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LAWN & TURF

- More on phytotoxicity risk with PCNB

2001 INDEX

LAWN & TURF

MORE ON PHYTOTOXICITY RISK WITH PCNB

by Paul Vincelli

I recently wrote briefly about the excellent efficacy of PCNB against pink snow mold and about the potential for this fungicide to cause phytotoxicity to turfgrass. Because of the rather widespread use of PCNB for control of pink snow mold/Microdochium patch, a follow-up article is in order.

To begin, I'll point out that many snow mold tests have been conducted with PCNB where there has been no report of phytotoxicity. Thus, phytotoxicity does not always result from application of PCNB. However, there are numerous cases of phytotoxicity in the literature I refer to when developing recommendations. For example, there is a report of phytotoxicity from PCNB applied for snow mold control in each of the past three issues of the journal *Fungicide and Nematicide Tests*. Also, an article was published in *Golf Course Management* one year ago describing repeated cases of phytotoxicity from PCNB over a three-year test against snow mold, especially with the flowable formulation. Other examples can be found by looking further into the literature.

The greatest risk of phytotoxicity from PCNB is when the weather following application is above 70°F. While such temperatures are not common during the winter, they can occasionally be reached during the normal application window for pink snow mold and Microdochium patch in Kentucky. Furthermore, there is evidence that PCNB residues in the soil can stunt the

growth of plant roots. Since PCNB has such a long half-life in soil, I would be concerned about phytotoxicity showing up during warm spells in spring any time PCNB is applied past mid-January.

I am only aware of phytotoxicity reports from PCNB on creeping bentgrass and *Poa annua*; of those, evidence suggests creeping bentgrass is the more sensitive. I am always concerned whenever a product causes phytotoxicity to either of these grasses, since these constitute the surface of putting greens. Reasons for avoiding the risk of phytotoxicity on putting greens are: standards for quality are very high; the abundance of other stresses (traffic, close mowing, etc.); and springtime is an important time for aggressive growth and food storage by the grass, not recovery from chemical injury. Thus, I would avoid using PCNB on putting greens, especially since a viable alternative exists (Chipco 26GT/Daconil combinations).

Use of PCNB on fairway-height creeping bentgrass is less risky, because stress levels are so much lower and the opportunity for recovery is greater. In Kentucky, pink snow mold/Microdochium patch is a significant risk on overseeded perennial rye. PCNB would still seem to be a viable option for those situations, since I know of no reports of phytotoxicity on perennial ryegrass, and fairway-height turf would be expected to recover rather quickly even if injury occurred. In fact, a point in favor of using PCNB for snow mold control on swards other than putting greens is the fact that it saves the chlorothalonil for disease control during other times of the year (recall that the total amount of chlorothalonil that can be used each year has been restricted according to the Food Quality Protection Act; see www.uky.edu/Agriculture/kpn/kpn_01/pn010326.htm#lawcha for more information on this). Also, an

application of PCNB for snow mold control is less costly than the Chipco 26GGT/Daconil Ultrex combination.

2001 INDEX KENTUCKY PEST NEWS

PLANT PATHOLOGY

This issue concludes the 2001 series of Kentucky Pest News (KPN) and marks the end of the 26th year of inclusion of disease information in KPN. The major objective has been to provide timely information on anticipated and occurring diseases in Kentucky. Any comments (favorable or critical) readers may have regarding KPN (i.e., format, subject matter, coverage, timeliness, etc.) may be directed to KPN authors: John Hartman, William Nesmith, Don Hershman, and Paul Vincelli, Extension Plant Pathologists; Paul Bachi and Julie Beale, Plant Diagnosticians. The above authors appreciate the efforts of colleagues who have co-authored topics in KPN; and Pat Yancey for typing, proofreading, and transmitting KPN.

The final issue of KPN 2001, like final issues of previous years, contains an index of all plant disease topics covered during the current year. The index is alphabetized according to each crop or other subject matter. After each crop, each disease that was discussed the past year is listed with the appropriate issue number(s). KPN issue numbers in parenthesis () refers to a listing of the crop or disease in the "Diagnostic Lab Highlights" section. We wish each of our readers a Cheerful Holiday and Peace and Prosperity in 2002. (Hartman, Nesmith, Hershman, Vincelli, Bachi, Beale, and Yancey).

ALFALFA & CLOVER

Acid soil problems - (916)
Aphanomyces-resistant - 934
Boron deficiency - (925)
Cold injury - (915)
Diseases cause wintertime stand loss - 907
Leaf spot diseases - 922
Lepto leaf spot - (922)
Pythium root rot - (920)
Rhizoctonia stem canker - (925)
Seed alfalfa early if fall-seeding - 927
Selecting alfalfa varieties with disease resistance - 911

CORN, POPCORN, AND SORGHUM

Corn - Anthracnose - (922), (936)
Acid soil problems - (921)
Cold injury - (916)
Corn root worm - (933)
Disease update - 915
Diseases of concern in continuous corn - 925
Ear rot - 930, (935)

Gray leaf spot - (925), 929, (935), (936)
Herbicide injury - (917), (918), (921)
Magnesium - (918)
Maize chlorotic dwarf virus - (936)
Maize dwarf mosaic virus - (933)
Nitrogen deficiency - (922)
Nutritional problems - (920)
Seed corn maggot injury - (915)
Southern leaf blight - (930), (935)
Stalk rot - 905, 927, (935)
Stenocarpella ear rot - (930)
Stenocarpella stalk rot - (933), (936)
Stewart's wilt - (923)
Stinkbug - (915)
Temporary phosphorus deficiency - (916), (917), (918), (919)
Virus complex showing up - 923
Zinc deficiency - (918), (919), (920), (921), (922)

FLOWERING ANNUALS AND PERENNIALS, GREENHOUSE ORNAMENTALS, HOUSEPLANTS, AND GROUND COVERS

African violet - Pythium root rot - (911)
Ajuga - Crown rot - 920
Southern blight - (916)
Angelonia - Botrytis blight - (909)
Astilbe - Cercospora leaf spot - (928)
Begonia - Botrytis blight - (909)
Pythium root rot - (910)
Sunscald - (913)
Chrysanthemum - Bacterial spot - (928)
Pythium root rot - (921), (928)
Rhizoctonia root/stem rot - (924), (928), (934)
Clematis - Leaf and stem blight - (927)
Dahlia - Powdery mildew - (933)
Daylily - Aureobasidium leaf blight - (929)
Bacterial soft spot - (925)
Fusarium crown rot - (925)
Pythium root rot - (908), (922)
Rhizoctonia root/crown rot - (908), (935)
Rust - 923, 926, (926), (928), (934)
Delphinium - Rhizoctonia root/stem rot - (929)
Dianthus - Rhizoctonia root/stem rot - (922)
Fuchsia - Black root rot - (930)
Geranium - Bacterial blight - (922), (924)
Botrytis blight - (909)
Cold injury - (916)
Impatiens necrotic spot virus - (913)
Necrotic spot virus - (913)
Pythium root rot - (911), (913), (914)
Gladiolus - Corm rot - (926)
Xanthomonas blight - (928)
Hibiscus - Bacterial leaf spot - (922)
Hollyhock - Rust - (920)
Hosta - Anthracnose - (927)
Bacterial blight - (927)
Hydrangea - Cercospora leaf spot - (930), (933)
Impatiens - Impatiens necrotic spot virus - (909)

Pythium root rot - (910)
 Rhizoctonia root/stem rot - (929)
 Ivy - Bacterial leaf spot - (912), (919), (925)
 Colletotrichum leaf spot - (912)
 Leaf spots - 919
 Rhizoctonia stem/root rot - (931), (933)
 Winter injury - (908), (911), (912)
 Kalanchoe - Botrytis blight - (910)
 Liriope - Pythium root rot - (920), (921)
 Winter damage - (908)
 Pachysandra - Leaf blight and stem canker - 916
 Pansy - Black root rot - (923), 933, (933), (934)
 Boron deficiency - (935)
 Cercospora leaf spot - (933)
 Iron deficiency - (934)
 Manganese deficiency - (934)
 Pythium root rot - (934)
 Peony - Cladosporium leaf blotch - (920), (926)
 Phyllosticta leaf spot - (931)
 Petunia - Black root rot - (923), (931)
 Powdery mildew - (908)
 Pythium root rot - (908), (911)
 Rhizoctonia root/stem rot - (928), (929), (931)
 Phlox - Powdery mildew - (927)
 Poinsettia - Pythium root rot - (925), (930), (934), (935)
 Monarda - Powdery mildew - (920)
 Morning glory - White rust - (926)
 Rose - Black spot - (921), (935)
 Powdery mildew - (910), (916), (920), (923), (928)
 Rose mosaic virus - (928)
 Rose rosette - (918), (920), (921), (922), (927), (928),
 (931), (935)
 Rudbeckia - Bacterial leaf spot - (925)
 Septoria leaf spot - (922), (924)
 Salvia - Bacterial leaf spot - (925)
 Scabiosa - Rhizoctonia root/stem rot - (929)
 Sedum - Powdery mildew - (923), (930)
 Snapdragon - Pythium root rot - (921)
 Rhizoctonia root rot - (921)
 Rhizoctonia stem rot - (918)
 Sunflower - Septoria leaf spot - (922)
 Vinca - Phoma stem canker - (922), (925)
 Phytophthora aerial blight - (930)
 Rhizoctonia stem rot - (914)
 Stem blights - 917
 Zinnia - Powdery Mildew - (934)
 Avoid powdery mildew of annuals and
 perennials - 912
 Bedding plant diseases - 909
 Diseases and cultural problems of houseplants - 936
 Perennial plants in the garden - sanitation for disease
 control - 937
 Prevent tulip and daffodil diseases now - 935

FORAGE CROPS

Fescue - Anthracnose - (927)
 Brown Patch - (927)
 Ergot risk - 918

Red thread - (922)
 Stripe smut - (918)
 Millet - Gray leaf spot - (927), 928, (929)

FRUIT CROPS

Apple - Aerial branch swellings-burrknots or crown
 gall? - 906
 Bitter rot - (930), (934)
 Blister spot - (926)
 Burr knot - (908)
 Cedar apple rust - (925)
 Cold injury - (916), (917)
 Fire blight - 910, (915), (916), (917), (918), (919), (920),
 (925), (930)
 Fly speck - (933)
 Freeze injury - (913), (915)
 Frogeye leaf spot - (925), (927)
 Fruit diseases - 930
 Nectria canker - (922)
 Powdery mildew - (926)
 Sooty blotch - (933)
 Apricot - Bacterial canker - (918)
 Cytospora canker - (918)
 Blackberry - Anthracnose - (919)
 Drought stress - (916)
 Fire blight - (926)
 Freeze injury - (920)
 Orange rust - (914)
 Psyllid injury - (926), (927)
 Rosette (double blossom) - (924), (926)
 Blueberry - Phytophthora crown rot - (925)
 Cherry - Black knot - (915), (919)
 Coccomyces leaf spot - (924)
 Cold injury - (920)
 Peach scale - (933)
 Crabapple - Entomosporium leaf spot - (933)
 Fire blight - (915), (916)
 Gooseberry - Powdery mildew - (922)
 Grape - Acid soil problems - (921)
 Anthracnose - (922), (928)
 Black rot - (917), (920), 921, (922), (923), (924), (925),
 (926), (934)
 Crown gall - (911), (929), (931)
 Downy mildew - (926)
 Growth regulator injury - (926)
 Phylloxera (insect) - (933)
 Pierce's Disease - 929, 933, (933), (934), 935
 Shothole borer - (911)
 Tar spot - (926)
 Peach - Bacterial canker - (918)
 Bacterial leaf spot - (921)
 Brown rot - (926), (928)
 Cytospora canker - (918)
 Oriental fruit moth injury - (919)
 Plum curculio - (920)
 Scab - (909), (928), (930)
 Sunscald - (920)
 Tarnished plant bug injury - (920)

Pear - *Phyllosticta* leaf spot - (931)
Fire blight - (915), (916), (918), (920)
Persimmon - Winter/freeze injury - (915)
Plum - Black knot - (915), (919)
Cytospora canker - (926)
Peach scale - (933)
Plum pockets - (916)
Raspberry - *Sphaerulina* leaf spot - (931)
Phytophthora root rot - (924)
Strawberry - Anthracnose - 908, (918)
Black root rot - (925), (928)
Leaf spot - (925)
Mycosphaerella leaf spot - (936)
Phomopsis leaf blight - (936)

Consider tree fruit collar rot control in the fall - 932
Fruit disease observations and management - 914
Managing small fruit diseases - 905

FUNGICIDES AND PESTICIDES

Actigard - a new blue mold control tool - 913
Actigard - a new tool in tomato disease control - 912
Adjusting and maintaining bactericide/fungicide sprays critical in commercial vegetables - 917
Change in Spectro label for gray leaf spot - 930
Changes in chlorothalonil label for turf disease control - 909
Evaluation of Actigard 50W and Acrobat MZ for blue mold control under strong disease pressure - 919
KY vegetable growers and dealers need to respect the resistance management guidelines for using the QoI/strobilurin-like fungicides - 933
Insensitivity of Quadris to certain gummy stem blight strains - a wake-up call - 916
Managing strobilurin fungicide resistance in horticultural crops - 904
Results from recent tests to control strains of *Pyricularia grisea* resistant to QoI (strobilurin-like) fungicides - 933
Stature, a new fungicide for greenhouse and shadehouse ornamentals - 931
Switch, a new fungicide for strawberry gray mold - 931

GRAINS

Canola - *Rhizoctonia* root and stem rot - (914)
Oats - *Fusarium* root rot - (920)
Semi-loose smut - (917)

LANDSCAPE TREES AND SHRUBS

Ash - Anthracnose - (916)
Cercospora leaf spot - (926)
Arborvitae - Normal leaf drop - (935)
Phomopsis twig blight - (935)
Azalea - Lace bug injury - (919)
Leaf and flower gall - (917)

Barberry - Winter/freeze injury - (915)
Birch - *Marssonina* leaf spot - (930)
Black Gum - *Botryosphaeria* canker - (928)
Boxwood - *Pseudonectria* dieback (*Volutella* blight) - (912), (919), (920), (924), (926), 927, (927), (928), (929), (933), (935)
Winter injury - (909), (910), (915)
Catalpa - *Verticillium* wilt - (921), (922), (924), (927)
Crabapple - Scab - (930)
Dogwood - *Septoria* leaf spot - (928), (933)
Spot anthracnose - (926)
Powdery mildew - 925, (925), (926), (927), (928)
Elm - Anthracnose - (923)
Bacterial leaf scorch - (933)
Euonymus - Winter injury - (910)
Golden raintree - *Verticillium* wilt - (931)
Hawthorn - Cedar-quince rust - (927)
Hemlock - *Cytospora* canker - (934)
Holly - Bacterial blight - (922)
Black root rot - (909), (911), (912), (914), (918), (919), (928)
Fungal leaf spot - (912)
Phytophthora root rot - (911)
Phythium - (927)
Rhizoctonia root rot - (927)
Winter injury - (909), (910), (911), (915)
Inkberry - Black root rot - (914)
Juniper - *Kabatina* twig blight - (912), (915), (919)
Phytophthora root rot - (920)
Leyland cypress - Winter/freeze injury - (915)
Lilac - Winter/freeze injury - (915)
Magnolia - Winter drying - (908)
Winter injury - (910), (911), (915)
Maple - Anthracnose - (915), (917), (929), (933)
Insect galls - (917)
Marssonina leaf spot - (928), (929)
Petiole borer - (916), (917)
Phyllosticta leaf spot - (918), (931)
Verticillium wilt - (918), 922, (925)
Mulberry - *Cercospora* leaf spot - (927)
Cylindrosporium leaf spot - (930)
Oak - *Actinopelte* leaf spot - (931)
Bacterial leaf scorch - (933), (935)
Hypoxylon canker - (935)
Insect galls - (917)
Jumping oak gall - (923)
Pecan - Internal breakdown - (930)
Pine - Brown spot needle blight - (930)
Eastern gall rust - (921)
Pine wilt nematode - (934)
Salt damage - (908)
Sphaeropsis tip blight - (914), (922), (935)
Photinia - *Entomosporium* leaf spot - (927)
Redbud - Anthracnose - (928)
Verticillium wilt - (921)
Rhododendron - *Botryosphaeria* canker - (908), (926)
Crown rot - (930)
Dieback - (908), (921)

Phytophthora root rot - (921)
 Winter injury - (909)
 Serviceberry - Entomosporium leaf spot - (927)
 Smoketree - Verticillium wilt - (929), (931) Spruce -
 Cytospora canker - (918)
 Rhizosphaera needle cast - (911), (927), (936)
 Winter injury - (909)
 Sycamore - Anthracnose - (923)
 Taxus - Phytophthora root rot - (911)
 Tuliptree - Tar spot - (925), (929)
 Powdery mildew - (929)
 Verticillium wilt - (925)
 Viburnum - Pythium - (934)
 Rhizoctonia root rots - (934)
 Walnut - Anthracnose - (928)
 Cylindrosporium leaf spot - (930)
 Willow - Cercospora leaf spot - (930)
 Septoria leaf spot - (934)
 Yellowwood - Anthracnose - (925)

Are wood chips a source of tree diseases? - 915
 Bacterial wetwood and slime flux of landscape trees -
 924
 Diseases of woody ornamentals and trees in nurseries -
 a new reference book - 926
 Fire blight alert - 911
 Fire blight - what now? - 918
 Landscape plant damage can be caused by excess
 water - 928
 Replanting the urban forest following bacterial leaf
 scorch - 907
 Water woody landscape plants to prevent winter
 drying and disease - 932
 Winter injury and spring frost injury to woody plants -
 913

LAWN AND TURF

Bentgrass - Anthracnose - (924), (934)
 Brown patch - (927)
 Disease reactions of new varieties - 931
 Dollar spot - (914), (924), (928), (935)
 Fairy ring - (917)
 Leaf spot - (927)
 Summertime spray programs - 914
 Take-all - 918, (918)
 Yellow patch - 907, (913)
 Bermudagrass - Dollar spot - (922)
 Loose smut - (927)
 Spring dead spot - 913
 Bluegrass - Anthracnose - (931)
 Necrotic ringspot - 910, (911), (926)
 Rust - (920)
 Summer patch - (923), (928)
 Fescue - Brown patch - (923), (929), (930)
 Orchardgrass - Brown stripe - (927)
 Ryegrass - Anthracnose - (926)
 Bipolaris leaf spot - (926)
 Gray leaf spot - 920, (929), (930)

Workshop on microscopic identification - 909
 Resistance to Q_oI (=strobilurin-like) fungicides - 919
 New recommendations for seedings for Kentucky
 horse farms - 934
 Pythium blight - (928)
 Turfgrass - Dollar spot - (921)
 Take-all - (921)
 Red thread - (921)
 Slime molds - (927)

Brown patch activity enhanced by recent
 wet weather - 920
 Controlling microdochium patch/pink snow mold in
 amenity turfs - 937
 Phytotoxicity risk with PCNB - 938
 Golf course uses no longer supported for maneb
 registrations - 937
 Pythium cottony blight - 921

MISCELLANEOUS

Ginseng - Alternaria leaf and stem blight - (920)
 Phytophthora blight - (929)
 Rhizoctonia root/stem rot - (922)
 Rosemary - Crown gall - (919)
 Fertilizer burn - (920)
 Botrytis blight - (920)
 Saint John's Wort - Rhizoctonia root and
 stem canker - (923)

SOYBEAN

Acid soil problems - (934)
 Anthracnose - (926)
 Bead pod mottle virus, severe strain - 931
 Charcoal rot - (928), (933), (934), (935), (936)
 Chemical injury - (925)
 Diaporthe pod/stem/rot - (933), (934), (936)
 Downy mildew - (925)
 Environmental stress - (925)
 Frogeye leaf spot - (931), (933), (934), (935)
 Herbicide injury - (921)
 Increased doublecrop yields may be possible - 918
 Late-season concerns - 935
 Macrophomina seed decay - (936)
 Nitrogen deficiency - (921)
 Phytophthora wilt - (924), (926)
 Potash deficiency - (926)
 Rhizoctonia root and stem rot - (918), (921), (925)
 Soybean cyst nematode - 910, 911, (922), (928), (929),
 (931)
 Sudden death syndrome - 907, 914, (928), (929), (930),
 (931), (933)
 "Unthriftness" - 926

Disease update: SDS and frogeye leafspot
 on the move - 928
 Foliar spots and blights - 922

TOBACCO

Alfalfa mosaic virus - (925), (928), (929)
 Angular leaf spot - (931)
 Bacterial blackleg - (919)
 Bacterial soft rot/hollow stalk/leaf drop/rot - (917), (918), 924, 929, (929), (931)
 Blackleg (Erwinia) - (915), (916), (917), (918), (920), (924)
 Black root rot - (920), (921), (922), (923), (924), (927)
 Black shank - 915, 917, (921), (922), (923), (924), (925), (926), (927), (928), (929), (930), (931), (933)
 Blue mold - 904, 906, (920), (921), (923), (924), (925), (926), 927, (927), (928), (929), (930), (931), (933), 934, 935
 Cultural practices for control - 910
 Current status - 911, 916, 917, 918, 919, 920, 921, 922, 923, 926, 929, 931
 Effect on China tobacco trade - 906, 927, 934, 935
 Field controls for 2001 - 922
 Oospores - 927, 934, 935
 Systemic blue mold - (931)
 Brown spot - (924), 930, (930), (931)
 Chemical injury - (914), (917)
 Chemical control -
 Acrobat MZ - 919
 Acrobat 50WP - 926
 Actigard 50WP - 913, 926, 919
 In tobacco transplant production systems-2001 crop - 908
 Messenger failed to control blue mold - 904
 Cold & frost injury - (913), (914), (915), (916), (919), (920), (921)
 Cucumber mosaic virus - (927)
 Disease resistant variety - 937
 Fertilizer burn - (915)
 Flea beetle feeding - (920)
 Float-system sanitation: a key step to root disease management in 2001 crop - 905
 Freeze damage - (914)
 Frog-eye leaf spot - (924), (925), (926), (929), 930, (930), (931), (933), (935)
 Fungal leaf spotting diseases of tobacco - 930
 Fusarium root/stem rot - (924), (925), (926), (928)
 Fusarium wilt - (923), (924), (925), (929)
 Genetic abnormalities (chimera) - (924)
 Herbicide and fungicide injuries - (916), (918), (919), (926), (927)
 Manganese toxicity - (919), (920), (921), (922), (924), (925)
 New or emerging tobacco diseases - 936
 Nitrogen - (920)
 Ozone damage - (925)
 Pythium root rot - (910), (911), (913), (914), (915), (916), (917), (918), (919), (920)
 Ragged leaf spot - 930
 Resistant variety issues - 927
 Rhizoctonia damping-off - (910), (913), (914), (916),

(917)
 Rhizoctonia root/stem rot - (925), (926)
 Root knot nematode - (925)
 Sclerotinia collar rot - (915), (917)
 Spiral root - (912), (913)
 Soreshin - (923), (924), (926), (927), (929), (931), (933)
 Storms increased disease potential in tobacco and commercial vegetables - 924
 Sunscald - (920)
 Target spot - (915), (916), (917), (918), (919), (920), (924), (930), (931), (933)
 Temporary phosphorus deficiency - (916), (917), (919), (920)
 Tobacco mosaic - (923), (927), 936
 Tobacco ringspot virus - (919), (923), (925), (926), (927)
 Tobacco streak virus - (925), (928)
 Tomato spotted wilt virus complex - (919), (920), 921, (921), (922), (923), (924), (925), (926), (927), (933)
 Transplant shock - (915), (920), (924)
 Wind/water damage - (931)

VEGETABLES

Bean - Angular leaf spot - (926)
 Anthracnose - (925), (930), (931)
 Bacterial spot - (922)
 Common blight - (927)
 Pythium stem blight - (930)
 Rhizoctonia stem rot - (918), (921), (926)
 Rust - (927)
 Sunscald - (922)
 Broccoli - Bacterial soft rot - (920)
 Rhizoctonia wirestem - (917), (933), (935)
 Cabbage - Black rot - (935)
 Pseudocercospora leaf spot - (936)
 Pythium root rot - (912)
 Spiral root disorder - (908)
 Cantaloupe - Alternaria leaf spot - (924)
 (Muskmelon)
 Anthracnose - (923), (928), (930)
 Bacterial wilt - (919), (920), (921), (923), (925), (926)
 Vector control - 934
 Downy mildew - 926
 Fusarium fruit rot - (931)
 Pythium root rot - (918)
 Root knot nematode - (919)
 Cauliflower - Alternaria leaf spot - (924), (936)
 Bacterial leaf spot - (936)
 Black rot - (936)
 Rhizoctonia wirestem - (933)
 Collard - Oedema - (926)
 Cucumber - Anthracnose - (926)
 Bacterial wilt - (921)
 Downy mildew - 926
 Sunscald - (917)
 Okra - Black root rot - (923)
 Rhizoctonia root and stem rot - (921)
 Onion - Black mold - (934)

Pea - Oedema - (925)
 Powdery mildew - (922), (926)
 Rhizoctonia root and stem rot - (921)

Pepper - Alfalfa mosaic virus - (924), (927), (930)
 Anthracnose - (931)
 Bacterial canker - (935)
 Bacterial spot - (920), (921), (922), (924)
 Cucumber mosaic - (927)
 Phytophthora blight - (933), (935)
 Potyvirus complex - (927)
 Pyllosticta leaf spot - (927)
 Pythium root rot - (911), (918), (920), (927)
 Rhizoctonia damping-off - (911), (913)
 Rhizoctonia root and stem rot - (921), (927)
 Southern blight - (924)
 Sunscald injury - (929)
 Tobacco mosaic virus - (930)
 Tomato spotted wilt virus - (921), (922), (927), (929)

Potato - Scab - (912), (922), (929)

Pumpkin - Bacterial wilt - (925), (927), (928)
 Cercospora leaf spot - (931)
 Downy mildew - 926, (930)
 Fusarium fruit rot - (931)
 Manganese toxicity - (929)
 Microdochium blight - (929), (930), (931), (934)
 Phytophthora blight - (933)
 Potyvirus complex - (929), (931)

Rhubarb - Bacterial crown rot - (926)

Squash - Alternaria fruit rot - (919)
 Bacterial wilt - (925), (927)
 Downy mildew - 926
 Phytophthora root and stem rot - (920)
 Virus complex - (931)

Sweet potato - Scurf - (934)

Tomato - Actigard - 912
 Anthracnose - (929)
 Bacterial canker - (919), (920), (921), (925), (926), (927), (930)
 Bacterial spot/speck - (920), (921), (924), (925), (930), (931)
 Blossom end rot - (914), (925), (927), (929)
 Botrytis canker - (929)
 Buckeye rot - (924), (928)
 Catfacing - (925), (931)
 Cucumber mosaic virus - (923)
 Early blight - (919), (921), (923), (925), (926), (929), (931)
 Fusarium root and stem rot - (923), (924), (925)
 Fusarium wilt - (922), (923), (924), (925), (929)
 Magnesium deficiency - (916)
 Pith necrosis - (922)
 Powdery mildew - (911)
 Pythium root rot - (917), (920)
 Rhizoctonia damping off - (913)
 Rhizoctonia stem canker - (917)
 Root knot nematode - (921), (929)
 Sclerotinia stem rot - (917)
 Septoria leaf spot - (921), (922), (923), (924), (925),

(928), (929), (933)
 Spray program for transplant production in a greenhouse system - 909
 Tomato mosaic virus - (926)
 Tomato spotted wilt virus - (918), (919), (921), (922), (923), (924), (926)
 Walnut wilt - (920), (922), (925), (933)
 Turnip - Anthracnose - (933)
 Boron deficiency - (935)
 Cercospora leaf spot - (934)
 Watermelon - Blossom end rot - (927)

Bacterial diseases in commercial vegetables - 923
 Downy mildew alert for cucurbit crops - 926
 Fungicide resistance management - 933
 Vegetable disease advisories - 924, 926
 Vegetable spray programs - 917

WHEAT

Barley yellow dwarf virus - (909)
 Cold injury - (909), (910), (912), (914)
 Fungicide label updates - 925
 Karnal bunt - 923, 924
 Powdery mildew: management options for 2001 - 906
 Stagonospora leaf blotch - (912)
 Stratego foliar fungicide labeled for wheat - 908
 Wheat disease status - 912, 915, 917, 919
 Wheat fungicide label updates - 925
 Wheat spindle streak mosaic virus - (915), (916)

ENTOMOLOGY

GARDEN & FIELD CROP PESTS

Accidental applications - 924
 Admire - 913 (tobacco)
 Alfalfa pests - 910, 912, 919, 920, 924, 922, 928
 Alfalfa weevil - 910, 912, 919, 920, 927
 Aphids - 905, 912, 919, 920, 928, 929, 930, 934
 Armyworms - 915, 916, 917, 921
 Aztec (corn treatment) - 907
 Barley yellow dwarf - 905
 Bean leaf beetle - 917
 Beet armyworm - 917
 Blister beetle - 920, 924
 Bt Corn - 910, 935
 Budworms - 913, 919, 922
 Common stalk borer - 922
 Corn borers - 922, 930
 Corn earworms - 927
 Corn pests - 908, 913, 914, 917, 921, 923, 926, 927, 930
 Corn treatment - 907
 Counter (corn treatment) - 907
 Crickets - 914, 928
 Cutworms - 913, 914, 916, 918, 919
 European corn borer - 910, 917, 919, 921, 922, 926, 927, 930
 Fall armyworm - 917, 922, 923, 924, 927, 928

Flea beetles – 913, 919
 Float plant pests – 909, 914
 Float systems – 909, 912
 Force (corn treatment) – 907
 Fungus gnats – 909
 Gaucho (corn treatment) – 907
 Grain fumigation – 930
 Grasshoppers – 928
 Green cloverworm – 930
 Ground beetles – 913, 919, 912
 Japanese beetle – 922
 Mexican bean beetle – 928
 Orthene – 913 (tobacco)
 Pill bugs – 912
 Potato leafhoppers – 919
 Prescribe (corn treatment) – 907
 Shore flies – 909, 912
 Sorghum midge – 924
 Sorghum pests – 924
 Southwestern corn borer – 908, 910, 926, 927, 930
 Sowbugs – 912
 Soybean aphids – 928, 929, 930
 Soybean pests – 917, 922, 923, 928, 929, 930, 931
 Soybean podworm – 931
 Spider mites – 922, 923
 Spittlebugs – 912
 Spotted cucumber beetles – 919, 928, 934
 Stink bug – 929
 Striped cucumber beetle – 934
 Sweet corn pests – 927
 Temperature, effect of winter – 904
 Thrips – 921
 Tobacco aphids – 913, 919, 920
 Tobacco budworms – 913, 919, 922
 Tobacco flea beetles – 913, 919
 Tobacco hornworms – 913, 919, 922
 Tobacco pests – 909, 912, 913, 914, 916, 918, 919, 920, 922, 929
 Tomato hornworms – 922
 True armyworm – 917, 918, 920
 Variegated cutworms – 912, 914, 922
 Waterfleas – 912
 Wheat insets – 905, 915
 Wireworms – 918
 Yellow striped armyworm – 917, 922

FRUIT

Codling moth – 913
 Green June beetles – 925
 Lady beetles – 934
 Plum curculio – 914

HOUSEHOLD PESTS

Ants – 920
 Asian Lady beetles – 907, 908, 934
 Birds – 911
 Bird mites – 911
 Black widow spider – 926

Boxelder bugs – 907, 908
 Brown recluse spider – 926
 Camel crickets – 932
 Carpenter bees – 913
 Carpet beetles – 936
 Clothes moths – 936
 Cluster flies – 906
 Crab spide – 934
 Crickets – 930
 Dwarf spider – 934
 Earwigs – 924
 Fabric pests – 936
 Face flies – 906
 Foreign grain beetle – 928
 Head lice – 904
 Hornets – 927
 Jumping spider – 934
 Leaf-footed (seed) bugs – 906
 Line weaving spider – 934
 Lady beetles (bugs) – 906, 907, 908
 Mice – 932
 Mites – 911
 Mosquitoes – 918
 Paper wasps – 906 (queen), 927
 Pest-proof your home – 933
 Spiders – 926, 934
 Stinkbugs – 906
 Termites – 910, 923
 Wasps – 906, 927
 Wolf spider – 934
 Woolly alder aphids – 934
 Woolly aphids – 934
 Yellowjackets – 906, 927

HUMAN, PUBLIC HEALTH PESTS

Head lice – 904
 Stinging caterpillars – 931
 Ticks – 910
 Velvet ants – 931

LANDSCAPE, TREES, TURF

Avaunt – 905
 Bronze birch borer – 917
 Burrower bugs – 917
 Calico scale – 916
 Cecropia caterpillar – 928
 Cicadas – 917
 Cicada killers – 925
 Clover mites – 912, 917
 Codling moth – 905
 Confirm – 905
 Danitol – 905
 Dogwood borers – 917
 Dursban – 916, 917
 Earwigs – 924
 Eastern tent caterpillars – 910, 912, 914
 European pine sawfly – 913, 917
 Flatheaded apple tree borers – 917

Giant caterpillars – 928
 Guthion – 905
 Hickory horned devil – 928
 Hawthorn lace bug – 912
 Holly leafminers – 913
 Honey locust borer – 917
 Honey locust plant bugs – 912
 Japanese beetles – 921
 Lacebugs – 924
 Less peachtree borer – 913
 Lilac borer – 913
 Lindane – 916
 Malathion – 916
 Maple petiole borer – 915
 Masked chafers – 921
 Mites – 917
 Oak galls – 913
 Orthene – 916
 Oystershell scale – 913
 Pennecap-M – 905
 Periodical cicadas – 917
 Pyrethroid (synthetic) – 916
 San Jose scale – 905
 Sawflies – 913
 Scimitar – 916
 Sniper – 905
 Southern Pine beetles – 909
 Talstar – 916
 Tempo – 916
 Wheel bug – 924
 White grubs – 921

LIVESTOCK

Cattle grubs – 928
 Cattle eartags – 912
 Cattle lice – 936
 Face fly – 924
 Horse flies – 924
 Stable flies – 924

PASTURE

Armyworms – 916, 918

VEGETABLES

Accidental application – 924
 Actara 25 WDG – 931
 AgriMek 0.15 EC – 931
 Avaunt 30 DG – 931
 Beet armyworm – 919
 Colorado potato beetle – 915
 Corn earworm – 927
 Corn flea beetle – 915
 Cucumber beetle – 934
 Cutworms – 915
 Danitol 2.4 EC – 931
 Diamondback moth – 915
 European corn borer – 927
 Fulfill 50 DF – 931

Fury 1.5 EC – 931
 Fall armyworm – 927
 Imported cabbageworm – 915
 Knack 0.86 EC – 931
 Leverage 2.7 SE – 931
 Platinum 2 SC – 931
 Potato flea beetle – 915
 Spotted cucumber beetle – 915, 919
 Striped cucumber beetle – 915
 Stiped flea beetle – 915
 Southwestern corn borer – 927 (sweet corn)
 Squash bug – 919
 Squash vine borer – 919
 Sweet corn – 927
 Tobacco flea beetle – 915

PESTICIDE INFORMATION

Applicator certification – 934
 Insecticides for armyworm in pastures – 918
 Actara – 921, 931(25 WDG - vegetables)
 Admire – 913 (tobacco)
 AgriMek 0.15 EC – 931 (vegetables)
 Astro – 909 (trees)
 Avaunt 30 DG – 905, 931 (vegetables)
 Carbaryl – 916 (pasture)
 Chlorpyrifos – 909 (trees), 916, 917, 937
 Confirm – 905 (fruit), 918 (pasture)
 Cythion – 916 (pasture)
 Danitol 2.4 EC – 905 (fruit), 931 (vegetables)
 Diazinon – 937
 Dursban – 916 (tree), 937
 Fulfill 50 DF – 931 (vegetables)
 Fury 1.5 EC – 931 (vegetables)
 Gaucho – 907 (corn)
 Guthion – 905 (fruit), 936
 Imidan – 905 (fruit), 936
 Intrepid – 905 (fruit)
 Knack 8.86 EC – 931 (vegetables)
 Leverage 2.7 SE – 931 (vegetables)
 Lorsban – 905 (fruit), 937
 Malathion – 916 (pasture & tree)
 Organophosphate – 905 (fruit), 912 (livestock)
 Orthene – 913 (tobacco), 916 (tobacco & tree)
 Pennecap-M – 905 (fruit)
 Permethrin – 909 (trees)
 Platinum 2 SC – 931 (vegetables)
 Pounce 3.2 EC – 905 (fruit), 918 (pasture)
 Prescribe – 907 (corn)
 Pyrethroid (synthetic) – 912 (livestock)
 Security threats – 935
 Sevin – 916 (pasture)
 Sniper – 905 (fruit)
 Telephone sales – 908, 934

