

Student 3.

Provision of Shelter.

Shelter is very important aspect of an apple orchard. It is one of the contributing factors which can affect the grower's yield. The main purposes of shelter on an apple orchard are as follows;

- To reduce wind speed and ultimately moisture loss – wind plays a major role in the moisture content in the soil when there is a lot of wind and exposure in an area a lot of water is sucked out of the soil and ends up back in the atmosphere. This is not good as apples have a high demand for water and therefore irrigation would have to increase which results in increased costs for the orchard manager because irrigation increases. When irrigation increases, profits decrease because intensive irrigation is a very expensive exercise and therefore less turnover is made [1].
- To reduce wind damage to plants – Wind damage to plants is a major concern for growers as this hugely influences crop yields. This is the major talking point when it comes to discussing reasons for introducing a shelter belt system. It is fundamental for running a successful and fully profitable apple orchard. Wind damage could potentially have a detrimental effect on the apple crops productivity. Wind funnels up each apple row and moves the trees around quite substantially, this results in a lot of fruit and bud damage. Often fruit gets bruised and damaged when there is not sufficient shelter provided which lets in pests and diseases, decreases fruit quality and could ultimately lead to a relative decrease in yields [2].

A good wind break should be -

- Cost effective – economical to set up as the only major costs are the set up fees which far out reached by the benefits that the shelter belt provides. Also costs should be split with those on the surrounding properties because of the shelter being provided over a large area.
- Long lasting – have a long lasting life expectancy which means they are relatively low maintenance as well as easy for the apple orchardist to manage.
- Environmental friendly – it is expected that wind breaks will attract wild life and provide adequate shelter for the apple orchard. On top of that a good shelter belt should be able to mother and eliminate weeds.

A list of trees that are adequate shelter belts include;

- Gums
- Cedar
- Poplars
- Taupata
- Wattles
- Macrocarpa
- Pines

These are all relatively low maintenance, strong, quick growing and long lasting trees. They meet the characteristics of a shelter belt because when they are all developed they are strong sturdy trees and provide a huge amount of shelter and protection of the crop.