# Canopy Management

Green Area Index is the ratio of green leaf and stem area to the area of ground on which the crop is growing. GAI will vary from crop to crop (and within crops) depending on sowing date, available nitrogen and grazing by pigeons. Assessment of the Green Area Index will guide when and how nitrogen should be applied.

The following points should be considered:

- A target canopy cover of GAI 3.5 at the start of flowering to deliver maximum yield this should equate to between 6,000 and 8,000 pods per square metre.
- Nitrogen has a large influence on the canopy size.
- It requires 175 kg/ha N (from a combination of soil N release, canopy accumulations and applied nitrogen) to achieve GAI 3.5 by flowering.
- Start nitrogen (and sulphur) application on thin/grazed crops as soon as growth commences in spring.
- Hold back 35-60 kg N/ha in all crops to be spread as near as practically possible to mid-flowering. This is to prolong green-leaf area during pod-fill. Leaves are the most efficient part of the rape plant to convert sunlight into yield.
- For each 0.5 t/ha of yield above 3.5 t/ha up to a maximum of 5 t/ha the crops needs 30 kg/ha of Nitrogen.
- Fungicides with growth regulation properties can be used to manipulate crop growth habit (and control disease) but check GAI before application

GAI = Ground Area Index and is a measure of how much green plant material is in a crop. It can be measured by weight (best suited to wide row spacing's*) or by digital photograph (best suited to narrow row spacing's).

**Download the OSR GAI app from the app store** onto your smart phone and it will calculate the GAI from the photograph. If you don't have a smart phone you can still measure the GAI by following the steps below.

*Measuring GAI with wide row spacing's.

1. Cut all plants from a meter row.
2. Weigh the fresh weight collected in kilos.
3. Divide the weights by 0.61 (for 24 inch spaced crop) to take into account the row spacing.
4. Multiply the final figure by 0.8 to get the GAI of the OSR crop.