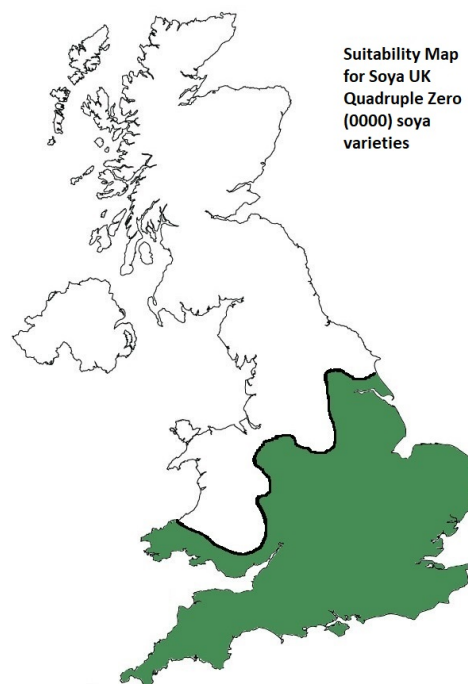




SOYA (Agronomy Summary)

Key Points

- Get a good seedbed, avoid compaction, conserve moisture.
- Sow at 1-1.5 inches into a warm bed from 25th April at the very earliest.
- Max depth 1.75 inches – important.
- Apply pre-emergence herbicide.
- Include Lambdastar with the Pre-em herbicide.
- Keep pigeons away for 2-3 weeks during establishment.
- Do post-emergence weed control.
- Tank-mix a fungicide with the post-em weed control if the field has a history of sclerotinia.
- Give a foliar feed in July to boost yields.



PHOSPHATE, POTASH & MAGNESIUM

Apply as follows:

Soil Index	0	1	2	3	4
Phosphate (Kg/Ha)	75	50	30	0	0
Potash (Kg/Ha)	120	50	30	0	0
Magnesium (Kg/Ha)	85	0	0	0	0

Put into the seedbed or on top immediately after sowing

NITROGEN & SULPHUR

- Although soya is a legume it needs access to a small quantity of nitrogen in the seedbed. If this nitrogen is already present, then no additional Nitrogen should be applied.
- With decreasing sulphur deposition from the air most crops will probably benefit from a sulphur application.
- Crop requirement is 15kg/Ha of sulphur and 25kg/Ha nitrogen in the seedbed

PRE-INOCULATION OF SEED

The nitrogen-fixing rhizobium bacteria for soya is not native to the UK. They must be introduced as a seed inoculant. The old procedure of using separate inoculant packs has been largely replaced by our new system of pre-inoculating at the seed plant. Pre-inoculation is exclusive to Soya UK Ltd, and is popular with growers since it is easier and offers a number of advantages.

SOWING DATE & DELIA BEAN FLY

The perfect sowing date is during the last week of April or in early May. Hard experience has shown us that it is advisable to add some Lambdastar to the pre-emergence spray to deter any delia bean fly (bean seed fly) that may be around. Bean seed fly can be a quite damaging pest if you are unlucky enough to get it, so crops should be protected with an application of Lambdastar, which is usually tank-mixed with the pre-em chemicals and applied as soon as possible after the crop has been sown. Previously, this was regarded as optional, but given that the Lambdastar is cheap and highly effective, we now regard it as essential.

DRILLING

Soya does not like compaction, nor does it like being sown too deep. Where using a conventional cultivate & drill approach, you should aim for a fine, moist seedbed, free from compaction. Because drying out in the seedbed is one of the most common causes of problems with soya, it is essential to get the seedbed or sowing conditions right. Depth control, moisture conservation and avoiding compaction are all key to good soya establishment.

Where direct-drilling the crop, the key is depth control, covering the seed correctly, and not smearing the slot. Direct drilling works well on light land, but can be a challenge on heavy land where compaction, smearing, and baking out can all be disastrous.

- Drill seed to 2-4 cm depth* (1-1.5 inches) - THIS IS IMPORTANT – DO NOT DRILL TOO DEEP
- Avoid compaction – soya doesn't like compaction.
- Do all you can to retain moisture in the top tilth.
- Normally the crop would be lightly rolled prior to the application of the pre-emergence herbicides. Do not roll if it is inappropriate or if it is too wet and there is a danger of capping the seedbed.

PRE-EMERGENCE WEED CONTROL

The crop will require a pre-emergence herbicide. Approved products are Stomp, Gamit, Nirvana and Artist. This is a strong suite of products and allows for good, effective pre-emergence weed control. Artist is particularly useful against grass weeds.

- Pre-emergence herbicides only work if there is moisture present when they are applied.
- Spraying immediately up behind the drill/roll will give the best results.
- Make sure you include the Lambdastar with the Pre-Em herbicides.

POST-EMERGENCE BROADLEAF WEED CONTROL

Post-emergence herbicides are usually necessary, but thankfully, soya has a better range of options than other legume crops like peas, beans or lupins.

Broadleaf control is usually achieved using either Basagran or Pinnacle. Pinnacle contains Thifensulfuron, and is generally a much better option than Basagran. Pinnacle is cheap, and highly effective against a very wide range of the usual weed spectrum. Both products have EAMU's. The best approach is to apply a low dose of Pinnacle soon after the crop has emerged in late May or early June. A second application, tank-mixed with a simple fungicide is then applied in mid/late June. Pinnacle can also be tank-mixed with Basagran for added effect.

POST-EMERGENCE GRASS WEED CONTROL

Both Laser and Fusilade Max have EAMU's which apply to soya. In addition, we hope to receive an EAMU for the use of Clethodim during the course of the 2020 season.

FUNGICIDES

Soya usually doesn't suffer any pest or disease issues, but sclerotinia can be a problem on land where there is a known threat. Modern varieties are much less susceptible to sclerotinia, but we also recommend growers tank-mix some Azoxystar (Azoxystrobin) with the Pinnacle application in early June. This is a cheap insurance and greatly reduces the incidence of the disease.

DESICCATION – Beyond Reglone

In the classic scenario, modern varieties of soya will mature by themselves. Normally the crop will begin to senesce in late August and by around the 20th September, will be reduced to a field of brown stems with mature pods and no leaves. Theoretically, with good weed control, a desiccant is not necessary, however in reality some crops often need some desiccant to deal with weeds or uneven areas. Traditionally, diquat was used for this purpose, but with harvest 2019 being the last year for Diquat to be used, we are also experimenting with alternatives such as Spotlight or Gozai. We are not happy to lose Reglone, but we feel that it is less of a problem for soya, than it is for other crops. Do not use glyphosate – it is usually a bad idea and it doesn't work.

PROBLEMS (and how to fix them).

Experience has shown that there are 4 threats to soya; Dry seed beds, compacted seed beds, drilling too deep, and pigeons. Of these, the dry seedbed is by far the greatest threat. Happily, soya does not suffer from any dramas at harvest time, it is easy to cut, dry and handle, and does not suffer from pests or diseases during the season, so 95% of the management is in getting it established to around 60 plants per square metre.

Seedbed moisture must be foremost in our mind since it is the key to success with soya – especially since it is essential that soya is not planted too deep (absolute max of 2 inches). It is also a function of the late sowing date, so it is essential that the seedbed moisture is managed closely.

Pigeon attack is less of a threat as long as reasonable measures are employed. The 2 to 3 week period from emergence until the first true leaf has fully emerged is the period of susceptibility to pigeon attack. In bad cases, the crop can be severely damaged or wiped out. Where reasonable measures are employed, there is usually no problem.

Delia bean fly was a serious problem in years gone by, but can now be very effectively mitigated by tank-mixing Lambdastar (Lambda-cyhalothrin) with the pre-emergence herbicide.

If the crop is nice and thick and the land has a history of sclerotinia, then it is definitely worth adding Azoxystar (azoxystrobin) to the post-em weed spray (Pinnacle) in early / mid June.