

Dated: February 20, 2003.

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Acting Director, Registration Division, Office of Pesticide Programs.

Summaries of Petitions

The petitioner summaries of the pesticide petitions are printed below as required by FFDCA section 408(d)(3). The summaries of the petitions were prepared by the petitioners and represent the views of the petitioners. The petition summary announces the availability of a description of the analytical methods available to EPA for the detection and measurement of the pesticide chemical residues or an explanation of why no such method is needed.

Bayer Corporation

2F6439 and 9E6054

EPA has received pesticide petitions (2F6439) from Bayer Crop Science, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709 proposing, pursuant to section 408(d) of the FFDCA, 21 U.S.C. 346a(d), to amend 40 CFR 180.518 by establishing tolerances for residues of pyrimethanil (4,6-dimethyl-N-phenyl-2-pyrimidinamine) in or on the Raw Agricultural Commodities (RAC): Tree nut, nutmeat, group at 0.25 parts per million (ppm), tree nut, hulls, group at 12 ppm, fruit, pome, group at 0.20 ppm, apple, wet pomace at 0.75 ppm, fruit, stone, group at 3.0 ppm, grape at 3.0 ppm, grape, dry pomace at 20 ppm, grape, wet pomace at 7.0 ppm, grape, raisin waste at 50 ppm, grape, raisin at 5.0 ppm, vegetable, bulb, group at 2.0 ppm, vegetable, tuberous and corm, subgroup at 0.05 ppm, strawberry at 3.0 ppm, tomato at 0.50 ppm, wheat, rotational at 0.05 ppm, cattle, meat at 0.1 ppm, cattle, meat byproducts at 0.1 ppm, and milk at 0.03 ppm. EPA also received a pesticide petition (9E6054) from AgrEvo USA Company, now owned by Bayer Crop Science, proposing, pursuant to section 408(d) of the FFDCA, 21 U.S.C. 346a(d), to amend 40 CFR 180.518 by establishing a tolerance for residues of pyrimethanil in or on the RAC: Banana at 0.10 ppm. EPA has determined that the petition contains data or information regarding the elements set forth in section 408(d)(2) of the FFDCA; however, EPA has not fully evaluated the sufficiency of the submitted data at this time or whether the data supports granting of the petition. Additional data may be needed before EPA rules on the petition.

A. Residue Chemistry

1. *Plant metabolism.* The metabolic profile of pyrimethanil has been investigated following application to five different crops (apple, carrots, grapes, lettuce and tomatoes) and is well understood. In plants, pyrimethanil is the only significant residue ranging from essentially all of the Total Radioactive Residues (TRR) in carrots and tomatoes to 44% in lettuce. Limited metabolism of pyrimethanil occurs with minor amounts (less than 10%) of the phenyl and pyrimidyl hydroxylated metabolites (AE C614276, AE C614277, AE C614278, and AE C621312) being released after acid hydrolysis. Analysis of the foliage from apples and carrots confirmed that the metabolism of pyrimethanil in plants proceeded primarily via hydroxylation of the aromatic ring structures as well as the methyl groups.

2. *Analytical method.* The plant metabolism studies indicated that analysis for the parent compound, pyrimethanil was sufficient to enable the assessment of the relevant residues in crop commodities. Following a dichloromethane surface wash and extraction of the crop matrix and sample cleanup, the analytical enforcement method relies on the use of NMR, High Performance Liquid Chromatography (HPLC), or Thin Layer Chromatography (TLC) for determination of the residue levels and metabolite identification. These methods allow detection and measurement of residues in or on agricultural commodities at or above the proposed tolerance level.

3. *Magnitude of residues.* Magnitude of residue trials were conducted for pyrimethanil on almonds, apples, apricots, grapes, onions, peaches, pears, plums, potatoes, strawberries, and tomatoes. Trials were conducted in the various required regions across the United States. Samples were collected at harvest according to good agricultural practices. The preharvest interval (PHI) ranged from 1-day to 72 days depending on the crop. Samples harvested at maturity were analyzed with a method having a level of quantitation (LOQ) of 0.05 ppm pyrimethanil. Residues in the RAC samples (range, maximum and average) are given below.

i. *Tree nuts (almonds, pistachios, beechnuts, chestnuts, and chinquapins).* Six trials were conducted on almonds during 2001. An end use formulation containing 400 g/l or 3.34 lbs active ingredient/gallon of pyrimethanil was applied three times as a broadcast application at a maximum rate of 0.70 lbs active ingredient/acre.

Applications were made approximately every 7 days. In almond hull RAC samples collected, the maximum residues were 10.2 ppm for pyrimethanil at a 30 ± 1 -day preharvest interval. In almond nutmeat RAC samples collected, the maximum residues were 0.135 ppm for pyrimethanil at a 30 ± 1 -day preharvest interval. According to Agency standard operating procedure 2000.1, residue trials on almonds will support the use of this product on pistachios, beechnuts, chestnuts and chinquapins.

ii. *Bulb vegetables (onions, green onions, dry bulb onions, welsh onions, garlic, great-headed garlic, leeks, and shallots).* Dry bulb and green onions were treated with pyrimethanil, a 400 g/l or 3.34 lbs active ingredient/gallon end use product. Nine trials were established for the study, three in California, two in Texas and one each in, New York, Michigan, Colorado, and Oregon. Each trial was conducted under typical cropping practices for its location. Pyrimethanil was applied to onion plants three times prior to harvest. Applications were made at a nominal rate of 0.71 lb active ingredient/acre, with 7 days between applications, the last application being made 7 days prior to harvest. A control (non-treated) plot was included in each trial. Mean pyrimethanil residue levels found in or on the non-decline trial samples ranged from 0.10 ppm to <LOQ for dry bulb onions and 1.62 ppm to 0.26 ppm for green onions. Pyrimethanil residues declined rapidly in dry bulb onions, with residues of 0.168 at 0 day PHI, 0.074 ppm at 7-day PHI (normal harvest), and <LOQ at 10-day PHI and thereafter. These trials will support registrations on the entire bulb vegetable crop groups.

iii. *Grapes.* Grapes were treated with pyrimethanil, a 400 g/l or 3.34 lb active ingredient/gallon formulation. Twelve RAC residue trials were established for the study, 8 in California, 2 in New York, and 1 each in Washington and Oregon. Pyrimethanil was applied to the grape vines two times, once at 35 days and once at 7 days prior to harvest. Applications were made at a nominal rate of 0.71 lb active ingredient/acre. Mean pyrimethanil residue levels found in or on the grapes sampled at 7 days PHI ranged from 0.13 ppm to 0.47 ppm. At the decline trial, mean pyrimethanil residues declined from 0.51 ppm at 1-day PHI to 0.20 ppm at 28 days PHI. Ground applications of pyrimethanil at a nominal rate of 1 kg active ingredient/hectare at flowering, grape closure, color change and 21 days prior to harvest results in residues of 0.51 ppm in the whole fruit. Processing of the fruit into