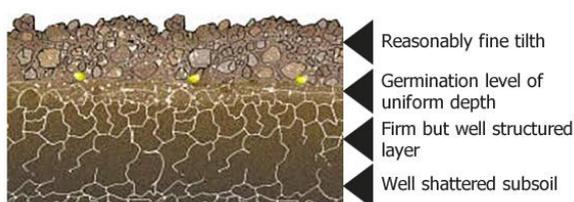


Basic Maize Growing Tips

Soil

Correct nutrient inputs are vital to the success of the crop and have a big influence on yield therefore soil sampling prior to drilling is highly advisable. Growers on favourable sites can achieve yields well over 60t/ha if nutrient levels are correct.

Maize is very sensitive to temperature. South facing sites are the best. Soils should be free draining, have a good reserve of moisture and be without compaction. Ploughing is best followed by cultivating to leave a fine surface tilth to at least 7.5cm deep.



Crop is then drilled at a typical seed rate of 43,000sds/acre (12.5cm spacing) but can fluctuate by 10% depending on soil type and conditions at drilling. Row spacing is 75cm.

The aim when drilling is to achieve quick germination and rapid unhindered early growth. To achieve this, soil temperatures need to be at least 9 degrees for a minimum period of 3 days before drilling. If soils are cold this will lead to poor root development which restricts the uptake of nutrients and therefore limits the crops yield potential. Alternatively where nutrients are restricted during periods of rapid growth this too will restrict growth and final yield. Therefore the use of a starter fertiliser such as DAP (18% N + 46%P₂O₅) in such circumstances is ideal in helping the crop to meet its needs during the early stages of development.

As maize has a high demand for nutrients it is important to know what is available to ensure the correct base mix is applied.

Nutrient Uptake

Nitrogen is the key nutrient for obtaining maximum yield. Nitrogen encourages leaf growth and where there is an insufficient supply, plants are smaller reducing the amount available for photosynthesis and therefore yield potential. Excessive applications of Nitrogen however can delay maturity and increase the risk of lodging. Recommended rate 150kg/ha under RB209. Where you are following strawed carrots and additional 80kgN/ha may be applied to help breakdown the straw.

Phosphorus is key to root growth. Any shortage in the very early stages reduces root growth and nutrient uptake and this can adversely affect the growth of the crop for the rest of the season. Typical phosphate removal on a 55t/ha crop on average is 80kg/ha P₂O₅. Symptoms of P deficiency are reddening or purpling of the older leaves.

Potash is required the greatest amount by maize with an average crop (50t/ha) taking up 220kg/ha by early August. It plays a vital role in regulating the water content in the plant and therefore during periods of drought stress is essential. It also plays a major role in maintaining the turgidity of plant tissue which is essential for maximising light interception and therefore yield.

Soil K Index	Soil K mg/ltr	Yield 50t/ha	Yield 60t/ha
0	0-60	270	310
1	61-120	245	285
2-	121-180	220	260
2+	181-240	195	235
3	241-400	150	190
4 or higher	401+	0	0