



**COPPID FARMING**  
ENTERPRISES

Grain Maize production in the UK.

The experience of a Dorset grower .



**VELCOURT**  
Europe's leading farming company



**Crichel Down Farm - Dorset**




Who are we?

- 1250 ha cropping with 600ha of woodland.
- Family owned and part of a 3-farm business.
- Light chalk soils with clay cap, some heavier loam.
- Wheat, Barley, Rye, HEAR, Beans, Grass & Maize
- CSS and shoot.
- Velcourt management agreement.
- 3<sup>rd</sup> party crop storage.
- Livestock tenants.



### The Boat was being rocked.....

Three key drivers for changing what we do.



#### Reduction in Support

Post EU, what was the fate of BPS?



#### Maintain organic matter in soil

The legacy of livestock was running out.



#### Rotations

Tight arable rotations were already leading to problems.



### Finding the perfect break crop - you can't!!



#### Threats to OSR profitability

Threats from dry seedbeds and flea beetle attack have reduced the profitability of oilseed rape crops.



#### Market volatility

Exposure to volatile world markets mean that pricing is not always guaranteed. With most combinable crops.



#### Managing workload

The problem of managing the workload during planting and harvesting.



#### Matching the returns of OSR

Being conscious of equalling the financial return of a rape crop.



#### Finding a Market

Ensuring that you have somewhere to sell the product.



### The Solution: 100ha of Maize



#### Crop storage

Here at Crichel we have 7000t of silage clamp capacity and up to 14,000t of grain storage.



#### Machine capacity

The drilling slot for maize is after other spring cropping, few spray passes required. Harvest is after autumn drilling.



#### Good break crop

While not a true broad leaf break crop, still gives opportunity for the use of different herbicides.



### The Product



#### Establishing partners

A customer for crimped maize was found. A supply agreement was then drawn up.



#### Other farms to boost tonnage

Using other Velcourt farms in the area to produce enough for our customer.



#### New market for dried maize

An opportunity to grow more maize for the bird food market.





## Establishment:

Seed bed is critical!

- Soil temp is above 8°C.
- Retain moisture.
- Remove all compaction.
- Remove clods.
- Seed rate - lower than forage (94K/ha- 38K/ac)
- Seed bed nutrition – DAP
- Decide on row width.
- Match drill size to header size.
- Avoid overlap - use of auto shut off.



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## Crop management:

Use the same program as forage maize.

- Even post OWS - plenty of time for Glyphosate.
- Seed bed nutrition - starter fertilizer.
- Plenty of Potassium. Critical for early maturity.
- Robust and early N program.
- Watch for slug damage.
- Pre- emergence herbicide???
- Post emergence herbicide.
- Keep your game keeper on side!



## Capital expenditure:

- Not essential! Plenty of contractors with the correct equipment.
- Better control of timings.
- 2nd hand header imported from Germany.
- Plastics and clamp coverings.
- Shear bucket for loading out.



### Crimping Maize.



#### Knowing the moisture.

Grain moisture will dictate the choice of additive to be used.

A *Wile® 65* gives readings up to 40%

Independent tests to determine DM%



#### Additive

The simplest method of preservation is using Potassium Sorbate.

We use a *Pioneer®* microbial formulation for stabilization of clamp face.



#### Match Crimping to harvesting.

It is essential that all that is harvested in a day is crimped in the same period.

Higher dry matter maize will crimp faster.



### Crimping and clamping:



- Same fundamentals as other silage making.
- *AG-Bag®* an option.
- Use of air block layer and tire side walls.
- Squirrels are never your friend!!



### Crimping and clamping:

Consolidation of product:



Clamp face at load out.

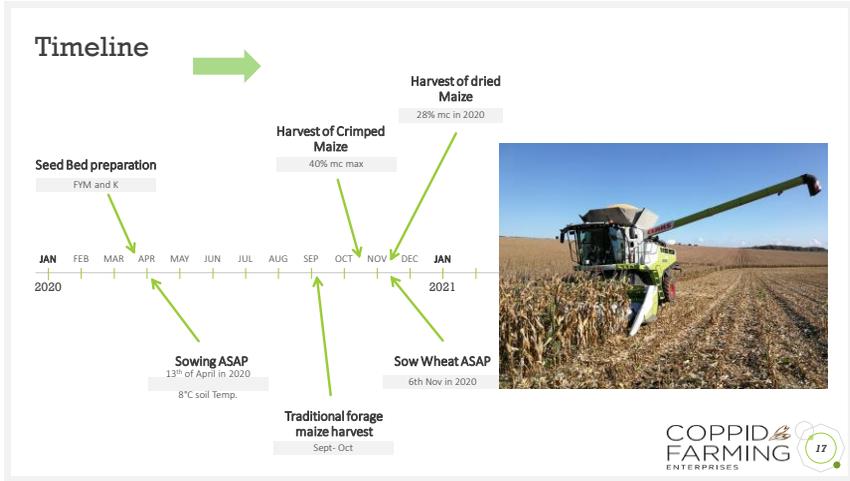


### Dried maize:



- Again – match harvesting to drying capacity.
- Use ambient air first if possible.
- Ensure adequate ventilation!
- Have moisture meter calibrated for maize.





### Post Harvest planning:

Crimped grain maize timing can offer good entry timings for 1<sup>st</sup> Winter Wheat crops.

**Environmental benefits from Grain maize:**

- Harvest process leaves a high residual organic matter 'mat'.
- Spring working of soil leaves it friable through to autumn.
- Plan to create a cover crop as a minimum.

**Opportunity for another 1<sup>st</sup> wheat in a rotation**

- Have resource to plant the crop as soon as the combine has cut the maize.
- Choose hardy varieties and use robust seed rates.
- Forcing late drilling can help battle grass weeds and Septoria.
- Avoid tined no-till drills.

**Luck and planning!**

- Weather is critical - luck.
- P.P.P.P.
- Dried grain maize needs even more luck!
- Have the whole fleet ready for action.
- Be flexible about the method of establishment.
- Be determined.

Shallow till of maize stubble with seed broadcast.



Germination, December 22<sup>nd</sup> - Needs rolling and no Pre-em.



GS 60. var. Dunston broadcast Nov. 19th, 2019.



m3 head count of 580. Dried yield of 11.2 t/ha. across the block that was broadcast.



## How does grain maize stack up?

DORSET FARM WITH OWN EQUIPMENT:	First Wheat	Crimped Maize	Dried grain Maize	HEAR OSR
<b>Produce</b>				
YIELD/HECTARE	10.8	10.8	8	3.5
PRICE/TONNE	£170.00	£140.00	£217.00	£400.00
PRODUCE SALES/HECTARE	£1,836.00	£1,512.00	£1,736.00	£1,400.00
<b>DIRECT COSTS /ha</b>				
SEEDS	£68.00	£120.00	£120.00	£118.00
FERTILISER	£206.00	£238.00	£238.00	£220.00
HERBICIDES	£89.00	£81.00	£81.00	£75.00
FLUNGICIDES	£91.00	£0.00	£0.00	£46.00
GR. REGULATORS	£18.00	£0.00	£0.00	£0.00
INSECTICIDE	£21.00	£0.00	£0.00	£35.00
OTHER SPRAYS	£4.00	£2.00	£2.00	£16.00
Drying/ crimping	£43.20	£108.00	£144.00	£16.00
		•		
	Total	£549.20	£585.00	£526.00
<b>Gross Margin /ha:</b>	<b>£1,295.80</b>	<b>£963.00</b>	<b>£1,151.00</b>	<b>£874.00</b>
	* generally less/ ha in wheat actual in maize.			



## Summary

Grain maize – a good break crop, but one that needs some adjustment to standard arable farm practice.

- Once a reliable market has been found then the crop has the potential for excellent returns.
- A good break crop.
- Be aware that this cropping may affect other rural land use.
- The ability to spread risk and workload.
- Correct crop management needed to ensure early harvest.
- There is an increase in workload so keeping the team on side is essential.
- A greater amount of organization is required to ensure crop is stored properly.
- Flexibility required for following cropping.

