**February 2013**

As the snow falls in February there is much planning and decision making to address over the next month or two.

A lot of debate is reigning over to plant spring crops or not, seed availability and costs. The dominating factors to all this of course the weather which determines if it will happen at all. Opportunities seem to be lessened each time it rains and the window for sowing winter cereals is nearing an end.

Crucially the damage already done by exhaustive and persistent precipitation has left much arable land in a desperate state of repair. Without dwelling on rainfall figures the damage caused is one of de-structuring soils even in the absence of poaching, nutrient leaching and the overwhelming of drainage systems resulting in some fields at field capacity.

Agronomically the year ahead will be challenging and making the right decision now will influence not only this year’s crop and yield but those in years ahead and more importantly profitability.

**Soil management**

For a soil to remain fertile it must contain air, water and nutrient and obviously texture i.e. clay, silt, and sand. If an in balance occurs this effectively blocks the soil from being a good growing medium and any one of the above factors will cause this. It’s not too difficult to realise that soils are currently anaerobic and contain little oxygen. Oxygen allows nutrient to convert by oxidization so that natural soil processes occur and applied fertiliser’s are able to become available plant foods. Water logging will kill soil bacteria which are essential to this process. This explains why applying additional N to wetter areas simply does not work as lack of oxygen prevents the N converting to an available form.

It is likely significant quantities of Nitrogen, Sulpher, Potash and Lime will be all have been lost over the last few months particularly on poorly structured soils more prone to leaching; those are in essence anything without a significant clay content to bind them to soil particles. Barley and sugar beet are lime sensitive crops and may fail in low ph soils.

From a cultivation point of view the decision is inversion i.e. ploughing or non-inversion techniques which may be shallow or deeper cultivation. All trials to date show the highest yields from ploughing but margin over cost may make the alternative more profitable. In the current environment the benefits to drainage from ploughing may be considerable and increasing aeration to create a tilth may have its advantages but on more bodied soils the lack of friability may counteract some of these benefits. There is not a wrong or right but to use a most suitable option to suit each situation ploughing dries quickly in the Spring! Deep cultivation should be left until summer when drier! Soils will heave more easily.

**CAP Reform**

With the ball now rolling it is likely we will see a new CAP policy ratified by June 2013 with the existing scheme phased out next year and the new one starting January 2015. Two main components under consideration are the likely compulsory introduction of crop rotation and some environmental schemes linked to it. It may be worth planning forward to adapt from mono-culture to a sustainable rotation should this come into effect

**Yield Plateau -** this is the buzz word for the season.

A lot of surveys are exploring what is restricting yields from advancing when seed variety breeding programs continually advances.

Generally we have pest and disease concerns under control the intervention of new S.D.H.I fungicide has given a much more powerful range of fungicides which have helped out yields last season in a lot of cases giving 100 % increases. The triazole technology failed badly alone dealing with heavy septoria pressure. That said the emphasis is now on nutrient enhancement. We know Sulphur is essential in all cereal and oil seed crops and contributing yield in all situations. Nitrogen usage has decreased latterly and usage should be increased to optimum to match the higher commodity price. Micro nutrients are heavily under estimated to allowing utilizable NPK and stress reduction in the plant. Principally magnesium and manganese in cereals but recent trial work is showing other lesser elements contributing to yield increase.

**Crop Management**

Slugs will potentially drown in water logged soils but the eggs are unaffected. Huge populations have increased numbers above that of seed numbers per meter so control must be maintained at every opportunity. Slug control is cost effective compared to re-drilling!

Over wintered crops are small backward and have limited root mass. Root enhancing products in conjunction with PGR will promote root and tillers and early nitrogen is required to sustain tiller survival. Shallow rooted plants are less able to access fresh phosphate necessary for strong rooting.

Di-ammonium Phosphate (DAP) is the most soluble form of phosphate and delivering Nitrogen at the same time maybe a consideration even at small degree to this year crops.

Building these backward crops to maximize them is challenging but small regular applications of N and maybe P coupled with foliar elements if there is sufficient leaf will help considerably on backward crops.

Black grass currently is small and suffering to a lesser extent the cold wet winter. Optimum control is achieved once growth has started with newer technology requiring some soil temperature. Current soil temperature is around 2-3 degrees C, 5-6 degrees C is optimum but maybe not achievable without a considerable improvement in ability to travel. The larger the plant the more difficult it is to control even though the target leaf increases. Difficult to predict when the majority of grass has germinated given the cold wet winter and with most crops getting one hit its important to get it right.

Comparative crop gross margins

Crop price yield variable cost gross margin

Winter feed wheat 180 9 500 1120

Winter oilseed rape 370 3.5 450 845

Spring wheat 180 7 370 890

Spring Barley 165 6 300 690

Spring Linseed 380 2.2 250 586

Sugar Beet 27 70 1000 890

Spring Beans 220 3.5 240 530

All yields and variables are only an indication but the trend between crops is the same so the margins are comparable.

Apologies for the length of this newsletter but hopefully these are valid technical discussions.

I intend to update through the growing season on our website so please check in for current topics.

Hopefully the weather will improve and allow some crop drillings in very near future.

**Tips**

1) Avoid using very cold water for spraying as products are less tank-mix friendly in cold

temperatures. Water stored at ambient temperature is preferable.

2) Always use a ph buffing product with glyphosate, organo-phosphate insecticides and

sulphonyl-urea herbicides. Even in non-hard water areas a buffer will protect the product in the

tank from damaging ions in the water, always add buffering agent to spray tank first.

3) Spreading and sticking is essential to improve product performance particularly onto small

targets e.g. black grass

4)Apply Nitrogen as soon as possible to oilseed crops and Sulphur in March.