that inadequate pre-cooling prior to packing was the most common cause of problems later in the handling chain. Ms Janine Jaeger, of Agriculture Victoria, visited in September 1998 and baseline data of naturally occurring microbial populations of snake beans and bitter melon were evaluated. Data suggested a high level of variability in separate samples but within the normal ranges for vegetables.

Changes in microbial populations due to temperature are being studied in conjunction with temperature logging this year. Several information kits about cool room use, post harvest handling and transport of vegetables have been produced as part of this project. Many thanks to Territory Produce Freight Management and growers who have been involved in this project.

5.1.9 EFFECT OF TEMPERATURE AND PACKAGING ON THE SHELF LIFE OF BITTER MELON AND OKRA

M Gosbee and S Marte

These experiments were performed to examine the effects of four types of packaging on the shelf life of bitter melon and okra when they were stored at different temperatures. This continues previous work on other Asian vegetables. The vegetables were packed in boxes with either a plastic bag, perforated plastic bag, peak-fresh bag or just with newspaper lining, and stored at 5, 10, 15 and 20°C and 95% RH. Weight loss and quality scores were recorded twice weekly to determine shelf life. Other parameters also noted included chilling damage, rots, ripening and colour changes.

Bitter melon had the best storage life of 23 days when stored at 5°C. However it developed chilling injury at this temperature. Okra had the best storage life at 10°C.

Table 1. Optimum storage conditions for bitter melon and okra

	Bitter Melon	Okra
Packaging	Perforated bags	Plastic bags
Temperature	10°C	10°C
Storage Life	14 days	24 days

As expected, the rate of water loss was strongly affected by packaging. Produce packed in newspaper lost the most water, and would not be recommended particularly in low humidity cool rooms. While plastic bags reduce water loss, they keep in the heat. Perforated bags are the best option. No advantage was gained from the peak-fresh bags. Thanks to Territory Produce Freight Management and Amcor for supporting this work.

5.1.10 BITTER MELON HARVEST MATURITY

M Gosbee and S Marte

Aim
To develop harvest maturity stages that optimise post-harvest storage life, minimise ripening in transit and maximise final eating quality to the consumer.