

Sunflower sowing time dilemma - Is November better than December?

Avoiding flowering and seed filling during heat waves – a desirable objective when growing any summer crop, including sunflowers – is always fraught with risk as these events can occur any time between November and early March.

But for most northern NSW and Liverpool Plains districts the risk of heat waves is higher between early January and mid February (the higher heat wave risk period is also the period of highest probability of receiving good summer rains in many northern areas).

Pacific Seeds Summer Grains agronomist Trevor Philp, like many experienced sunflower researchers and advisers, stresses that good soil moisture reserves are more important than any other factor and provides a good buffer against tough in-crop growing conditions including periods of extreme heat.

Trevor believes that for most areas,

summer crops like sunflowers require at least one metre of sub soil moisture before sowing.

Any decision to sow sunflowers in November rather than wait until December, given suitable sowing moisture, requires an accurate assessment of sub soil moisture Trevor advises. If soil moisture levels are significantly less than 1.0 metre, which for clay loam soils can be equivalent to 150–225 mm of stored rainfall, he suggests delaying sowing to allow an opportunity for rainfall to build soil moisture reserves further.

If November/early December rainfall doesn't arrive then November sown crops with low sub soil moisture would face moisture stress, commonly coinciding with hot conditions – a recipe for poor crops or total crop failure.

On average, November sown crops will progress from budding to grain fill during a 45 to 85 day period after sowing (depending on variety and temperature). A mid

November sowing would therefore flower and fill during late December to the end of January. This is usually the hottest part of the year as well as having the highest probability of good rainfall for many north west NSW districts.

Delaying sunflower sowing to mid to late December has advantages of possibly increased soil moisture reserves given average November/early December rains. These crops, again depending on variety and seasonal conditions, would flower and fill grain over the late January or early February to the mid March period.

While heat wave risk is slightly less over this period, especially for crops sown towards the end of December, the probability of good rains during the vital heading to grain fill stage is a little lower for much of north west NSW.

Sowing date trade-off

Trevor says sunflowers can be sown later than December – and well into January for many regions – but there is a trade-off with a lower probability of good rain in the late February/March and early April period when the critical stages of flowering and grain fill occur while temperatures on average will be considerably lower.

Late sowing also needs to be weighed up against aspects such as a higher risk of diseases like *Rhizopus* head rot, slower ripening and greater exposure to birds, as well as the possibility of more difficult harvest conditions should autumn be cool and showery. Sound rotations to reduce the risk of sclerotinia are also especially important with later sown crops.

Regardless of sowing time issues Trevor stresses the importance of sound agronomic practise for all crops. “Sunflowers are an extremely versatile crop with a much longer sowing window than sorghum, easier to double crop and can be more than competitive economically with other summer crop options. It is also a great rotation crop for winter cereals.”

“Good agronomic practices include care with choosing hybrids, sowing depth and plant population, weed, disease and pest control, and prompt harvest when crops reach receival moisture levels,” Trevor says.

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Stephanie Belfield agronomist with HMAg Moree and Trevor Philp Pacific Seeds Summer Grains agronomist, checking a single skip December 2008 sown sunflower crop. Trying to avoid sunflowers flowering and filling over heat waves and sowing crops on at least one metre of sub-soil moisture are two critical aspects of successful sunflower production.