



The FlexiTunnel portable greenhouse has been a boon to Canterbury growers.

# Ideal ally to beat frosts

By LYN MCKINNON

**I**N A market as competitive as horticulture, technologies which give one grower an edge are often kept out of the spotlight.

However, Tony and Lynnette Mallard, who grow large quantities of organic vegetables on 7ha of rich Marshlands soils near Christchurch, cannot praise their FlexiTunnel portable greenhouses too highly.

For the past 30 years, the Mallards have battled Christchurch's short and unpredictable growing season, frequently being hammered by frosts in spring and sometimes right through to Christmas. One year, they lost pumpkins on February 4.

"Just like a burn on humans, frost makes it very hard for the plant to regenerate and sometimes it will completely destroy the crop," Mr Mallard says.

On top of the frost comes the ferocious, dehydrating Canterbury nor'wester, not to mention occasional southerly squalls dumping their ballast of hail.

So, anything that ups the ante in the protection game is a bonus. When fellow organic grower Ernst Frei recently developed his simple, versatile FlexiTunnel system, the Mallards were among the first growers to sign up.

They are considered among the best organic operators in the South Island. Whereas, some growers strive to find a market, they strive to contain demand to the level of their production capacity. With 1500sq m under permanent greenhouse, another 1600sq m under FlexiTunnels and the remainder outdoor production, the Mallards work on their own to grow a wide range of around 26 distinctly different crops, plus fancy varieties and cultivars.

Their system is well-balanced and efficient, but because they do not buy in produce for their gate sales, they have to maintain this wide range over the most extended season possible.

As they counter autumn frosts towards the end of the season, the FlexiTunnels have proved invaluable. For example, a tunnel over crops like summer melons and cucumbers can soon be shifted on to adjoining tomatoes to give protection from frost and rain through until late May. This spring, the Mallards got a quick safe start with potatoes. As soon as the plants were above the ground, they were covered by a tunnel which had been used over early brassicas.

The key is to make maximum use of each tunnel, says Mr Mallard.

"The advantages of the FlexiTunnel are many, but one of the biggest is the number of crops you can protect with one tunnel in one season, because they are so portable."

The Mallards cover up to five crops a year with each tunnel, planning ahead to have enough land vacant on one side to make the shift an easy one.

One person requires a little assistance, says Mr Mallard. It takes two people around half an hour to shift the frames for a 100m length, the rest can be done solo.

The benefits are incomparable. Plenty of crops like beetroot, early brassicas, carrots, spring onions and even white turnips perform so much better with protection, and not only is production earlier but there is considerably heavier yield and superior quality.

Because they prevent burning, FlexiTunnels also produce a far better tomato than those grown outdoors in the same conditions, he says. Even the dwarf varieties perform like premium glasshouse

tomatoes, and warmth-loving crops like peppers, aubergines and basil thrive.

FlexiTunnels are proving an important stepping stone between outdoor production and permanent greenhouse production, solving the problem of increasing soil disease levels.

"Once a crop is in the greenhouse it stays there until it is mature, whereas we can keep the FlexiTunnels going, cranked up hard and fast by removing them from over the crop as soon as protection is no longer needed."

When the FlexiTunnel was originally designed, the Mallards thought it would be important that they could be dismantled for storage, but this has not happened. Their tunnels are operating year-round.

If winds exceed 100kmph, Mr Mallard will start some danger control, lifting the polythene on the leeward side to reduce any uplift. However, if well-anchored with the latest effective screw anchors, it seems they will stand anything, he says.

Venting can be a little time-consuming at the time of year when he wants to close the tunnels at night, but they are usually left partly-open, and the problems Mr Mallard expected from water run-off after heavy rains have not eventuated.

Unless frosts dive below five degrees, the FlexiTunnel will fend off everything, and corn and beans in the tunnel came through unscathed when a bitter frost hit the district hard in October.

It is frustrating, though that crops grown in soil with high organic matter suffer more severely from frost damage. Mr Mallard attributes this to the build-up of organic material insulating the soil and preventing heat coming through to combat surface frost.

"That always hurts when you think you are doing everything right."