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THE EFFECT ON PLANTS OF METHYL BROMIDE FUMIGATION IN
JAPANESE BEETLE TREATMENT TESTS; PRELIMINARY REPORT

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The writers have been investigating the possibilities for the use of methyl bromide as a fumigant for the destruction of immature stages of the Japanese beetle in greenhouse and nursery stock which moves from within to beyond the boundaries of the area under Federal quarantine against this insect. Early in the work results indicated that complete mortality might be expected with a fumigation treatment of $2\frac{1}{2}$ pounds of methyl bromide per 1,000 cubic feet of space, including the load, for an exposure period of $2\frac{1}{2}$ hours at a minimum temperature of soil and air of 63° F. This indication has since been confirmed, and approval has been given for the use of the treatment for bare-rooted, potted, or balled plant material, with certain limitations on the size of pots and soil balls.^{1/}

Concurrently with the investigations for insect mortality, tests have been made to develop information on possible injury to plants as a result of this treatment. All tests were made at a dosage of $2\frac{1}{2}$ pounds of methyl bromide for an exposure period of $2\frac{1}{2}$ hours. The lists which follow record the observed condition of experimental plants on which information has been obtained to April 1, 1939. Other tests are under observation and additional ones are contemplated. The data on these will be summarized as soon as the accumulated information justifies so doing.

Individuals using these records as a basis for commercial treatment of plants do so at their own risk. The data shown should be regarded as experimental evidence which may be subject to change with additional experimental and practical experience. In no case can the United States Department of Agriculture or employees of the Department be held responsible for injury to plants as a result of fumigation thereof.

In many cases the number of test plants is too small to be of definite experimental value. In other cases cultural conditions both before and after treatment may have affected the results obtained.

^{1/} B.E.P.Q.--359 (Supplement No. 4), H. Methyl Bromide Fumigation, Feb. 15, 1939. Bur. Ent. and Plant Quar., Div. of Control Inv. 2 pp., mimeographed.

The list reported on includes greenhouse material showing active growth, plants in a semidormant condition from cold houses, and plants in a state of complete dormancy from out of doors. All were held for observation after fumigation in heated greenhouses in order to force development.

So far as possible the plant names conform with correct botanical nomenclature.^{2/} In cases in which the correct botanical names are different from those familiar to the nursery trade, the latter are also listed for cross-reference purposes. Several of the plants listed are new varieties for which no approved names are available. Within some groups, notably azaleas, hydrangeas, rhododendrons, and roses, the varieties are listed in accordance with their accepted names in the trade rather than in strict adherence to scientific nomenclature.

List No. 1 records those treated plants which, experimentally, have shown no injury or complete recovery following slight initial injury. List No. 2 is an account of the plants fumigated which showed injury or appearance of injury sufficient to render the plants more or less unmarketable. In most cases the numbers of plants were small. For 14 of the varieties shown no controls were available. In the opinion of nurserymen who cooperated in these tests, injury in many cases was due to improper care after treatment, and the plants suffered therefrom rather than from the fumigant. Pending additional data, all varieties contained in this list should be regarded as injured and handled accordingly.

An explanation of the symbols used in the lists is as follows:

- (d) Plants in a dormant condition at fumigation.
- (sd) Plants in a semidormant condition at fumigation.
- (g) Plants from greenhouses.
- * Plant growth stimulated by fumigation.
- ** Plant growth slightly retarded by fumigation.
- *** Slight injury followed by complete recovery.

The numeral following each variety shows the number of plants fumigated.

The lists show the effect of methyl bromide fumigation on 187 genera of plants representing 503 horticultural varieties and unnamed entries. Of these, 6.6 percent show injury or suspected injury sufficient to render the plants unsalable; 1.4 percent of the varieties either died or failed to make promising recovery. Injury was most common among growing greenhouse plants appearing in 12.0 percent of these varieties. Among the dormant and semidormant plants, only 3.2 percent were injured. Since many of the deaths, particularly among greenhouse varieties, are believed due to the kind of care rather than treatment, additional data may lower these percentages.

Of the uninjured varieties, stimulation in growth, as evidenced primarily by early breaking of leaf or flower buds, was shown by 11.1 percent and retardation by 1.5 percent.

^{2/} The writers gratefully acknowledge the assistance of Dr. S. F. Blake, Senior Botanist, Bureau of Plant Industry, in reviewing the plant list and correcting the plant names.

List No. 1.--Plants fumigated experimentally with methyl bromide with success.

Acer palmatum atropurpureum (d) (3) *
Adiantum cuneatum (g) (1)
 gloriosa (g) (1)
 wrighti (g) (5)
Aglaonema modestum (g) (1)
Ajuga reptans (d) (2)
Althaea (see Hibiscus)
Aloe humilis (g) (2)
Alyssum sp. (d) (2)
Ampelopsis (see Parthenocissus)
Anchusa myosotidiflora (d) (2)
Anemone hupehensis (d) (2)
Aquilegia: var. Mrs. Scott Elliot (d) (2)
Arabis alpina (d) (2)
Aralia (see Fatsia)
Araucaria excelsa (g) (5) ***
Arctostaphylos uva-ursi (d) (3)
Areca (see Chrysalidocarpus)
Arenaria montana (d) (1)
Armeria (see Statice)
Aronia arbutifolia brilliantissima (d) (1)
Artemisia dracunculus (d) (2)
Asparagus plumosus nanus (g) (1)
Asplenium nidus (g) (1)
Aster: var. Climax (d) (1)
 Nancy (d) (2)
Astilbe spp. (d) (11)
 var. Betsy Cuperius (d) (1)
 Peach Blossom (d) (2)
Aucuba crotonifolia (g) (5) ***
 japonica variegata (g) (2)
Azalea (listed by hort. var. names)
 Alaska (g) (5)
 Albert and Elizabeth (g) (5)
 Albion (g) (11)
 Alice Muller (g) (5)
 Amoena (g) (7)
 Apple Blossom (g) (7)
 Avalanche (g) (5)
 Binegiri (d) (5)
 Blushing Bride (g) (5)
 Bouquet Rose (g) (7)
 Bridesmaid (g) (5)
 Chas. Encke (g) (16)
 Christmas Red (g) (5)
 Christmas Cheer (g) (5)
 Constance (g) (8)
 Crimson Glory (g) (5)
 Dame Melanie (g) (5)
 Daphne (g) (5)

LIBRARY
STATE PLANT BOARD

List No. 1 (continued)

Azalea (continued)

Day Break (g) (7)
Dorothy Gish (g) (5)
Eclaireur (g) (5)
Eechhoutte (g) (1)
Empress of India (g) (8)
Ernest Thiers (g) (5)
Fairy (g) (5)
Firefly (g) (5)
Firelight (g) (22)
Flame (g) (7)
Glory (g) (3)
Hexe (g) (39)
Hinodegiri (d) (19)
Hinomayo (d) (5)
Indian Chief (g) (5)
Indica alba (d) (5)
Indica rosea (d) (5)
Jean Haerens (g) (12)
Jean Peeters (g) (6)
J. T. Lovett (d) (2)
Lavender Queen (g) (5)
L. J. Bobbink (g) (26)
Lorraine (g) (11)
Macrantha (d) (5)
Marie Louise (g) (1)
Mary Corcoran (g) (25)
Mauve Beauty (g) (7)
Mme. Morreux (g) (7)
Mme. Petrick (g) (15)
Mme. Petrick Superba (g) (5)
Mme. Van der Cruyssen (d) (15)
mollis (d) (4)
Morning Glow (g) (7)
Mrs. Fred Sanders (Mrs. Fritz Saunders) (g) (6)
New Pink (g) (5)
new varieties (listed by breeder's number)
 K-3 (d) (5)
 K-4 (d) (2)
 K-7 (d) (2)
 K-10 (d) (2)
 K-24 (d) (2)
 K-34 (d) (5)
 K-44 (d) (5)
 056 (g) (2)
 0145 (g) (2)
Niobe (g) (8)
Orange Beauty (g) (7)
Orange King (g) (5)

List No. 1 (continued)

Azalea (continued)

- Paul Schame (g) (9)
- Peach Glow (g) (7)
- Pink Beauty (g) (5)
- Pink Pearl (g) (11)
- Pink Ruffles (g) (5)
- Pres. Oswald de Kerchove (g) (5)
- Prof. Walters (g) (8)
- Purity (g) (5)
- Raphael (g) (5)
- Rose (g) (5)
- Rose Queen (g) (22)
- Salmon Glow (g) (6)
- Salmon Perfection (g) (5)
- Schryveriana (g) (1)
- Snow (g) (18)
- Snow Bank (g) (7)
- Snow Queen (g) (5)
- Sunset (g) (5)
- Suntan (g) (7)
- Triomphe (g) (12)
- Vervaeneana (g) (14)
- Vervaeneana alba (g) (5)
- Yayegiri (d) (5)
- Begonia: var. Chatelaine supreme (g) (1)
 - Gibbs (g) (1)
 - hybrid Lady Mac (g) (4)
 - Rex (g) (3)
- Berberis gagnepainii (d) (3) **
 - julianae (d) (3) *
 - thunbergii (d) (5)
 - triacanthophora (d) (3)
 - verruculosa (d) (3)
- Bignonia chinensis (d) (2)
 - grandiflora (see chinensis)
 - Mme. Galen (d) (2)
- Biota (see Thuja orientalis)
- Boston fern (see Nephrolepis)
- Bouvardia: var. Giant Pink (g) (3) ***
 - humboldtii (g) (3) ***
- Buddleia sp. (d) (2)
 - var. Pink Charming (d) (1)
- Buxus japonica (g) (1)
 - sempervirens (d) (3)
- Cactus spp. including Ferocactus and Opuntia (g) (9)
- Caladium candidum (hybrid: Triomphe de l'Exposition) (g) (1)
 - reposiura (g) (1)
- Calceolaria multiflora nana (g) (3)
- Calluna vulgaris (d) (6)
- Calycanthus floridus (d) (1)

List No. 1 (continued)

- Campanula carpatica (d) (1)
 - garganica (d) (2)
 - isophylla (d) (2)
 - medium (d) (1)
 - medium calycanthema (d) (1)
- Caryopteris incana (d) (5) *
 - incana superba (d) (3)
- Cedrus atlantica (d) (3)
- Cerastium biebersteinii (d) (2)
- Cereus peruvianus (g) (1)
- Chaenomeles lagenaria (d) (1)
- Chamaecyparis obtusa crippsii (d) (1)
 - pisifera (d) (3)
 - plumosa aurea loveti (d) (1)
 - squarrosa sulphurea (d) (3)
 - squarrosa veitchii (d) (1)
- (N.B. Several varieties of Chamaecyparis injured
(see list No. 2). Fumigation of this genus
inadvisable pending additional information.)
- Chrysalidocarpus lutescens (g) (1)
- Chrysanthemum arcticum (d) (2)
 - coccineum (Painted Daisy) (d) (2)
 - frutescens (Marguerite) (g) (8) *
 - hortorum (g) (2)
 - sp.: Pink Daisy (d) (1)
- Cineraria hybrida (g) (2)
 - multiflora (g) (1)
- Cissus rhombifolia (g) (9)
 - striata (g) (2)
- Citrus sinensis (g) (2)
 - taitensis (g) (5)
- Clematis jackmani (d) (5)
 - Ramona (d) (2)
- Clivia hybrida (g) (3)
 - miniata (g) (1)
- Codiaeum sp. (g) (1)
- Convallaria majalis (d) (2)
- Cordyline indivisa (g) (2)
 - terminalis: Firebrand (g) (1)
 - terminalis: Mme. E. Andre (g) (4)
- Cornus alba (sibirica) (d) (1)
 - florida rubra (sd) (3)
 - stolonifera lutea (d) (3) *
- Cotoneaster applanata (see dielsiana)
 - dielsiana (sd) (5) *
 - divaricata (d) (2)
 - francheti (d) (5)
 - horizontalis (davidiana) (d) (5) *
 - horizontalis perpusilla (sd) (3)

List No. 1 (continued)

- Cotoneaster (continued)
 - lucida (d) (2)
 - microphylla (d) (2)
 - microphylla glacialis (d) (4)
 - microphylla thymifolia (d) (2)
 - pannosa (d) (2)
 - procumbens (d) (2)
 - racemiflora veitchii (d) (2)
 - rotundifolia (d) (5) *
 - salicifolia (sd) (3)
 - simonsi (d) (5)
- Croton (see Codiaeum)
- Cryptanthus roseus pictus (g) (1)
 - zonatus zebrinus (g) (1)
- Cyclamen persicum (g) (4)
- Cydonia (see Chaenomeles)
- Cyperus alternifolius (g) (1)
- Cypress (see Chamaecyparis)
- Cyrtomium rochfordianum compactum (g) (3)
- Cytisus canariensis (g) (2)
 - hybridus elegans (g) (2)
 - scoparius (d) (5)
- Daphne sp. (d) (2)
- Davallia figiensis (g) (1)
 - lucida (g) (1)
- Delphinium belladonna (d) (2)
- Dennstaedtia cicutaria (g) (1)
- Deutzia gracilis rosea (d) (1)
 - lemoinei (d) (3)
 - scabra crenata (d) (1)
- Dianthus barbatus (d) (2)
- Dicentra spectabilis (d) (1)
- Dieffenbachia braziliensis (g) (2)
 - picta (g) (2)
- Dielytra (see Dicentra)
- Diervilla florida (d) (4) *
 - hybrida (d) (1)
 - hybrid: Eva Rathke (d) (1) *
 - nana variegata (see D. hybrida)
 - rosea (see D. florida)
- Dracaena (see also Cordyline)
 - fragrans massangeana (g) (7)
 - godseffiana (g) (1)
- Elaeagnus pungens (d) (2)
- Enkianthus campanulatus (sd) (3) **
- Epimedium sp. (d) (8)
 - musschianum (d) (1)
- Epiphyllum (see Zygocactus)

List No. 1 (continued)

- Erica melanthera (g) (2)
 - vulgaris (see Calluna vulgaris)
- Erodium sp. (d) (2)
- Eulalia japonica zebrina (see Miscanthus sinensis zebrinus)
- Euonymus alatus (d) (3)
 - japonicus: Gold Queen (g) (3)
 - radicans (sd) (500)
 - radicans carrieri (sd) (500)
 - radicans minimus (g) (1)
 - radicans minimus (d) (12)
 - radicans variegatus (sd) (200)
 - radicans vegetus (sd) (500)
- Eupatorium coelestinum (d) (1)
- Euphorbia fulgens (g) (3)
 - pulcherrima (see Poinsettia)
- Fagus sylvatica (sd) (3) *
- Fatsia japonica (g) (5)
- Ficus elastica (g) (2)
 - pumila (repens) (g) (4)
- Fittonia argyroneura (g) (1)
- Forsythia intermedia (d) (1)
 - suspensa fortunei (d) (3) *
- Funkia (see Hosta)
- Gaillardia: var. Ruby (d) (2)
- Gardenia veitchii (g) (4)
- Genista (see also Cytisus)
 - pilosa (d) (3)
- Geranium zonale (see Pelargonium)
- Ginkgo biloba fastigiata (d) (3) *
- Hedera sp.: Pittsburg (g) (9)
 - dankeriana (g) (2)
 - helix (g) (11)
 - helix (d) (2)
 - helix baltica (sd) (3)
 - helix variegata (g) (3)
- Helenium autumnale: Riverton Beauty (d) (1)
- Helianthemum sp. (d) (2)
- Helleborus niger (d) (2)
- Hemerocallis sp. (d) (12)
 - var. Gipsy (d) (1)
 - thunbergii (d) (2)
- Heuchera sanguinea (d) (6)
- Hibiscus syriacus: Boule de Feu (d) (1)
- Hosta sp. (d) (6)
 - caerulea (d) (2)
- Howea belmoreana (g) (1)

List No. 1 (continued)

Hydrangea (listed by hort. var. names)

- sp. (d) (1)
- Altoona (sd) (9) *
- arborescens grandiflora (d) (4) *
- Blauer Prinz (sd) (2) *
- Deutschland (sd) (41) *
- Europa (sd) (10) *
- Gertrude Glahn (sd) (28) *
- Goliath (sd) (25) *
- Hamburg (sd) (9) *
- Hamburg (g) (2) *
- Hollandia (sd) (3) *
- Kunert (sd) (8) *
- Le Merville (sd) (2) *
- macrophylla (g) (1)
- macrophylla otaksa (d) (1)
- Marshall Foch (sd) (17) *
- Mme. E. Chautard (sd) (23) *
- Mrs. Baardse (sd) (2)
- Niedersachsen (sd) (44) *
- paniculata (d) (3) **
- paniculata grandiflora (d) (1)
- petiolaris (d) (2)
- Renovation (sd) (2)
- Sch. Perle (sd) (5) *
- Sch. Perle (g) (2) *
- Splenders (sd) (3) *
- Trophee (sd) (41) *
- Wilkomen (sd) (4) *
- Wilkomen (g) (1) *
- Hypericum moserianum (sd) (3)
- Ilex aquifolium (d) (2) *
 - crenata microphylla (d) (3)
 - glabra (d) (3)
 - opaca (sd) (93)
- Iris kaempferi (Japanese) (d) (6)
 - kaempferi: E. Parry (d) (2)
- Ivy (see Hedera, Parthenocissus)
- Jasminum nudiflorum (d) (7)
- Juniperus chinensis pfitzeriana (d) (4)
 - communis (d) (3)
 - communis canadensis (see depressa)
 - communis depressa (d) (3)
 - communis hibernica (d) (3)
 - excelsa stricta (d) (1)
 - horizontalis douglasii (d) (3)
 - plumosa depressa (see J. virginiana)
 - sabina (d) (3)
 - sabina tamariscifolia (d) (3)

List No. 1 (continued)

Juniperus (continued)

- virginiana canaertii (d) (3)
- virginiana (hort. var. plumosa depressa) (d) (6)
- virginiana schottii (d) (3)
- (N.B. Two varieties of Juniperus severely injured. Fumigation of this genus inadvisable pending additional information.)
- Kalanchoe flammea: Blossfeldiana (g) (2)
- Kalmia latifolia (sd) (3) *
- Kentia belmoreana (see Howea)
- Kerria japonica (d) (3)
- Kniphofia uvaria grandis (d) (2)
- Kolkwitzia amabilis (d) (3)
- Liatris pycnostachya (d) (2)
- Ligustrum amurense (d) (1)
 - lucidum (sd) (3)
 - ovalifolium (d) (4) **
 - ovalifolium aureum (d) (1)
- Lithospermum sp. (d) (2)
- Lobelia cardinalis (d) (2)
- Lonicera fragrantissima (d) (4) *
 - japonica chinensis (d) (2)
 - magnifolia (d) (2)
 - nitida (sd) (3)
 - periclymenum belgica (d) (2)
 - pileata (sd) (3)
 - tatarica punicea (d) (3) *
- Magnolia kobus (sd) (3) *
 - soulangiana (sd) (3) *
 - stellata (sd) (3) *
- Miscanthus sinensis zebrinus (d) (2)
- Monarda didyma splendens (d) (2)
- Myosotis palustris semperflorens (d) (2)
- Nandina domestica (sd) (3) *
- Nepeta sp. (d) (2)
- Nephrolepis exaltata bostoniensis (g) (7)
 - trevillian (g) (3)
- Ophiopogon jaburan aureus variegatus (d) (1)
- Opuntia (see Cactus)
- Orange (see Citrus)
- Oriental poppy (see Papaver)
- Oxydendron arboreum (sd) (3) *
- Pachysandra terminalis (d) (3)
- Paeonia sp. (d) (2)
 - rubra (d) (3)
- Palm (see Howea and Phoenix)
- Papaver orientale (d) (4)
- Parthenocissus quinquefolia (d) (3) *
 - robusta (d) (2)
 - tricuspidata lowii (d) (2)
 - tricuspidata veitchii (d) (2)

List No. 1 (continued)

- Pelargonium zonale (g) (2)
- Peony (see Paeonia)
- Peperomia argyrea (g) (1)
 - maculosa (g) (2)
 - obtusifolia (g) (6)
- Philadelphus grandiflorus (d) (1)
 - laxus (d) (3) **
 - nivalis: Snowbank (d) (1)
- Philodendron dubium (g) (1)
 - dubium: Silver Sheen (g) (1)
- (N.B. Several varieties of Philodendron severely injured
(see list No. 2). Fumigation of this genus inadvisable
pending additional information.)
- Phlox sp. (d) (6)
 - subulata alba (d) (2)
- Phoenix roebelenii (g) (6)
- Physocarpus opulifolius (d) (1)
- Physostegia virginiana: Vivid (d) (2)
- Pieris floribunda (d) (2)
 - japonica (sd) (3)
- Platanus orientalis (d) (3) *
- Poinsettia pulcherrima (g) (5)
 - pulcherrima: Mrs. Paul Ecke (g) (1)
 - pulcherrima: Oak Leaf (g) (2)
- Polygonum auberti (d) (2)
- Polypodium aureum mandaianum (g) (1)
- Pothos wilcoxii (g) (1)
- Primula sp. (d) (8)
 - malacoides (g) (2)
 - veris (d) (2)
- Pteris alexandrae (g) (1)
 - cretica rivertoniana (g) (1)
 - cretica wilsoni (g) (1)
 - cretica wimsetti (g) (1)
 - ensiformis victoriae (g) (1)
- Pyracantha angustifolia (sd) (3)
 - coccinea lalandii (sd) (5)
- Pyrethrum (Painted Daisy) (see Chrysanthemum coccineum)
- Quercus alba (d) (3)
- Retinospora (see Chamaecyparis)
- Rhododendron (listed by hort. var. names)
 - Album Elegans (d) (1)
 - Boule de Neige (sd) (3)
 - Caractacus (d) (1)
 - carolinianum (sd) (3) *
 - Charles Bagley (d) (2)
 - Charles Dickens (d) (1)
 - F. D. Goodman (d) (1)
 - Hyle seedling (d) (1)

List No. 1 (continued)

Rhododendron (continued)

- Ignatius Sargent (d) (1)
- James MacIntosh (d) (1)
- Mrs. Charles Sargent (d) (1)
- Old Port (d) (1)
- Purpureum (d) (1)
- Purpureum Elegans (d) (1)
- Snow White (Album Novum) (d) (1)
- Rhodotypus kerrioides (d) (1)
- Rhus aromatica (d) (3)
- Rosa (listed by hort. var. names)
 - Miss Edith Cavell (d) (2)
 - Mrs. Henry Bowies (d) (2)
 - Ville de Paris (d) (2)
 - wichuraiana (d) (3)
- Rudbeckia laciniata hortensia (d) (1)
- Saintpaulia: hybrid Blue Boy (g) (4)
- Salix discolor (pussy willow) (d) (1)
- Sansevieria laurentii (g) (4)
- Sedum sieboldii (d) (2)
 - spectabile: Brilliant (d) (1)
 - stoloniferum coccineum (d) (1)
- Selaginella emmeliana (g) (4)
 - braunii (g) (2)
- Sempervivum calcarum (g) (2)
 - globiferum (d) (2)
- Sitolobium (see Dennstaedtia)
- Spirea astilbe (see Astilbe)
 - bumalda: Anthony Waterer (d) (3)
 - cantoniensis (d) (3) **
 - reevesiana (see S. cantoniensis)
 - richmensis (d) (1)
 - ruhandi (d) (1)
 - thunbergi (d) (1)
 - vanhouttei (d) (4)
- Statice armeria alba (d) (2)
- Stephanandra flexuosa (d) (1)
- Stokesia lilacina grandiflora (d) (1)
- Stranvaesia davidiana (sd) (3)
 - davidiana undulata (sd) (3)
- Symphoricarpus albus (d) (4)
 - chenaultii (d) (4) **
 - orbiculatus (d) (1)
 - racemosus (see S. albus)
 - vulgaris (see S. orbiculatus)
- Syringa vulgaris (d) (3) *
 - vulgaris: hybrid Wm. Robinson (d) (3)
- Tamarix africana (d) (1)
- Tarragon (see Artemisia)

List No. 1 (continued)

- Taxus baccata erecta (d) (6)
 - baccata repandens (d) (3)
 - cuspidata nana (d) (3)
 - cuspidata thayeri (d) (3)
- Teucrium sp. (d) (2)
 - chamaedrys (d) (3)
- Thuja occidentalis ellwangeriana (d) (3)
 - occidentalis fastigiata (d) (3)
 - occidentalis globosa (d) (1)
 - occidentalis hoveyi (d) (3)
 - occidentalis pyramidalis (see fastigiata)
 - occidentalis robusta (d) (3)
 - occidentalis rosenthalii (d) (3)
 - occidentalis vervaeneana (d) (3)
 - occidentalis wareana (see robusta)
 - orientalis bakeri (biota) (d) (1)
 - orientalis bonita (biota) (d) (1)
 - orientalis compacta (biota) (d) (3)
- Thymus serpyllum coccineus (d) (2)
- Tritoma (see Kniphofia uvaria grandis)
- Trollius europaeus superbus (d) (1)
- Tsuga canadensis (d) (4)
- Tunica saxifraga (d) (2)
- Veronica: hybrid Blue Spire (d) (1)
 - spicata (d) (2)
- Viburnum americanum (see trilobum)
 - bitchiuense (sd) (3)
 - dentatum (d) (1)
 - lantana (d) (6) *
 - molle (d) (3) *
 - opulus (d) (1)
 - rhytidophyllum (d) (3) *
 - tomentosum plenum (d) (3) *
 - trilobum (d) (3) *
- Vincetoxicum (d) (6)
- Viola cornuta: Jersey Gem (d) (2)
 - odorata: Gov. Herrick (d) (1)
- Vitex macrophylla (d) (3)
- Vitis rhombifolia and V. striata (see Cissus)
- Weigela (see Diervilla)
- Wisteria floribunda (d) (2)
 - multijuga alba (d) (3)
 - multijuga rosea (d) (2)
 - sinensis alba (d) (2)
- Zygocactus truncatus (g) (2)

List No. 2.--Plants fumigated experimentally with methyl bromide with resulting injury or suspected injury.

- Abelia grandiflora* (sd) (7) (severe leaf injury in 2 tests; all plants recovered)
- Aglaonema sinensis* (g) (1) (slight burn of leaf margins)
- Aspidistra lurida* (g) (3) (plant in 1 test unhealthy; some dead leaves)
- Azalea* (listed by hort. var. names)
- Coral Bells (g) (37) (majority killed, balance severely injured)
- Salmon Beauty (g) (27) (majority killed, balance severely injured)
- Billbergia alberti* (g) (1) (plant died several weeks after treatment)
- nutans* (g) (1) (plant died)
- Caladium*: Our Red (g) (1) (all leaves died, possibly from post-fumigation care; good recovery)
- Calathea vandenheckei* (g) (1) (slight burn of leaf margins)
- Capsicum* sp. (g) (1) (plant died)
- Chamaecyparis pisifera aurea* (d) (3) (tips of branches severely injured)
- pisifera filifera* (d) (3) (tips of branches severely injured)
- pisifera filifera aurea* (d) (3) (same as above)
- plumosa lutescens* (d) (3) (same as above)
- Cibotium schiedei* (g) (7) (all show severe injury to a few old leaves)
- Cordyline terminalis* (g) (1) (outer leaves killed, recovered)
- Crassula arborescens* (g) (8) (plants dropped most of leaves; good recovery)
- Ficus pandurata* (g) (3) (one killed, one severely injured)
- Howea forsteriana* (g) (9) (slight injury, a few old leaves killed)
- Juniperus japonica* (d) (3) (2 plants with severe and 1 with slight tip injury)
- sylvestris* (d) (3) (severe injury, all needles killed)
- Maranta* (see also *Calathea*)
- leuconeura kerchoveana* (g) (2) (a few old leaves killed, recovered)
- Monstera deliciosa* (g) (5) (plants killed and severely injured; injured recovering)
- Nephthytis afzelii* (g) (2) (severe injury, lower leaves killed; recovered)
- liberica* (g) (2) (severe injury, lower leaves killed; recovered)
- Pandanus veitchii* (g) (9) (severe injury, most leaves killed; new suckers vigorous on some)
- Philodendron cordatum* (g) (10) (severe injury; most marked in smallest pots, 2½ inches)
- pertussum* (see *Monstera deliciosa*)
- scandens* (g) (1) (slight injury to leaves)
- Pinus bungeana* (sd) (3) (severe needle burn and drop; good recovery)
- Sedum adolphii* (g) (3) (severe injury to leaves and terminal buds)
- Strelitzia reginae* (g) (2) (several old leaves killed)
- Thuja plicata atrovirens* (d) (3) (all show winter injury, slightly more marked in fumigated than in controls)
- Tsuga canadensis pendula* (sd) (3) (slight burn of needle tips)
- sargenti* (see *T. canadensis pendula*)