

Apple Spray / 1961 Program

FOR COMMERCIAL GROWERS

NAME & TIME OF SPRAY APPLICATION	AMOUNTS OF FUNGICIDES AND INSECTICIDES TO USE PER 100 GALLONS OF SPRAY, NOTES ON THEIR USE AND MAJOR DISEASES AND INSECTS TO CONTROL
LATE DORMANT Before visible growth starts	Use: Oil 2 gal. plus dinitro paste 1 qt. OR oil 2 gal. plus dinitro powder 1 lb. Very important spray for aphid eggs, mite eggs and scales. If this spray is omitted, mite and aphid control must be started in the PINK SPRAY.
DELAYED DORMANT When buds show ¼ to ½ inch new growth	Use: Lime-sulfur 2 gal. OR dodine 65% 12 oz. OR sulfur 3 lb. + ferbam 76% 8 oz. + dichlone 50% 4 oz. OR sulfur 3 lb. + ferbam 76% 8 oz. + dodine 65% 8 oz. Diseases: Scab, mildew, quince rust and cedar-apple rust. Dodine (Cyprex) is very effective against scab; ferbam against rusts; sulfur against mildew.
PRE-PINK When center buds first show pink	Use: Same materials as in DELAYED-DORMANT SPRAY
PINK Just before bloom	Fungicide: Dodine 65% 12 oz. OR sulfur 3 lb. + ferbam 76% 8 oz. + dichlone 50% 4 oz. OR sulfur 3 lb. + ferbam 76% 8 oz. + dodine 65% 8 oz. OR paste sulfur 70% 8 lb. + ferbam 76% 12 oz. Insecticide: Parathion 15% 1½ lb. OR Malathion 25% 4 lb. OR Guthion 25% 1½ lb. OR Sevin 50% 2 lb. Use either fungicide with either insecticide. Don't use parathion or Guthion unless all precautions are followed. Sevin doesn't control mites. Diseases: Scab, rusts, mildew, leaf spot Insects: Aphid, leaf roller, mite, Oriental fruit moth
BLOOM About 1 week after PINK SPRAY if bloom period will extend to 12 to 14 days	Fungicide: Sulfur 6 lb. + ferbam 76% 12 oz. Don't spray in peak of bloom. Insecticide: Use NO insecticide during bloom. Diseases: Scab, rusts, mildew, leaf spot For fire blight control: Streptomycin at 60 ppm (parts per million) in sprays at 5-day intervals from the start to the end of bloom will help.
PETAL-FALL When most of petals have dropped	Fungicide: Dodine 65% 12 oz. OR captan 50% 2 lb. OR captan 50% 2 lb. + ferbam 76% 8 oz. OR paste sulfur 8 lb. + ferbam 76% 12 oz. OR sulfur 3 lb. + ferbam 76% 8 oz. + dichlone 50% 4 oz. OR sulfur 3 lb. + ferbam 76% 8 oz. + dodine 65% 8 oz. Insecticide: Lead arsenate 3 lb. Dodine is only for scab; ferbam for rusts and leaf spot; sulfur for mildew and scab; captan for scab and black rot. Dodine russets Golden Delicious apples. Diseases: Scab, powdery mildew, rusts, leaf spot, black rot Insects: Codling moth, leaf roller, Oriental fruit moth
FIRST COVER 10 days after PETAL-FALL	Fungicide: Same as in PETAL-FALL Insecticide: Parathion 15% 1½ lb. OR Malathion 25% 4 lb. OR Guthion 25% 1½ lb. OR Sevin 50% 2 lb. Diseases: Same as in PETAL-FALL Insects: Same as PETAL-FALL plus apple seed chalcid. Sevin doesn't control mites.
SECOND COVER 2 weeks later	Note: Diseases to control during the remainder of the season include scab, fruit spot, black rot, botryosphaeria rot, bitter rot, blotch, sooty blotch and fly speck. Note: Insects to control during the remainder of the season include aphid, codling moth, leaf roller, mite and Oriental fruit moth. Fungicide: Captan 50% 2 lb. OR copper sulfate 3 lb. + hydrated lime 6 lb. Insecticide: Parathion 15% 1½ lb. OR Malathion 25% 4 lb. OR Guthion 25% 1½ lb. OR Sevin 50% 2 lb. OR lead arsenate 3 lb. Sevin or lead arsenate doesn't control mites. Don't use Malathion or Sevin or Guthion with copper sulfate + lime. Don't change from copper sulfate + lime to captan in one spray to the next.
THIRD COVER 2 weeks later	Fungicide: Same as in SECOND COVER Insecticide: Same as in SECOND COVER To prevent mite build-up in July and August include in this spray one of the following miticides unless Guthion is being used in all sprays: Kelthane emulsion concentrate 17% 1 qt. OR Systox (demeton 25%) 1 qt. OR Tedion 25% 1 lb.
FOURTH COVER 2 weeks later	Fungicide: Same as in SECOND COVER Insecticide: Same as in FIRST COVER
FIFTH COVER 2 weeks later	Fungicide: Same as in SECOND COVER OR substitute captan 50% 1 lb. + zineb 65% 1 lb. for captan 50% 2 lb. Insecticide: Same as in SECOND COVER
SIXTH COVER 2 weeks later	Fungicide: Same as in FIFTH COVER Insecticide: Same as in FOURTH COVER Don't use lead arsenate within 30 days of harvest. This applies to apples of all varieties.
SEVENTH COVER 2 weeks later	Fungicide: Same as in FIFTH COVER Insecticide: Parathion 15% 1½ lb. OR Malathion 25% 4 lb. OR Guthion 25% 1½ lb. OR Sevin 50% 2 lb.

THE LAST SPRAY SHOULD BE APPLIED 4 WEEKS BEFORE HARVEST OF RED DELICIOUS AND GOLDEN DELICIOUS OR 6 WEEKS FOR STAYMAN AND ROME BEAUTY, EVEN IF ADDITIONAL SPRAYS WILL BE REQUIRED.

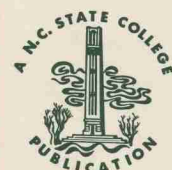
Prepared by: C. N. Clayton, Professor of Plant Pathology and
George F. Turnipseed, Research Assistant Professor of Entomology

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PETAL-FALL When most of petals have dropped	Fungicide: Dodine 65% 12 oz. OR captan 50% 2 lb. OR captan 50% 2 lb. + ferbam 76% 8 oz. OR sulfur 3 lb. + ferbam 76% 8 oz. + dichlone 50% 4 oz. OR sulfur 3 lb. + ferbam 76% 8 oz. + dodine 65% 8 oz. OR Phaltan 50% 2 lb. (if Phaltan is approved by FDA for use on apples.) Insecticide: Lead arsenate 3 lb. Dodine is only for scab; ferbam for rusts and leaf spot; sulfur for mildew and scab; captan for scab and black rot. Dodine russets Golden Delicious apples. Diseases: Scab, powdery mildew, rusts, leaf spot, black rot. Insects: Codling moth, leaf roller, Oriental fruit moth.
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