



LINSEED COMBINE OPERATOR INSTRUCTIONS

Basic Guide to When the Crop is Fit

- The over-all crop appearance will be light brown with a few darker patches.
- Capsules will be a 'parchment' colour (see picture below)
- The top half of the stem will be dead, although the lower half is still likely to be yellowy green.

Check to see whether the seeds separate from the capsule by rubbing a handful between your hands to assess how easily the seeds separate. If you do this several times over the field you may have enough to do a moisture test (depending on your meter).



The picture (right) shows the 'papery' capsule that has been crushed between thumb and fore-finger, which easily releases the dark brown seeds

Pre-Harvest Check

Assuming the crop has been desiccated, crops should be ready for harvest 5-10 days after the application of Diquat or 10-14 days after Glyphosate.

The two extremes of harvesting problems generally are:

- Trying to cut the crop before the desiccation has had time to work, which can lead to threshing problems.
- Leaving the crop too long which results in over-retting in the stems which makes the crop more difficult to cut.



You can often find that the seeds will be dry yet the straw may well still be green from half way down. Do not think that the crop is not fit - your combine will more than likely handle this.

Spring Linseed will generally be harvested at between 8.5% and 12% moisture content with the market standard being basis 9% with a maximum of 10%. Admixture is basis 2%.

Combine Settings



Linseed with quite green straw being harvested and chopped

- **Knife** – consider fitting a new one, or have it re-sectioned. Either way it must be sharp and in good condition. Ensure that the knife sits tight and flat against the fingers so that a good scissor action is achieved. The best analogy is to imagine trying to cut a piece of paper with a pair of scissors when the screw in the middle is not tight ie the paper passes between the blades!
- **Table Auger** – ensure that the retractable tines retract fully and that any nuts/bolts on the central section of the auger are round-headed. Check that there are no rough edges on any of the auger flights.
- **Reel** – most operators keep the reel up high out of the way of the crop. Occasionally the reel may be needed to "help" the crop over the knife. Position the reel tines at 180° to the crop, using the selector quadrant on the reel so that just the tube is used on the crop where necessary.
- **Concave** – initially close to minimum clearance and fit de-awning/blanking off plates if available. Some combines not only have an adjustable front concave but also at the rear. The rear concave clearance is usually a fiddle to adjust as it involves un-doing bolts rather than moving a lever, so is often over-looked. If seed is damaged/cracked (can happen when the seed is very dry) or if conditions improve, increase concave clearance as appropriate.
- A common problem is un-threshed heads in the sample. This is caused by excessive concave clearance. This may be as a result of the concave adjustment as described above or alternatively bent or broken concave wires. If your combine has done a number of seasons, chances are that the concave wires are curved away from the drum. In this situation, despite the concave being adjusted up as far as it will go, there is room for capsules to pass through the drum.
- Set the retractable fingers to minimum.
- **Drum** – 800-1400 rpm. Start high and work back as appropriate. Linseed does require a relatively aggressive set-up
- **Top sieve** – size or adjustment should allow small or partially threshed capsules to drop through.
- **Bottom sieve** – if adjustable, will need to be virtually closed. If fixed, the size selected should be small enough to prevent partially threshed capsules from going to the tank.
- **Fan** – start with low wind. Adjust up to get as clean a sample as possible. We see many samples of linseed that have excessive light chaffy material – so they could have done with more wind. Any additional whole seed blown out the back of the combine would have paled into insignificance compared to the additional cost of cleaning samples to within contract specification

These notes are intended as a basic guide only – consult individual manufacturers instructions for more details.

Technique

- A sunny afternoon is preferable. Linseed does not shed easily, so you can afford to wait for a better opportunity. BUT, do not leave Linseed until after you have finished your Wheat harvest. Leaving linseed too long will result in the stems "over retting" and becoming more difficult to cut and more likely to wrap.
- Consider leaving the headland until last, especially if surrounded by trees and/or hedges as this likely to be damper
- Set cutting height to take the minimum amount of material necessary to achieve an even feed. You may find that if the knife is struggling to cut the stems, *lowering* the knife to cut the stems near to the ground, may lessen the problem. This is because the fibre in the linseed stem is concentrated in the middle 2/3rds of the stem
- Linseed is very good at finding leaks, similar to OSR, so tape up any flaps on elevators and augers to stop seed escaping.
- Stop the combine and check the tank and swath:
 - * if excessive seeds on the ground, reduce wind.
 - * if unthreshed capsules on the ground, open top sieve (and check concave clearance - see above)
 - * if partially threshed capsules in tank, reduce bottom sieve and increase forward speed to load the drum more.
 - * if *very* small dust/chaff in tank, increase wind slightly.
 - * adjust concave clearance and drum speed according to efficiency of thresh.
- Once underway, check elevators, tanks and augers for leaks.
- Do not leave damp linseed in the combine tank overnight.
- Should wrapping occur around the table auger either:
 - * the crop is not fit *or*
 - * stop the combine immediately. Allow 15-30 seconds for auger to clear and continue *or*
 - * if wrapping continually, try adjusting table height *or*
 - * remove all retractable tines from the auger and wrap wide insulating tape or similar over the holes and across the complete centre section. This will then be a completely smooth surface with nothing for the crop to snag on.
 - * In extreme situations (eg if the Linseed crop is lodged or 'tousled') try cutting with only one side of the header.
- The efficiency of thresh will be increased the more material entering the drum, so if possible keep the forward speed up.

CLAAS Lexion Combines

Over recent years we have had occasional reports of Linseed straw wrapping around the rear rotor of CLAAS Lexion combines.

Our understanding is that the rear of the non-modified rotor has rubber "paddles" attached to it. Linseed straw can snag on these and end up tearing them off. This wrapping is made much worse if the straw is weathered (as above). The modified rotor has metal paddles which prevents the wrapping.

From 2013, their Lexion models were built as standard with a pair of Linseed rotors. There is a retrofit kit available for Lexion machines that are already in the market and many combines have been fitted with this modification. Neither option has any detrimental effect on the performance of the combine.

If you have a pre-2013 CLAAS Lexion (or intend to buy second hand) you may want to check with your local CLAAS dealer about this modification.

Moisture

In our experience, compression type moisture meters give more reliable moisture readings for Linseed, particularly when the moisture exceeds 11% or so. If you have a Protimeter, but do not have a Linseed setting, you can use a conversion chart, which is available from the Premium Crops website www.premiumcrops.com/winter-linseed/agronomy and navigate to the "drying and storage" section.

For those farms where a Marconi is still used:

Marconi Calibration for Linseed (at 20°C)

Reading	MC%
22	8
31	9
39	10
44	11
48	12

Note: Oilseeds leave a deposit of oil on the cell base - this must be wiped clean to ensure reliable results.

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