-than-ideal conditions.

The go-to variety to follow later-lifted sugar beet normally selected by John would have been Belepi - a unique soft endosperm alternative wheat also managed by Agrovista and known for its rapid development in the Spring and an effective ability to out-compete blackgrass.

However, Alvius in trials has shown a sizeable yield advantage and where soft endosperm is not a preference, offers growers an improvement in performance and a six-month drilling slot mid-October through to the end April.

“I drilled 30ha of Alvius for seed and 6.0ha of Belepi for commercial use into a cloddy seedbed 2nd February 2022” commented John. “There was no apparent difference in emergence between them, though being a true spring wheat Alvius continued to grow through an initial cold snap, while Belepi was held back a touch” he continued.

John applied 180kg/ha of Nitrogen and 50kg/ha of Sulphur. The seed rate was 150kg/ha which in hindsight considering the dry conditions was too low. Variable costs for all inputs were £378/ha and a further £324/ha for establishment after sugar beet, drilling spraying and combining.



* Basic seed was delayed at Customs. Had it been processed at our own UK seed plant it would have achieved the November drilling window!

Following a very dry year where minimal rain fell from drilling through to harvest the Alvius across two fields achieved a yield of 5.72t/ha off 30ha while the Belepi totalled 4.88t/ha across 6.0ha. The Alvius, being grown for seed had three applications of fertiliser – Sulphur N (26N, 35 S03) on 16th March; then two applications of granular urea on the 26th April and 15th May. There was no late nitrogen application to enhance quality.

Samples were sent for seed and milling analysis with the following outcome.

Variety	Protein	Specific weight (kg/hl)	Hagberg (minutes)
Alvius	14%	77.4	351
Screenings through 2.25mm		Screenings through 2mm	
1.5%		0%	

Rheology analysis of the flour placed Alvius in the proximity of Group 1, but with necessary caveats that this was one sample from one grower, one location, one year.

The miller testing the seed commented “Normally, we would be able to point out a few concerns. It closely matches what I would consider the ideal test set of data for a variety” It is acknowledged that further testing of bulk tonnage from various growers and regions will be necessary before we can confidently advise on end market. The miller went on to say “This sample was good. If we could buy wheat of this quality, all the time, we would have a much bigger smile on our face than we do”.

The seed crop returned a gross margin after costs of £820/ha inclusive of seed premium which would have reflected a moderate milling premium had the crop been grown for that market.



We rarely achieve such a high specific weight from a spring-drilled crop. To be able to add value and achieve a high protein too without late nitrogen could be a significant benefit in the current times

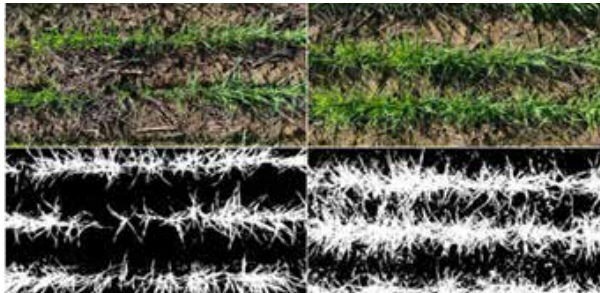
John Taylor
Clopton Suffolk

Flexible Sowing Date

Alvius has been bred to efficiently establish following late-lifted break crops such as sugar beet, making maximum use of moisture levels and shorter days and lower light levels as autumn sets in.

The following photograph looking at Green Area Index highlights the ability of Alvius (on the right of the image below) to enhance leaf number relative to winter wheat drilled at the same time.

The delayed arrival of the stock seed from Germany for John Taylor’s seed crop highlights that many factors beyond the grower’s control can negatively influence drilling date. Alvius can be drilled safely mid- October through to the end of April without any concerns regarding vernalisation or winter hardiness – Alvius has good resistance to cold conditions.



John Davey of E H Davey drilled Belepi as a second wheat late February 2022 and Alvius immediately next to it by comparison. Belepi was first through the ground, but being a winter wheat and winter dormant, the sharp frosts and cold rain experienced in March held the Belepi back, while the Alvius carried on establishing. The photograph above taken on the 18th April shows that Alvius is comfortable managing cold spring conditions, green canopy is marginally thicker and colour intensity marginally darker relative to the Belepi indicating its scavenging capability.

March 2023 was an exceptionally wet month and our spring trials in one location remain undrilled (at time of going to Press). Growers remain comfortable that with Alvius they can carry on drilling through April.

Two-year average performance at our AgX trial site in Cambridgeshire where varieties are drilled in November following contractor-lifted sugar beet - often not in the most ideal conditions, is a good indicator of how Alvius will perform elsewhere when conditions are tough.

2-Year November drilled Haddenham AgX following sugar beet

Variety	Yield			Spec weight		
	2021	2022	Mean	2021	2022	Mean
CHAMPION	11	14.71	12.855	59.5	79.8	69.65
EXTASE	9.85	14.35	12.1	63.1	83.2	73.15
ALVIUS	10.83	13.14	11.985	69	84.53	76.765
SKYFALL	9.54	12.93	11.235	62.1	83.7	72.9
BELEPI	9.28	12.7	10.99	63.7	81.17	72.435

Sample Quality

In last year's Agrovista Cereal seed brochure 2022 we brought to your attention the grain quality of Alvius compared to KWS Extase when autumn sown and KWS Cochise when spring sown. Last year's Mediterranean weather clearly benefitted early-to-harvest varieties, notably KWS Extase with few varieties achieving the same yield and quality.

Nevertheless, Alvius retained superior specific weight relative to KWS Extase across both seasons at the Haddenham AgX site (Table 1) and marginally out-performed the proven late-drilling wheat Skyfall at our heavy land site in Newmarket, Suffolk drilled through winter and into spring (Table 2).

Quality analysis Alvius wheat Newmarket harvest 2022

OCTOBER SOWING					
Variety	Hagberg	Protein	kg/hl	Screenings through 2.0mm sieve	Yield t/ha
KWS EXTASE	310	12.61	67.17	0.7	9.788
ALVIUS	380	13.55	67.53	1.2	9.672

NOVEMBER SOWING					
Variety	Hagberg	Protein	kg/hl	Screenings through 2.0mm sieve	Yield t/ha
KWS EXTASE	336	12.64	69.61	0.9	9.388
ALVIUS	400	12.95	70.18	1	9.61

FEBRUARY SOWING					
Variety	Hagberg	Protein	kg/hl	Screenings through 2.0mm sieve	Yield t/ha
KWS COCHISE	242	12.82	67.8	0.8	8.076
ALVIUS	385	12.79	68.9	0.7	8.125



Alvius was launched to Agrovista customers winter 2022, spring 2023. It is hoped where growers can store that we will be able to undertake milling quality trials later in the season to establish the varieties capability and maximise value. If it retains a flour rheology like that of our seed crop, then Group 1 premium may be available which will enhance further the varieties potential as a management tool to spread the drilling window following late-lifted break crops.



October-drilled Alvius has an appearance like other vigorous winter wheats such as KWS Extase. (North Lincs 18th April 2023).