

evenly across the store as it moves further away from the air tunnel.

Duct widths are tapered from two metres down to 0.7m and can be adjusted according to the condition of the crop.

Crop Systems service and installation director Richard Cook says: "The store has two modes. It can work at a high temperature with a low humidity for flowers or for potatoes which require the opposite."

While the store is equipped with the technology to cool potatoes, it also has the ability to heat to a constant temperature of 55degC with a relative humidity of 15% for drying flowers. For potatoes, it can keep a constant cool temperature of 8degC and a relative humidity of 98%.

Humidity

A wet pad humidity system is also in place, which draws air through a wetted pad or cell; the air then picks up moisture, which is circulated through the crop, restoring moisture if it is starting to dry out.

Refrigeration and reverse heating systems have also been installed, with four heaters and two cooling coils.

The in-store fans have a diameter of 1.6m with mounted silencers. Because the fans are so large they are run at a slower speed than normal to make them more efficient, giving them an energy efficiency rating of 3, which is better than the

Shropshire Petals

- ▶▶ 40 hectares of flowers planted
- ▶▶ Dried wheat grown on-farm was included in the 2012 Olympics medal winners' bouquets
- ▶▶ 1.5 tonnes of petals dried on average each year
- ▶▶ 80% of sales are achieved online



Shropshire Petals dries 1.5 tonnes of petals on average each year.

current regulation requires them to be. The current energy efficiency rating requires a rating of 2.

All the fans are inverter driven which helps keep energy bills down and allows speed to be matched to suit different requirements.

Energy efficiency is an important aspect of the new build and an air-source heat pump and solar panels are fitted to help bring costs down.

The cooling coils are run on food-safe glycol rather than refrigerant gas and the refrigeration pack is running on R290 gas bringing the overall global warming impact down. R290 is high purity propane, used in the refrigerant and air conditioning industry, with low environmental and global warming impact.

The new store has hatched louvres, which are larger than the usual bladed type with the aim to help insulate the store in cold weather.

Mr Cook says: "The fully insulated louvres help maintain the climate within the store and give

more control [to the store manager]."

The many technical features in the store are computer-controlled and the system has the ability to limit airflow to certain areas of the store if, for example, only parts of the crop need attention.

Airflow

All of these features are essential to get a consistent, even airflow through the store,

which is crucial when applying chlorpropham (CIPC), says Mr Cook.

John Bubb has found sprout control with CIPC to be much easier in the similar store, built in 2011, because of the airflow.

He says: "We put on 23g/tonne which is well below legal limits. We have been able to enjoy the maximum benefits from CIPC without worrying about exceeding maximum residue levels."

