

STABY

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Care & Handling

Ethylene (The Flower Killer)

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It is estimated that 30 percent of all floral crops die prematurely because of ethylene-induced disorders.

Ethylene is an odorless gas (a hormone that stimulates the aging in flowers and plants) and it is given off by most higher plants.

Its sources in our industry are:
1. fruits, vegetables and flowers;
2. engine exhaust; 3. fungi and bacteria; 4. stressed flowers, foliage, etc. and 5. pollution.

Ethylene is everywhere—in greenhouses, flower shops, coolers, warehouses and in the air outdoors.

What specific symptoms do we see when we suspect its presence?

- In cut flowers, buds fail to open, closure of open flowers, sleepiness (a wilted appearance) in carnations.

- Snapdragon florets drop, sepals dry on orchids and baby's breath buds fail to open.

It takes a very small amount of ethylene gas to damage flowers. Only 100 parts per billion can reduce cut flower life. Some flowers are more sensitive to ethylene than others.

The more sensitive list of the most common flowers are alstroemeria, anemone, baby's breath, carnations (standard and miniature), delphinium, freesia,

ready for use. The others require a simple mixing procedure. Both are effective and take only an hour of pre-treatment time. Excellent results have been reported by all industry segments—grower, wholesaler and retailer. Cost of treatment is less than a penny per stem.

Scrubbers or filters are another effective way to control ethylene. Keep in mind that scrubbers do not attract ethylene. Ethylene has to come in contact with the scrubber material for it to work.

Scrubbers are only effective if there is good air flow through them. Hanging them from strips in refrigeration fans has been effective.

In summary:

Ethylene action cannot be reversed but it can be prevented or minimized by following procedures that avoid sources of ethylene—minimize ethylene production and inhibit its action.

These control procedures include following good sanitation practices, controlling temperatures for flower storage, pre-treating flowers with chemical treatments, having good ventilation, using scrubbers, watching how commodities are mixed and being careful of engine exhaust from trucks and autos.

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The more sensitive list of the most common flowers are alstroemeria, anemone, baby's breath, carnations (standard and miniature), delphinium, freesia, enchantment lily, rubrum lily, orchids, snapdragons, phlox, cornflowers, stocks and sweet peas.

All of these flowers respond favorably to pre-treatment with one of the commercially available S.T.S. solutions.

Benefit of S.T.S. treatments are quite dramatic. Carnations pre-treated and placed in preservative solution following treatment can last 25 days. Excellent results with increases in bud opening for lilies and baby's breath have been shown. Snapdragon flower drop has been reduced.

One of the commercial products available is pre-mixed and

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