and place two together with one or two combs of honey and pollen, and with all the adhering bees, into each of the prepared hives, making sure that there is one good-sized ripe queen cell present in each division and plenty of nurse bees. The brood combs should be placed next to the wall of the hive, with the queen cell between the two combs.

When each division is completed two good mats should be placed over the frames, and the entrance to the hive completely closed with a wad of green grass tight enough to prevent the escape of bees for at least two or three days. If this is not done the field bees will immediately drift back to their original stand in great numbers, thus leaving insufficient bees to keep the required warmth necessary for hatching the queen cell and brood.

Ventilation and Mating

There will be sufficient ventilation through the crevices about the hives, and the bees will gnaw a small passage through the grass as it withers, by which time the majority of the bees will make no attempt to drift back to their original location in the apiary. If the best cells are chosen, the queen cell in each division will not hatch before the tenth or eleventh day after removal of the queens from the parent hives, and the young virgin queens will not require their liberty for mating for at least another three days. In the meantime, the beekeeper should widen the entrance to each hive to about two inches, but before doing so he should make sure that there are no robber bees about to molest these weakened colonies. When the young queens are mated and laying, the frames should be moved over from the side of the hives as each colony makes progress, and the empty spaces filled with good worker combs according to requirements. The entrance to each hive may also be extended accordingly.

The same results may be obtained by dividing a colony which is preparing to swarm, using only the best queen cells for the purpose and destroying all others, together with the old queen. Only hives which have given good results the previous season should be used for increase in this way; otherwise inferior stocks may result.

More advanced methods of raising queen cells to provide a supply of young queens will be dealt with next month.

—T. S. WINTER, Senior Apiary Instructor, Wellington.

COOL STORAGE NOTES—Continued from page 244.

hoe "set" the plant—do not "drop" it—to the depth of the first two leaves. Hold the plant down firmly while releasing the hoe, then gather the soil round it and press compactly round the root and stem, levelling off with the fingers. Set in this manner, the young plants will not be affected to the same extent by high winds as those planted shallow.

Staking

Growing single-stem plants is recommended as most suitable for the home gardener. If this method is adopted, place the stakes in position immediately planting is completed. These should be 4 ft. 6 in. long, and at least 1 inch by 1 inch thick. Drive them into the soil to a depth of 15 inches and as close to the plant as possible without damaging the root. Stakes set when the plants are partly grown damage the root system and create opportunities for parasitical attacks on the plants. A reasonable distance between the plants is 12 to 14 inches.

Tying

Use light binder twine or raffia—preferably the latter—for fastening the plants to the stakes. Flax, if properly prepared, is also suitable. The first tie should be about 8 to 10 inches from soil level. In tying, turn the binding material twice round the stake and fasten tightly with a double knot. Then circle the plant and tie somewhat loosely. The next tie will bring the plant close to the stake, but the method of fastening just described should be followed until the plant is full-grown.

Cultivation of tomatoes should be shallow, and only for the purpose of weed destruction and the conservation of moisture.

Make another small sowing of seed, the plants from which should be ready for setting out about the middle of December. Tomatoes from this planting should, if properly grown, supply the household to the end of the season.

In addition to pruning, tying will be further dealt with in the October issue of the "Journal."

—D. K. PRITCHARD, Instructor in Vegetable Culture, Wellington.

SETTING OUT TOMATO PLANTS—*(Continued from page 246.)*

lighting in cool storage chambers is unsuitable for inspection purposes. This applies particularly to the Granny Smith variety, as the fruit may appear to be green in colour when viewed under electric lighting, but it may be quite yellow when inspected in daylight.

Freezing injury is likely to occur in cool chambers where pears are stored, as the storage temperatures are lower than those required for apple storage. The freezing of fruit is brought about by maintaining the flesh of the fruit at too low a temperature, often due to an imperfect system of air distribution in the cool chamber.

The freezing temperature of pears is 28.5 deg. F., and wrapped and packed fruit held under conditions where the temperature of the circulating air when it enters the chamber is lower than this reading is likely to suffer injury. Temperatures should be taken with a flesh thermometer. The temperature of the fruit stacked adjacent to the delivery air trunk or cooling pipes is the most reliable guide to the cool storage engineer in preventing freezing injury. One degree of variation will be sufficient to cause freezing when suitable temperatures are being maintained for successful pear storage. Thermometers used for registering cool storage temperatures should be checked from time to time with a standard instrument in order to prove their accuracy.

—A. A. POWELL, Cool Storage Officer, Wellington.