A. Chemicals Utilized to Control Fusarium Root Rot

1949
Aluminum Sulphate
Chloropicrin (CP)

1949-50
CP
Sulphur
Dowfume W-85 (85% Ethylene Bromide)
Dowfume MC-2 (98% Methyl Bromide & 2% CP)
Shell DD
Shell OS-840
Note: Adverse side effect has been removal of all mycorrhiza, a beneficial fungi.

1950-51
CP (greatly reduced due to mycorrhiza depletion)
Allyl Alcohol

1952-53
Semesan
Arasan
Cersasan
Firmate
AL SO-4
FE SO-4
CP
Sucrose, sodium fluoride, glucose, citric acid, oxalic acid
Trichoderma, Aclinomyces, Pencillium

1954-55
AL-2 SO-4
Aluminum Sulphate
Nitrate
Orthocide 50 - fungicide
Ortho Seed Protector and Treater

1957-58
Orthocide 75
Terrilite
Aluminum Sulphate
Ammonium Phosphate
Note: Denser planting and more water reducing soil temperatures have helped.

1961-62
Note: Intensive soil management has been best control for root rot.
No chemicals used at this time.
<table>
<thead>
<tr>
<th>Year</th>
<th>Chemical/Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971-72</td>
<td>MBCP (methyl bromide and cholorpicrin)</td>
</tr>
<tr>
<td>1972-73</td>
<td>Fumigation (?)</td>
</tr>
<tr>
<td>1973-74</td>
<td>Fumigation (?)</td>
</tr>
<tr>
<td>1981-82</td>
<td>Note: 7,280 pounds of fumigant was used for 1982 sowing.</td>
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<tr>
<td></td>
<td>MBCP (67%-33% ratio)</td>
</tr>
<tr>
<td>1984-85</td>
<td>Vapam (Metam-sodium)</td>
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<tr>
<td></td>
<td>Dazonet (Badamid granular)</td>
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<tr>
<td></td>
<td>MBCP</td>
</tr>
<tr>
<td>1985-86</td>
<td>Bravo 500</td>
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<td></td>
<td>Daconil 2787 (chlorothalonil)</td>
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<td></td>
<td>Benlate 50-wp (benomyl)</td>
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<tr>
<td></td>
<td>MBCP (67%-33%) ratio - 350 lbs per acre</td>
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<tr>
<td>1986-87</td>
<td>MBCP</td>
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<tr>
<td></td>
<td>Basamid</td>
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<tr>
<td></td>
<td>Captan</td>
</tr>
<tr>
<td></td>
<td>Benlate</td>
</tr>
<tr>
<td>1987-88</td>
<td>MBCP (treated by NW Pesticide Co. do to high hazard handling)</td>
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<tr>
<td></td>
<td>Basamid</td>
</tr>
<tr>
<td>1988-89</td>
<td>MBCP</td>
</tr>
<tr>
<td></td>
<td>Basamid</td>
</tr>
<tr>
<td></td>
<td>Benlate</td>
</tr>
<tr>
<td></td>
<td>Captan</td>
</tr>
<tr>
<td>1989-90</td>
<td>MBCP</td>
</tr>
<tr>
<td></td>
<td>Benlate</td>
</tr>
<tr>
<td>1990-91</td>
<td>MBCP</td>
</tr>
<tr>
<td></td>
<td>Benlate</td>
</tr>
<tr>
<td>1991-92</td>
<td>Basamid</td>
</tr>
<tr>
<td></td>
<td>OSU study - EPA requests info on impact if MBCP is prohibited.</td>
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<tr>
<td>1992-93</td>
<td>MBCP</td>
</tr>
<tr>
<td>1993-94</td>
<td>Benlate 50 DF</td>
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<tr>
<td></td>
<td>Captan 50 WP</td>
</tr>
<tr>
<td></td>
<td>Clearly 3336</td>
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<tr>
<td>1994-95</td>
<td>MBCP</td>
</tr>
<tr>
<td></td>
<td>Basamid trial with MBCP for alternatives to MB.</td>
</tr>
<tr>
<td>1995-96</td>
<td>MBCP</td>
</tr>
<tr>
<td>1996-97</td>
<td>No fumigation - trials continue</td>
</tr>
</tbody>
</table>
B. Chemicals Utilized to Control Weeds

1949
Shell #10
Standard Oil "Stoddard"

1951-52
Shell #10
CMU (DuPont) Kills to roots and inactivates soil for 6 months.

1952-53
Shell #10 no longer available - similar product, used as a paint base, was sprayed and proved more effective, but burned 2-0 transplant stock.
2-4D

1955-56
Orthocide 75
Orthocide 50
Dithane

1957-58
Orthocide 75
Terrilite
Aluminum Sulphate
Ammonium Phosphate

1958-59
Mylone
Acti-Dione

1960-61
Mineral Spirits from Shell Oil Co.

1961-62
Mineral Spirits
Amazine
Trizone

1978-79
Dymid
Mowdown

1981-82
Dymid
Mowdown

1982-83
Dymid
Mowdown

1983-84
Herbicide for weed control banned in Region 6.

1990-91
Goal 1.6E. Herbicide usage reinstated.

1991-92
Goal 1.6E

1994-95
Endurance
Goal 1.6E

1997-98
Goal 1.6E
C. Chemicals Utilized to Control Pests (Birds, Mammals, Insects)

1954-55 Two compounds from California Spray Chemical Co. to eradicate Doves.
1959-60 Morkit - to eradicate birds.  
Arasan - to prevent animal damage.  
Roplex - to prevent animal damage.
1960-61 Arasan
1961-62 Thiram - animal repellent
1986-87 Sevin - insecticide  
Trapping and shooting to control birds and rodents - no chemicals used.

D. Chemicals Utilized for Seed Treatment

1955-56 Orthocide 75
1959-60 Captan 75 (fungicide)
1960-61 Captan 75  
Anthroquinone (bird repellent)  
Mowit  
Latex
1961-62 Captan 75
1974-75 Dymid  
Enide

E. Chemicals Utilized as Soil Amendments

1951-52 Test #1 Super phosphate & ammonium sulfate 
Super phosphate & sodium nitrate 
Super phosphate & lime 
Test #2 Super phosphate 
N-K  
Merculine  
Carbon disulfide 
Test #3 P-162 in water solution
1956-57 Aluminum sulphate
1959-60 Commercial Fertilizer 16-20-0
1960-61 16-20-0
1961-62 16-20-0
1971-72 34-0-0, 27-12-0 & sulfur
1984-85 Change to organic amendments include sawdust, mint sludge, manure, and Bendorgunite (sewer sludge)
1985-86 Nitrogen (ammonium sulphate, urea & potassium nitrate)
F. Chemicals Utilized to Control Miscellaneous Problems

1961-62  Rootone - to control transplant shock
         Rootex 59 - to control transplant shock
         Rutex W-3 - to control transplant shock
1988-89  Bravo 500 - to control Phoma, tip blight
         Benlate 50_W - to control Phoma, tip blight
1989-90  Bravo foliar drench - to control Phoma
1993-94  Bravo 720 - to control Phoma