

Get The Pulse Back Into Your Rotation

Simon Clark, Agronomist at Harlow Agricultural Merchants takes a look at pulses; their weeds, pests and diseases and recommendations for the protection of water quality...

Well, no matter how long you have been farming one thing is definite, no one season is the same and there always seems to be another new challenge. The Basic Payment Scheme has resulted in changes, but one good thing that has come from it is perhaps the increase in the pulse area. Pulses now count as part of our ecological focus area which has to be 5% of eligible land, with 0.7 ha EFA counting for every 1 ha of pulses grown.

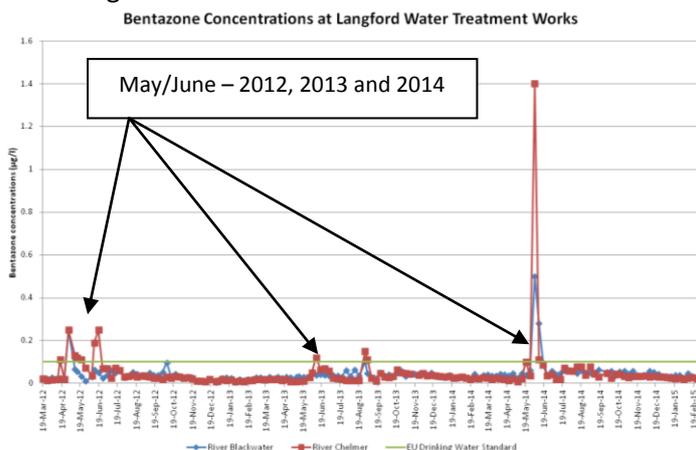
Pulse crops, if managed well can provide a profitable alternative to OSR, beans having fewer pigeon issues and peas usually have fewer flea beetle problems. Pulses can provide an opportunity to spring drill, gain valuable blackgrass control and spread out workloads.

Weeds

Weed control in spring pulses relies on pre-emergence herbicides, and failure to apply these leaves very few options. Bentazone (Basagran) is the main post emergence choice, it has a limited weed spectrum, cannot be used during very warm temperatures (above 20°C) and is a product that we need to keep out of watercourses. We have historically seen a rise in bentazone levels in rivers in the Chelmer and Blackwater catchments at the end of May/beginning of June and we must endeavour to reduce this, particularly as the pulse area has increased, potentially increasing the

“Take care with bentazone (eg. Basagran) applications this Spring”

risk.



Where cleavers are a problem, clomazone (Centium) is an ideal choice. This can be mixed with pendamethalin to provide a good broadleaved weed spectrum. Nirvana is another popular product, but recently I have been disappointed with the cleaver control and have added a low dose of clomazone, which has improved the efficacy.

Water Protection Advice

In order to keep pesticides out of the watercourses in our catchment, please follow basic water protection guidelines and discuss the following with your sprayer operator and your agronomist for your pulses this Spring in order to retain our leading water quality:

- Point pollution sources (farmyard runoff, spillages) must be avoided – please do use your drip tray or bunded filling area.
- Take care when filling and cleaning the sprayer.
- Use a 6m grass buffer strip or 5m no-spray zone adjacent to watercourses.
- Do not apply when heavy rainfall is likely within 48 hours after application.
- Do not apply when soils are cracked or saturated.
- Reduce bentazone dose rates (<1000 g ai/ha/year) as far as possible.

Pests and Diseases

The first pest which affects spring pulses and is often underestimated is pea and bean weevil, by the ‘u shaped’ notches along leaf margins. The physical damage to the plants can at times delay growth but the fundamental reason to spray is the damage the larvae do to the root nodules. This damage reduces the nitrogen fixation that the plant requires whilst growing and once damaged the nodules produce little residual nitrogen for the following crop, one of the key benefits from having pulses in the rotation.

Peas are more susceptible to aphid attack than beans, the pea aphid, an alarmingly large green aphid can be found pre flowering often enclosed in the flower buds. It is important to use an insecticide with a fumigant activity (pirimicarb) along with a contact product (pyrethroid) as control is difficult, due to the protection for the aphids from the flower buds. If left untreated these aphids can reproduce quickly and soon reach damaging numbers. Thrips can also be a problem but are also controlled by these insecticides.

Disease levels in pulse crops can vary in their severity and are more weather dependent. Chocolate spot (see picture overleaf) and the aschochyta complex are more prevalent during periods of prolonged overcast humid weather. The chocolate coloured lesions can coalesce and form larger grey lesions destroying green leaf area if treatment is delayed,

stems and pods can also become infected. Treatment is advised at an early stage usually with at least two sprays, in beans the second spray should also target bean rust. Alto Elite containing a triazole and clorothalonil is an ideal first choice, and the addition of azoxystrobin to the second spray increases rust control.



Bean rust can become problematic and develop quickly under hot dry conditions the brown pustules are easily identified by a light coloured surrounding halo, later these pustules turn an orange brown when spores are released.

Bruchid beetle are the scourge of most bean crops, this pest can severely damage bean quality with the larvae eating their way out of the bean to produce the holes that are commonly seen. The beetles lay their eggs on the small developing pods and are not mature until they have feed on pollen for around two weeks, so don't spray too early! The threshold of two consecutive days at 20°C once the pods on bottom trusses are two centimetres long is now recognised as the ideal timing. If in doubt there is a useful forecasting system called BruchidCAST that indicates potential spray dates using e-mail alerts from Syngenta. A follow up spray 10 days later is required and possibly a third may be needed. The main objective is to ensure your spray quality and water volumes



allow the insecticide to reach the pest, so good canopy penetration is essential.

If growing peas then pea moth (left) should not be forgotten as this will damage pea quality and

is particularly important if growing human consumption varieties. The spray timings are best predicted by placing pheromone traps in the field, once threshold have been reached the PGRO can be contacted and will advise on the specific spray date for your location.

Peas are also very susceptible to manganese deficiencies resulting in a condition called marsh spot, which is a brown discoloured area in the centre of the pea affecting quality and end market choice. When manganese sprays are applied with the fungicides good control levels can be achieved, but ensure you use high enough rates of manganese.

Pollinators

Importantly if you grow pulses don't forget the pollinators, recent research has shown that they can increase the yield by up to 40%. Bees are the main pollinators although hover flies can also help. Honey bees and mason bees are quite effective but most beneficial bee is the bumble bee. So encourage any bee keepers to your crops and if pulses are a long term part of your rotation consider pollen and nectar mixes to further encourage bees to the farm.

Interestingly, whilst our pulse area in the UK has increased over the last couple of years we still have a long way to go to get close to India's production. India produces 15 – 17 million tonnes compared to our 40,000 tonnes and is the world's largest importer producer and consumer of pulses. The pulse market worldwide is some 65 million tonnes and pulses are grown in 170 countries around the world.

Now Spring has finally arrived, we should have a good start for our spring pulses, keeping pesticides and water quality in mind. Now it just leaves combining and marketing to get right, so no pressure or stress there then!

Water Capital Grants

The deadline for submitting your grant scheme application this year is Thursday 30th April.



Grants up to £10,000 at 50% funding are available for a range of items including: sprayer filling areas, hardcore tracks, concrete for livestock yards, watercourse fencing and more.

This year is the last year of the grant in this format, so make the most of the opportunity now. For advice and more information, please contact Teresa on 07792 169545.

Newsletters and Event Invites

Would you prefer to receive your newsletter and event invites from the Chelmer & Blackwater Catchment Partnership via e-mail? Would you like your Farm Manager or employees to be sent a copy or invites directly? Or have your details changed?



If so, let us know and we can amend our records to reflect your preferences. Phone or text Teresa Meadows, Chelmer and Blackwater Catchment Advisor on 07792 169545 or e-mail teresa.meadows@nwl.co.uk.

Look out for the next catchment newsletter: Summer 2015

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