CARNATION CUTTINGS SHOULD NOT BE SEALED AIR TIGHT

By W.D. Holley

Several times during the past year occasional lots of carnation cuttings developed a scald in cold storage. This also occurred among some cuttings stored in Denver. The cuttings developing this scald were worthless.

The first two possible causes coming to mind were, (1) warming up during storage, and (2) lack of oxygen in the container. Tests were set up February 17, 1951, to determine if either or both of these factors would contribute to scald in storage.

Eight lots of 31 cuttings of William Sim carnations were sealed in MSAT cellophane. Four of these were punctured to allow some air inter-change then all eight lots were placed in a 40° F. storage.

To test the possibility of injury due to the storage temperature warming up, two lots from the sealed and two from the punctured were taken out of storage one month later and left for 24 hours in a 50-60° room. They were then placed back in the 40° cooler until May 11, when all were removed for sticking in sand.

On May 11, three of the four lots that had been completely sealed were scalded and unfit for propagation. Upon testing, the fourth was found to have an incomplete seal. The remaining lots which had not been sealed were in excellent condition.

The number and degree of rooting after 21 days is included in the following table.

TREATMENT	Rep. 1			Rep. 2		
	R	PR	NR	R	PR	NR
Absolute seal	Scalded			Scalded		
Absolute seal (50-60° for 24 hrs.)*	27	3	1	Scalded		
Sealed then punctured	28	3	0	27	2	2
Sealed then punctured (50-60° for 24 hrs.)	24	4	3	26	3	2

R---Well rooted PR--Poorly rooted NR--Not rooted

* Note the one lot not scalded from this treatment was found to have an incomplete seal when taken from storage.

Several previous experiences substantiate these results. No trouble has been encountered with scald when polyethylene bags have been used as containers, although these bags have been fastened with rubber bands instead of being sealed. Growers who have sealed polyethylene bags have had trouble.

Cellophane bags which previously had been thought to be sealed were in most cases not absolutely tight. It is quite difficult to get a high percentage of absolute seals on cellophane with an ordinary hand iron.

In light of these results it is suggested that growers who store carnation cuttings use an unsealed container, either with cellophane or polyethylene bags. Merely gather the top together, fold it over and put a rubber band around it tightly. Keeping the moisture in seems to be most important.