

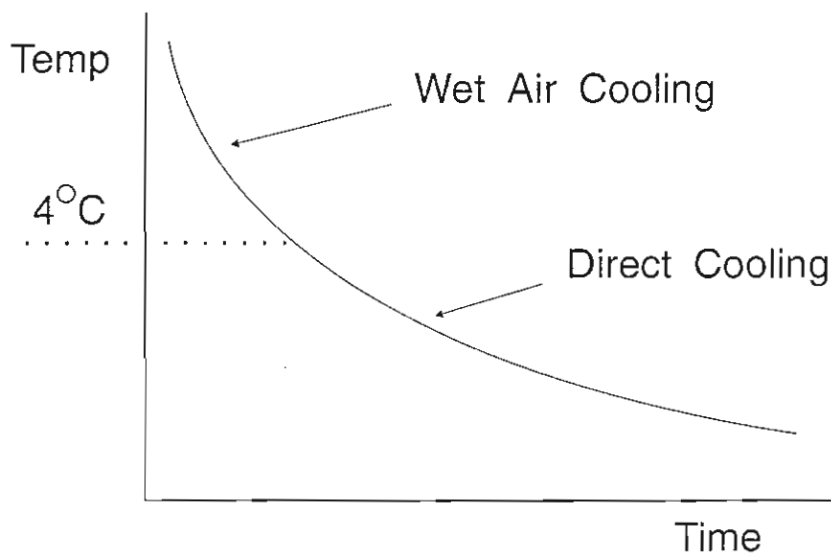
FREEZING FOG COOLING SYSTEM

Introduction

Most vegetable crops require low temperatures and high humidities during storage to retain best condition. Although some crops like potatoes suffer when the air contains droplets of moisture, others like carrots and calabrese benefit from being kept 'wet'. A new system which incorporates a moist air cooling system with direct refrigeration (to achieve low air temperatures) has been developed to satisfy the need for low temperatures and ultra high humidities.

Technical Description

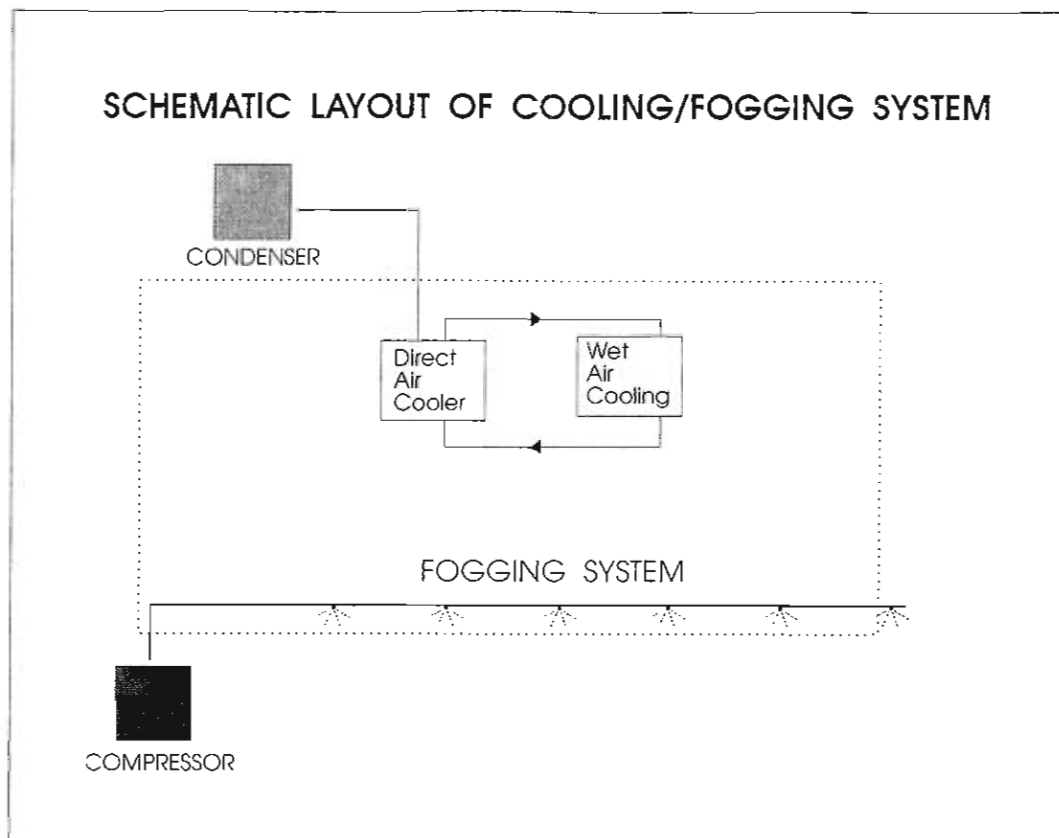
Initial cooling is carried out using a wet air system. That is cooling the store air using chilled water in a cooling tower. As the store temperature approaches freezing the chilled water cooling system becomes progressively less effective and at about 4 to 5°C a direct refrigeration system is used. Temperature can then be brought down to under freezing point if necessary.



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The fogging system works on a timer control to give the correct humidity conditions for the particular crop being stored. The fogging system uses high pressure delivery lines which are purged immediately after fogging to prevent icing of the spray heads.



These 'freezing fog' systems are particularly suitable for carrots and calabrese.

Trials being undertaken on a system sponsored by Farm Electric will help to quantify running costs and final crop quality. More information should be available in the summer of 1994.

List of Suppliers

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