



## CROP GUIDE - Protea

### Sampling Notes

KB Item: 3489v4

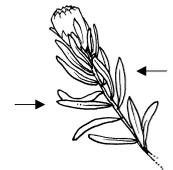
The nutritional status of this flower is monitored using soil tests and plant analysis. Monitoring regularly is important to help sustain optimum levels and avoid nutritional disorders. If disorders do occur, rapid diagnosis is necessary to assist correction.

This Guide may also be used for leucospermum and leucodendron.

#### Leaf

<b>Sampling Time:</b>	Mid season.
<b>Plant Part</b>	Youngest matured leaves.
<b>Collect From:</b>	-
<b>Quantity per Sample:</b>	50 leaves.
<b>Recommended Tests:</b>	Basic Plant (BP).

**Comments:** Just prior to flowering or during early flowering is considered to be the appropriate time to sample. However, regular leaf analyses should be obtained through the growing season (e.g. 6 - 8 weekly intervals) in order to monitor the effect of liquid feeding programmes being used.



#### Soil

<b>Sampling Time:</b>	Prior to crop establishment.
<b>Core Depth</b>	15cm.
<b>Collect From:</b>	From the rooting zone of the plant.
<b>Quantity per Sample:</b>	12 - 20 cores.
<b>Recommended Tests:</b>	Basic Soil (BS), Soluble Salts (SSg).

**Comments:** If a problem is suspected during the growing season, then a sample should be taken from the rooting zone immediately adjacent to the plant. Collecting a second sample from an unaffected area may help identify the cause of the problem.

## Comments

---

Protea prefer light textured, free draining soils. Heavier, poorly drained soils result in rootlet death and infection from fungi such as phytophthera. Sites should also be sunny and frost free.

The soil should be acidic (pH 5.0 - 5.5). If the soil is significantly above this, then lowering of the pH is recommended.

High levels of plant available nutrients are undesirable, particularly phosphorus. Protea are known to be susceptible to phosphorus toxicity. A suggested maximum Olsen P level is 30 ug/mL, but ideally it should be less than 20 ug/mL.

Fertiliser requirements are minimal, and generally, none is applied. Soil tests are often performed to ensure the nutrient levels are low enough for this plant.

Results for copper, zinc and manganese in leaves sprayed with fungicides will not be reliable due to adhering spray residues on the leaves.

Iron levels cannot be reliably assessed from leaf analysis, due to the presence of physiologically inactive forms of iron within the tissue. Also, soil contamination of leaves growing near the ground may elevate total iron results.

## References

---

Elgar, J. Proteaceae - Flower and foliage production. HortResearch HortNET, 1997.

## Disclaimer

---

Normal Range levels shown as histograms in test reports relate specifically to the sampling procedure provided in this crop guide. The Normal Range levels in test reports and Comments provided in this Crop Guide are the most up to date available, but may be altered without notification. Such alterations are implemented immediately in the laboratory histogram reports. It is recommended that a consultant or crop specialist be involved with interpretations and recommendations.