



# FACT SHEET

## Chilling Tulips

### What's the problem?

In warmer areas of New Zealand, many tulip cultivars may need refrigeration before planting.

You probably need to consider refrigeration if your flowers have unusually short stems or your bulbs occasionally fail to flower altogether.

### Why does it occur?

Tulips are native to areas which experience quite cold winters, and they need this cold period for the bulb to complete the development of the flower bud deep inside. Insufficient cold period results in either no flower or flowers on short stems.

### Does it affect all tulip types?

Darwin Hybrid tulips and Species tulips are the most suitable types for warmer areas. If you want to grow all the colours available in the Single tulip range or have the pleasure of growing types from the exotic Parrot tulips to the graceful Lily types, then you will need to go to a little more trouble.

### Are there any alternatives to chilling?

A number of things may help you get good tulip flowers without chilling:

- All tulips should be planted later in autumn when the soil temperatures are cooler, ideally below 12°C. Mid to late May is an ideal time.
- Plant the bulbs 20 cm deep as the soil is cooler at that depth. The bulbs cope very well as long as the soil has been well worked down to 35 cm or more to allow a good root run.
- Use a mulch to help keep the soil cooler.

### How do I go about chilling?

The most important point is that you need to chill, not freeze! Don't put bulbs in the freezer as this is too cold and will kill them. The average fridge is at approximately 4°C and this is an ideal temperature.

Place the bulbs in a breathable container such as a paper bag and start chilling before the end of March. Continue for at least eight weeks before planting in May.

### Are there any problems to watch out for?

Done correctly, chilling your tulips will result in perfect flowers next spring. However, if it is not done well, keeping bulbs in the fridge can cause as many problems as it solves.

- Using a paper bag is very important so the bulbs can breathe. Plastic bags cause sweating and rot may develop.
- Keep the bulbs to the side of the fridge, not at the back where the cooler plate may ice up and damage them, or where condensation may cause mould to develop.
- Ripening fruit releases a gas called ethylene. This gas causes other fruit to ripen in a chain reaction. We make use of this sometimes by getting kiwifruit to ripen more quickly by putting them in a bag with apples or bananas, which are higher ethylene producers. However, ethylene causes severe damage to the developing flower bud in the bulb, often resulting in complete loss of the flower. Including an ethylene-absorbing sachet in the bags with the bulbs will prevent ethylene damage and suppress mould growth.

Ethylene-absorbing sachets are low cost and make flower bulb chilling a safe option.

