



## RECOMMENDED LISTS

### **AHDB Descriptive Lists (RL) for cereals and oilseeds: Spring Linseed protocols (2022–26)**

This protocol was believed to comply with relevant agrochemical, environmental and other regulations at the time of writing but it is the responsibility of the contractor to ensure that it continues to comply. In the event of non-compliance the protocol should not be followed but the Field Trials Manager should be notified at once of how the protocol requirements would breach regulations.

Any deviation from this protocol other than under the circumstances described above may result in a breach of contract and should be agreed in advance.

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AHDB Cereals & Oilseeds is a part of the Agriculture and Horticulture Development Board (AHDB).

### Changes from previous version

All	Removed	References to Flax varieties have been removed as these are now in a separate trial
P5	Removed	<b>Flax types</b> Fibre flax varieties will either be blocked separately within trials, and this will be shown in the trial plans, or they will have a separate trial.
P6	Removed	and 800 plants per m <sup>2</sup> for flax varieties,
P7	Added	If sulfonyl urea herbicides are used they should be applied at no more than half the product label rate.
P7	Removed	Napropamide e.g. Devrinol
P7	Removed	Clopyralid + picloram e.g. Galera
P9	Changed	A typical rate of nitrogen is to use 80- <b>100</b> kg/ha to A typical rate of nitrogen is to use 80- <b>110</b> kg/ha
P9	Changed	at early stem extension. to not later than when the earliest variety is at mid stem extension.
P9	Added	Delayed migrations caused by low spring temperatures can be more intense resulting in potential for more significant damage.

Please read the whole protocol to ensure you have noted all the changes.

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## **Part 1: General information**

### **1.1 Trial distribution**

Four untreated replications.

Trials may be co-located or combined with NL varieties.

SL415	South-East England
SL416	Eastern England or Midlands
SL417	South-West England
SL418	Eastern England
SL419	Eastern England

### **1.2 Trial Design and treatments**

Trials will be untreated only.

Trial design will normally be an incomplete block design.

Sowing lists and trial design will be specified by the Field Trials Manager and RL Data Team. It is important that any change to the drilling layout is discussed and agreed with the Field Trials Managers beforehand.

Replications: Four

## **Part 2: The trials system**

### **2.1 General**

The trial operator will be responsible for the choice of site, and for the establishment, supervision, recording and harvesting of the trial.

The trial must be located within a commercial crop to aid management and reduce the risk of flax flea-beetle damage. The Field Trials Managers Team should be consulted if this proves impossible or impractical.

The previous cropping must be appropriate for a linseed crop and should have no history of Fusarium wilt or likely herbicide residues that could damage the crop. There should be at least a three-year (and preferably five year) gap between linseed and any other linseed or flax crop. The trial must not be located on land that has been used for trials in the previous 12 months.

Flax flea beetles overwinter in woodlands and migrate into the crop in spring. Trials should be sited away from woodlands. Physical barriers including hedges and taller crops may reduce the migration into the trial from overwintering woodlands. Avoid following a previous winter or spring oilseed rape crop.

#### ***Genetically modified (GM) varieties***

There are no GM varieties in Recommended List or Descriptive List trials. RL or DL trials must not be grown on, or near, land that contains, or has contained, genetically modified (GM) plants without the

express permission of AHDB. Seed suppliers will be required to give written assurances that all reasonable steps have been taken to prevent the adventitious presence of GM material during breeding, production and handling of the seed submitted for trials.

The varieties/seed submitted will be:

- varieties bred from parent plants that have not been genetically modified.
- produced from plants grown under appropriate isolation conditions and isolated from transgenic lines.

A site should be chosen that will avoid problems from previous cropping e.g. linseed volunteers or herbicide effects from a previous crop. There should be:

- a minimum of three years (preferably five years) break since a linseed or flax crop
- no history or risk of Fusarium wilt
- a low risk of bird or rabbit grazing
- no potato or other root crop volunteers
- no risk of herbicide residues

In principle, cultivation and agronomy should follow best local practice.

Records should be clear and self-explanatory so that the trial can be taken over at short notice by another officer without difficulty.

The seed has been supplied for trial purposes only and must not be used for further multiplication or any purpose other than that specified by AHDB, unless special permission has been obtained. It is frequently supplied for testing on the condition that it is not multiplied for other purposes, and it is the responsibility of the officer in charge of the trial to ensure that this does not occur.

A decision to abandon a trial must only be taken in consultation with the Field Trials Managers Team

## **2.2 Randomisation of trials**

The RL Data Team will generate trial workbooks/plans. They will be transferred to the appropriate trial centres in electronic format as Excel workbooks (one for each trial).

In an incomplete block design, any splitting within superblocs must ensure that sub-blocks stay complete. Any movement of varieties to avoid clustering must be within sub-blocks and not between them. If there are any problems with the plan or in adjusting it to fit into the field, the RL Data Team should be consulted.

If the trial has not been sown to plan, confirmation of the changes must be received clearly marked on the trial layout. A new workbook is likely to be issued to you with updated data tabs to reflect these changes and prevent confusion at time of data submission.

## **2.3 Plot dimensions, discards and surround**

It is essential that the plot size suits the intended plot equipment and contractors should discuss their plans with the Field Trials Managers prior to drilling to ensure that this is the case.

Plots should be drilled to a greater length than required and cut back to the required length prior to harvest. The plot width for calculating harvested area is measured centre gap to centre gap with an inter-plot gap in the range 0.5m to 0.8m.

Plot size should be sufficient for a harvested area of not less than 20 m<sup>2</sup> (four reps). Bordered drills may be used and must have a minimum harvested area of 18m<sup>2</sup>.

There should be an area of at least two metres of linseed discard crop immediately surrounding the trial area and at least one discard plot at the end of each block/rep.

Where the risk of flax flea beetle is high additional buffers and discard should be used to reduce migration into the trial.

## **2.4 Trial seed**

### ***Supply of seed to trial operators***

Seed supplied to trial sites may be chemically treated as bulks sufficient to sow the specified trials. Details of the chemical seed dressing will accompany the seed. It is the responsibility of each trial manager to prepare plot packets from the bulk of seed supplied and to ensure that the correct plant population is achieved. Variety names, codes and thousand seed weight information will be sent to trial operators by e-mail.

Surplus seed may be used for discard and buffer plots or filling in but for no other purpose without the prior consent of the Field Trials Manager.

## **2.6 Husbandry guidelines**

### **2.6.1 Site Selection**

The trial must be grown within a linseed farm crop. It should be located away from trees, hedges, headlands and other features likely to cause uneven growth. The soil should be as uniform as possible but if there are irregularities such as ridges or furrows, the trial should be drilled across them. Ensure that cultivations are carried out across the direction of sowing.

Applications of fertilisers and sprays should be uniform, it is normally best to apply these across the direction of the plots.

### **2.6.2 Sowing**

The seed rate is to be determined by the trials manager based on soil type etc. The aim is to establish a target plant population of 400 plants per m<sup>2</sup> for linseed varieties, based on thousand seed weight and germination. In marginal soil conditions (e.g. Cotswold brash) and in dry seasons, percent seed loss will be higher, and this should be taken into account when calculating seed rates. However, excessively high populations can lead to premature maturity of weak and low yielding plants.

As a guideline, trials should be drilled between the last week of March and the 3rd week of April when soil temperatures reach 7-8°C and conditions are conducive to rapid and even establishment. The trial should be drilled as soon as conditions allow so the crop has emerged prior to flax beetle migration, which happens in warmer still weather. However, due to the very high risk of damage by flax beetles, trial managers are advised to wait until conditions are conducive to good germination and rapid growth. Key to good establishment is drilling into moisture and good seed to soil contact. Ideally

cultivations should be done in the previous autumn, with minimal soil disturbance prior to drilling to create a level, firm and fine seedbed to help conserve moisture. Avoid excessive passes, over-consolidation and compacted soil. Avoid seedbeds with high levels of trash from the previous crop, best practice is not to follow a brassica crop.

Drill into moisture ideally at 1.5-2.0 cm depth. Drilling deeper on heavier soil types to put seed into moisture (up to 4 cm) will impair establishment and if necessary, this should be taken into account when determining seed rates.

Rolling after drilling is usually necessary unless significant rain is forecast in the following couple of days and is beneficial on lighter and stony soils. Heavier soils should be rolled if there's a risk of moisture loss, but it is essential to avoid capping.

If irrigation is necessary to assist establishment, this must be uniform and by prior arrangement with the Field Trials Managers.

Under current legislation the seed is unlikely to have been treated with insecticide seed treatments and so it is essential that trial managers are vigilant with pre- and post-emergence flax beetle control measures. The crop is vulnerable, especially if slow to establish, until it is more than 3 cm tall. If necessary, spray for flax beetle.

### **2.6.3 Herbicides**

Application should be across the direction of drilling.

Chemicals should not be used to which any variety is known to be sensitive. Pre-emergence herbicides should be used, and it should be noted that under certain soil and weather conditions the linseed crop can be intolerant of some approved post-emergence herbicide products. In particular, some post-emergence sulfonyl urea products can be damaging and should be avoided. Jubilee (Metsulfuron-methyl) can be particularly damaging and should not be used without consulting AHDB/BSPB. If sulfonyl urea herbicides are used they should be applied at no more than half the product label rate.

The following factors should be considered:

- Approved pre-emergence herbicides are effective but work best with good soil moisture and seedbed conditions and with the appropriate application technique (e.g. water volume). (Note that use of Callisto is now restricted to the month of May - Extension of Authorisation Number: 1616.)
- Post-emergence herbicide applications should be made when all varieties are 15-20 cm. The risk of crop damage is greater on light soils (e.g. chalks) and no variety should not be shorter than 10 cm.
- Most herbicide damage is likely when soils (especially light and chalky soils) are very dry and/or during extremes of temperature, especially very hot conditions.
- Experience has shown that the use of the following products can lead to damage and should be avoided:
  - Metsulfuron-methyl e.g. Jubilee
  - Metazachlor e.g. Butisan
  - Metazachlor + quimerac e.g. Katamaran
  - Bifenox e.g. Fox

If use is considered necessary for the success of the trial, pay particular attention to restrictions and specific recommendations for use on linseed.

When using post emergence herbicides, use the minimum effective dose that will kill the weeds present and do not use adjuvants.

#### **2.6.4 Fungicides**

Trials will normally be untreated with fungicide. However, fungicides should be applied at mid/end-of flowering if there is a high risk of disease infection, by prior arrangement with the Field Trials Managers. Diseases most likely are *Botrytis* and *Alternaria* in wet seasons, and powdery mildew in dry seasons.



### **2.6.5 Fertilisers**

Nitrogen fertiliser should be applied according to advisory guidelines (e.g. The AHDB Nutrient Management Guide (RB209)).

A typical rate of nitrogen is to use 80-110 kg/ha minimum (including SMN) as follows:

- Heavier soils: 100% in the prepared seedbed or when rows are first visible.
- Lighter soils: 60% when the rows are visible and 40% not later than when the earliest variety is at mid stem extension.

If the risk of the seedbed drying out is high, then it may be appropriate to apply all N to the seedbed even on lighter soils.

*Late applications should be avoided as these can delay harvesting.*

Trial operators should be aware of other nutrient requirements and should be prepared, if necessary, to apply appropriate treatments.

### **2.6.6 Plant growth regulators**

Plant growth regulators should not be used.

### **2.6.7 Pest control**

Adequate measures should be taken to prevent or minimise damage by any pest. Flax flea beetles in particular are likely to be a significant pest during establishment and trial managers must ensure that adequate pre- and/or post-emergence control measures are taken. Crops should be monitored every 2-3 days when temperatures are above 8°C as damage can occur quickly. Delayed migrations caused by low spring temperatures can be more intense resulting in potential for more significant damage. Pyrethroids are effective and should be applied as beetles are seen.

Assessments should be made wherever pest damage occurs since decisions have to be made on the validity of each plot affected.

### **2.6.8 Harvesting**

Plots should be trimmed to their final length before flowering and measured before harvesting. If it is necessary to alter the size of any plot at harvest give clear details with the yield data.

It is the Trial Operator's responsibility to ensure that plots can be harvested without damaging neighbouring plots and without contamination: plots should be separated adequately as required.

Trials should be desiccated prior to combining unless there is a reason for not doing so and the trial must be at an overall suitable stage of development.

The use of the pod sealer "Pod stick" is preferred but is at the discretion of the trial manager based on their assessment of pod shatter risk in season etc.

Notify the Field Trials Managers that harvest has taken place on the day of harvest, or first thing the following day. Yield with dry matter should be returned as soon as possible and within three days of the harvest of the trial, together with any other outstanding data. If dry matters are being conducted by a sub-contractor, yield data should be returned within two days (see [Appendix 2](#)).

Details of sample requirements are given below.

## 2.7 Completion of records

The trial workbook should be used to record all data.

Completed data should be returned to [trials@ahdb.org.uk](mailto:trials@ahdb.org.uk) as soon as records are taken and by the deadlines shown in the table below:

<b>Report</b>	<b>Deadline</b>	<b>Sheets to be returned (use return macro to submit the required workbook tabs)</b>
1) Confirmation of sowing and notification of changes to plan	With 5 days of sowing	Confirmation that the trial has been sown and if it has been sown to plan. Trial layout – clearly show changes if trial has not been sown to plan
2) Site data	Spring sown trials: as soon as possible and within one month of sowing.	Site data Map of area Field layout sketch Trial layout Trial diary
3) Early data	Spring sown trials: within one month of sowing. Some measures maybe recorded after this time.	Early data recording tab Trial diary update
4) Disease data	Spring crops – As soon as recorded and by 22 <sup>nd</sup> August.  Data submitted by these dates will be used in the calculation of disease ratings but if disease develops after this date, records should be taken and submitted as soon as possible and will be used when practicable.	Disease data recording tab Trial diary update
5) Harvest data	Within 5 days of harvest	Harvest data recording tab Agchem details Trial diary update

Early, disease and harvest plot data tabs contain columns for records likely to be undertaken during the recording period and which may or may not be required by the protocol. Any additional recording columns can be added on the relevant data tabs.

### **2.7.1 Site plot data (Site data, location and plan details):**

This information should be returned shortly after full establishment and within one month of sowing.

This report should include:

- Confirmation of sowing to plan or full details of any changes to plan

This should be done by clearly highlighting the changes on the trial layout tab contained in the workbook. On receipt of the returned workbook the RL Data Team will re-issue an updated workbook to include these changes in all areas of the workbook, including the data tabs. If a new workbook is issued it is recommended that any older versions of the workbook are deleted.

- Completed site data tab
- Map of area. Site location details i.e. how to get to the field by road
- Field layout sketch. Sketch showing the layout of the trial(s) in the field, in relation to other trials and showing access roads, gates etc
- Trial layout. Trial sketch showing plot numbers, variety IDs and variety names as a minimum
- A short post-establishment report of the condition of the trial in the diary sheet

### **2.7.2 Early data**

This sheet will contain

- All agronomic plot data to be recorded
- For each measure you will need to provide date of recording and the growth stage at time of assessment
- Please submit data as it is assessed

### **2.7.3 Disease data**

This sheet will contain

- Disease data relevant to your crop and trial purpose
- For each measure you will need to provide date of recording and the growth stage at time of assessment.
- Please submit data as it is assessed

### **2.7.4 Harvest data**

This sheet will contain:

- All plot data, including yield, dry matter and all remaining agronomic data (see 2.2)
- For each measure you will need to provide date of recording and the growth stage at time of assessment
- Trial diary comments. Note any factors that may affect the validity of the trial

- Treatments applied to the trial and details of agrochemical inputs must be returned in the Agchem sheet

Any notes (especially factors that may affect the validity of the trial) made since the last submission of data should be shown on the trial diary sheet, which should also be returned.

The trial operator must report any significant variation in the trial cause by poor establishment, missed rows, soil conditions, uneven weed control, animal/human damage, Fusarium wilt, wheelings, hand weeding, or other reasons. These are to be checked and recorded by the Trial Operator and any appropriate decisions and actions made prior to harvest - see 2.1.

The list below details the records required and the scales that should be used. Data should be recorded in the Excel recording sheets within the trial workbooks. A de-randomising facility allows you to conduct an initial validation of the data.

The growth stage should be recorded for each observation. The correct growth stage key is given in [Appendix 1](#).

Plot numbers and variety codes must correspond to those on the computer trial plan.

In order to make records comparable across sites, it is essential that the names and units used should be as indicated below. Records of other characters will be processed and stored but may not be used.

Plot records are to be made using the following scales and guidelines:

<u>Emergence (1-9)</u>	1 = very slow 9 = very fast	<b>OBLIGATORY</b>
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Give the estimated date of full emergence for a control variety.

<u>Establishment (1-9)</u>	1 = very thin 9 = very thick	<b>OBLIGATORY</b>
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Record after emergence is complete and give the approximate numbers of plants per metre row for the extreme values used.

<u>Early vigour (1-9)</u>	1 = very weak 9 = very vigorous	<b>OBLIGATORY</b>
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This score provides a measure of differences in plant vigour/size and can usually be scored at the same time as establishment.

<u>Lodging (1-9)</u>	1 = completely lodged 9 = no lodging	<b>IF PRESENT</b>
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<u>Flowering (1-9)</u>	1 = very late 9 = very early	<b>OBLIGATORY</b>
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Record when the earliest variety is in full flower and the varieties in the trial exhibit a good range of differences. One record is normally sufficient.

Plant height (cm)

**OBLIGATORY**

Record average plot height at the end of flowering before leaning or lodging takes place. If lodging has occurred, choose a representative area of the plot, lift a number of plants against the measuring pole and record an average height.

Maturity (1-9)

1 = very late  
9 = very early

**OBLIGATORY**

Record on three occasions in the last two to three weeks before harvest (including a final record on the day of desiccation) based on seed development.

Seed loss (resistance 1-9) or boll loss

1 = severe seed loss  
9 = no seed loss

**OBLIGATORY**

Give an estimation of maximum % seed loss/boll loss.

Harvest date

**OBLIGATORY**

Obligatory. Record in the format dd/mm/yyyy.

Yield (kg) and Dry Matter%

**OBLIGATORY**

Assess from yield plots

***Plot dimensions***

Plot length      The plot length harvested in metres

Plot width      The width of the harvested plot in metres from outer row to outer row plus half of the inter-plot gap. If the inter-plot gap varies it should be measured for each plot.

Record all plots.

The fresh seed yield should be recorded in kg. Any tare weight should be subtracted before submitting the data. Return with the yield the completed Agchem sheet and note in the diary any factors which may have affected the yield of the trial or individual plots.

The dry matter % of each plot must be determined by the oven method and samples retained for oil and ALA content analysis (see [Appendix 3](#)).

***Pests and other factors affecting validation***

Attacks by pests and any other site features should be noted. Individual plot records should be made if varietal differences are apparent. The character recorded should be clearly described and the scale clearly defined. Notes on factors that are likely to affect the validity of the trial should be recorded in the trial diary and comments column for individual plots.

## 2.8 Disease assessment and recording

The disease most likely to be encountered is Powdery mildew (*Erysiphe linicola*), though both *Alternaria* and *Botrytis* may cause infections on the leaves. Capsules are most likely to be affected by *Alternaria* and *Botrytis*. Stem and whole plant symptoms are most likely to be caused by *Verticillium*, *Sclerotinia*, *Mycosphaerella* (Pasma disease), *Phoma*, *Fusarium* wilt and other *Fusarium* diseases.

Disease should be recorded when the level of infection on the most affected variety is over 5% of the leaf area. Percentage leaf area infected on the plot as a whole should be recorded. If disease infection persists, successive records should be made through the season.

*Fusarium* wilt can cause the entire plant to wilt. It will show clearly in susceptible varieties such as Juliet and in other varieties according to their resistance. If recorded, the trial location should not be used again due to long-term persistence in the soil.

### Timing of assessments

A guide to probable assessment times is given below:

Disease	Seedling/ Vegetative	Flower bud	Flowering	Capsule formation	Pre- maturity
Powdery mildew%		✓	✓	✓	
Botrytis%		✓	✓	✓	
Alternaria%			✓	✓	
Fusarium%	✓	✓	✓	✓	✓
Fusarium wilt%	✓	✓	✓	✓	✓
Verticillium%				✓	✓
Sclerotinia%			✓	✓	
Phoma%	✓	✓	✓	✓	
Mycosphaerella%				✓	✓

All disease records should be sent to the RL trials inbox (trials@ahdb.org.uk) as soon as they are made.

## 2.9 Trial samples and quality tests

Sample requirements will be specified by the Field Trials Manager each year and full details with pre-printed plot labels will be sent out by AHDB prior to harvest.

A 200g sample should be taken from each plot at the time of plot weighing in a polythene bag for moisture content determination. Place one label on the inside of each bag and seal it by rolling over the top and securing the bag and the second label secured on the outside with rubber bands.

Dry matter determination can be conducted by sub-contractor by prior arrangement with the Field Trials Manager, in which case the samples should be sent ex-combine.

Notification of sample dispatch should be e-mailed to the laboratory and Field Trials Manager at the same time.

## **2.10 Trial inspection**

All trials will be inspected by an AHDB approved inspector at a mutually convenient time. In some cases, it may be necessary to visit on more than one occasion.

The requirements for trials operators in respect of inspections are as follows:

1. To give reasonable access to trials to inspectors.
2. To supply the inspector with information (for example sprays applied etc.) within seven days of a request.
3. To co-operate with the inspector in making any non-routine assessments required to establish the validity of the trial (for example population counts).
4. To carry out any action agreed in consultation with the inspector. In particular it is important that any requirement to shorten plots is undertaken and that missing values are returned on any plots which have been dropped from the trial.

The trials inspection also provides an opportunity for feedback to AHDB about any problems with the trials protocol and trials operators are encouraged to make any points to the inspector so that these can be considered for future revisions to the protocol.

## Appendix 1 - Growth stage key for linseed

Main Growth Stage	Growth stage	Description of Growth Stage
Germination and emergence	0.0	Dry seed
Leaf production	1.0	Both cotyledons unfolded and green
Leaf production	1.1	First true leaf emerged
Leaf production	1.2	Second true leaf emerged
Leaf production	1.3 etc	Third true leaf emerged
Stem extension	2.0	No internodes (rosette)
Stem extension	2.5	About five internodes
Flower bud development	3.0	Only leaf buds present
Flower bud development	3.1	Flower buds present but enclosed by leaves
Flower bud development	3.3	Flower buds visible from above ('green bud')
Flower bud development	3.5	Flower buds raised above leaves
Flower bud development	3.6	First flower stalks extending
Flower bud development	3.7	First flower buds yellow ('yellow bud')
Flowering	4.0	First flower opened
Flowering	4.1	10% all buds opened
Flowering	4.3	30% all buds opened
Flowering	4.5	50% all buds opened
Pod development	5.3	30% potential pods
Pod development	5.5	50% potential pods
Pod development	5.7	70% potential pods
Pod development	5.9	All potential pods
Seed development	6.1	Seeds expanding
Seed development	6.2	Most seeds translucent but full size
Seed development	6.3	Most seed green
Seed development	6.4	Most seed green-brown mottled
Seed development	6.5	Most seeds brown
Seed development	6.6	Most seed dark brown
Seed development	6.7	Most seed black but soft
Seed development	6.8	Most seed black and hard
Seed development	6.9	All seeds black and hard
Leaf senescence	7.0	No description
Stem senescence	8.1	Most stem green
Stem senescence	8.5	Half stem green
Stem senescence	8.9	Little stem green
Pod senescence	9.1	Most Pods green
Pod senescence	9.5	Half pods green
Pod senescence	9.9	Few pods green



## Appendix 2 - Deadlines and milestones

It is required that AHDB Recommended List trials will be grown to the highest standards and that contractors will give them priority. Failure to meet the trial specification without good reason will be a breach of the contract and could result in reduced or no payment of the agreed fee for that trial.

If any operation, for example drilling, disease recording or harvesting, are delayed or carried out in poor conditions, it is the responsibility of the contractor to inform the Trials Coordinator and to explain the reasons for the delay/ problem. **Failure to inform the Field Trials Managers will constitute a breach of the contract.**

The Field Trials Managers should be notified if there is good reason that deadlines cannot be met. **Failure to return data and / or samples by these deadlines without good reason will constitute a breach of contract.**

Report	Deadline	Sheets to be returned (use return macro to submit the required workbook tabs)
Confirmation of sowing and notification of changes to plan	Within 5 days of sowing	Confirmation that the trial has been sown and if it has been sown to plan. Trial layout – clearly show changes if trial has not been sown to plan
Site data	Spring sown trials: as soon as possible and within one month of sowing.	Site data Map of area Field layout sketch Trial layout Trial diary
Early data	Spring sown trials: within one month of sowing. Some measures may be recorded after this time.	Early data recording tab Trial diary update
Disease data	Spring crops– As soon as recorded and by 22 <sup>nd</sup> August.	Disease data recording tab Trial diary update
Harvest data	Within 5 days of harvest	Harvest data recording tab Agchem details Trial diary update

Response to email or telephone queries from the Field Trials Managers during the season	7 days after the request or by harvest if this is sooner
Response to email or telephone queries from the Field Trials Managers after the trial has been harvested	1 working day
Quality samples	To be received by the appropriate laboratory (as designated by the Field Trials Manager) within 5 days of harvest.

## **Appendix 3 – Dry matter and oil content determination in linseed**

### ***Oven method***

An accurately weighed and recorded sample of 100g seed ( $\pm 5$ g) per plot is placed in the drier which must be at a temperature of  $100^{\circ}\text{C} \pm 4^{\circ}\text{C}$  with the air recirculation set in the range 80-100% recirculation in order to restore the temperature to  $100^{\circ}\text{C} \pm 4^{\circ}\text{C}$  as rapidly as possible. When the temperature is restored to  $100^{\circ}\text{C} \pm 4^{\circ}\text{C}$  the air regulator is set at 80% recirculation i.e. 20% fresh hot air. The regulator is critical for rapid drying. The samples are dried at  $100^{\circ}\text{C} \pm 4^{\circ}\text{C}$  for such time as is necessary for complete drying.

The dried sample is removed from the drier as soon as the sample is cool enough for accurate weighing.

**The dry weight is recorded to one decimal place.**

Dried samples should be retained for oil content determination.

Do not use an electronic moisture analyser to assess dry matter.