



David Jones has grown forage maize for 25 years and relies on consistent year-on-year performance to underpin the ration for his 200 high yielding dairy cows.

CONSISTENT CROPPING SECURES PLACE FOR MAIZE

For Monmouthshire dairy farmer David Jones, there's no better source of homegrown energy than forage maize.

The crop has been grown for the 200-cow high yielding milking herd based at Hardwick Farm, near Abergavenny, for around 25 years, typically making up 45% of the forage ration alongside grass silage.

It's a crucial element in supporting yields of 10,500 litres/cow in the robotically milked herd, so consistent performance, year after year, is fundamental to success.

"In a very good year we can achieve up to 28 tonnes freshweight per acre, but more typically we're averaging around 18 tonnes/acre," says David. "At these average yields and producing forage that is 11.5 ME and 38% starch, forage maize has a relatively low cost per tonne for us and, as such a good source of bypass starch, is a key driver of milk production."

Attention to detail at every stage is critical and David is quick to recognise

the specialist input from his agronomist, seed supplier and local contractors J & S Agri who are involved from drilling through to harvesting.

In 2020, crops have averaged 18.8 tonnes/acre freshweight, hitting target yields despite variable conditions. The main area of maize was drilled around 20th April, going into the ground with just the right amount of soil moisture and performing better than later drilled crops that went into drier conditions in mid-May after first cut silage.

In most years David opts to grow his maize as a mixture, pairing a new high yielding variety with a longer established tried and trusted variety. In 2020, he grew 50 acres of the new high ranking second early hybrid Agagold alongside the longstanding consistent performer Rodriguez, both supplied by Field Options. Varieties were grown in alternate rows, drilled at 45,000 seeds/acre.

"We're constantly pushing performance, so want to use the best available varieties," says David. "By combining a new higher yielding variety with a longer established hybrid in this way we're ensuring the consistency of performance that is so critical."

A block of Agagold was first grown by David in 2019, standing out as an exceptional variety and contributing to



Growing a mixture of compatible varieties allows helps to ensure consistent performance whilst always pushing the boundaries with the latest top performing hybrids.

outstanding yields in that year.

All maize ground is soil tested, and the land close to the unit receives the optimum application of slurry whilst other land further away benefits from measured applications of chicken manure.

When conditions allow, a pre-emergence herbicide is used, but in 2020 conditions were *Continued >*



Forage maize was harvested in the first week of October this year, allowing time for a following crop of winter wheat to be established.

too dry for this to be fully effective so a post-emergence spray was used instead. A mixture of Callisto and Samson applied at around the four to five leaf stage proved suitable effective in controlling potential problems such as mayweed.

Another key factor in maintaining consistent performance is attention to detail in crop nutrition, with tissue sampling being carried out at about the five leaf stage to look for any trace element deficiencies.

“We’ve found there to be benefits in applying a foliar spray at the eight leaf stage, depending on the results of the tissue sampling,” adds David. “We find zinc and magnesium are often in short supply, and it’s also advantageous to give the crop a readily available source of phosphate at this time. We use a maize boost product that is taken up quickly by the crop and has a lasting impact.”

Maize is harvested to achieve a dry matter of 33-35% and in 2020 this was the first week of October. The policy at Hardwick Farm is never to follow maize with maize, growing the crop as part of a rotation. With modern varieties combining performance with a guaranteed maturity relatively early in the autumn, David is usually able to follow his maize with winter wheat.

Growing maize as a mixture

Combining varieties is a safe way to directly test and compare new hybrids or to combine different characteristics, according to Field Options director Francis Dunne.

The benefits can include improved yield stability and greater uniformity in the quality of silage produced. This is particularly important in high yielding herds, where variability in the ration can have a significant impact on performance.

There are some important guidelines that should be borne in mind, as Francis explains:

“First and foremost, it’s important to select the best varieties for any given situation,” he says. “Varieties that are grown together should be selected from similar earliness groups, and from a different genetic background. Avoid using any varieties that have a significant agronomic weakness.”

Whilst drilling varieties in alternate



Rye is a good option for September establishment, but it is important to use proven forage varieties and not grain rye.

rows is acceptable practice, to achieve the optimum performance from a maize mixture it is better to arrange the drilling sequence so that there is an equal spread of varieties for the forage harvester header width.