of the Surgeon General that adverse health effects have not been found in the U. S. population below 8 mg F/L (0.23 mg/kg/day).

3. *Non-dietary exposure*. Cryolite is used almost exclusively as an agricultural crop protection insecticide. Conceivably, cryolite also could be used in outdoor homeowner/residential sites for insect control in ornamentals and shade trees. Cryolite is not registered for either lawn or crack and crevice treatments. EPA concluded in the RED that a post-application exposure assessment for cryolite (including both occupational and residential exposure) was not appropriate since no toxicological endpoints relevant to non-dietary exposure have been identified for cryolite. The Task Force concludes that non-dietary exposure represents a negligible component of potential aggregate exposure to cryolite and need not be considered in the aggregate risk assessment.

D. Cumulative Effects

The residue of toxicological concern in cryolite is fluoride. Although fluoride supplements in drinking water are not considered to be pesticidal substances, the dietary contribution of drinking water to overall fluoride exposure has been discussed elsewhere in this summary. Current tolerances for insecticidal fluorine-containing compounds are limited to cryolite and synthetic cryolite. For this reason, consideration of potential cumulative effects of residues from pesticidal substances other than sodium aluminofluoride with a common mechanism of toxicity are not applicable.

E. Safety Determination

1. *U.S. population*. As discussed above, non-dietary exposure to cryolite is negligible. For dietary exposure, EPA has concluded that rather than establishing a traditional Reference Dose (RfD), a weight-of-the-evidence risk assessment is a more appropriate approach for cryolite. The toxicological endpoint of concern for dietary exposure to cryolite is skeletal fluorosis. EPA has approximated that total dietary fluoride levels in food plus drinking water is 0.095 mg/kg/day. Of this total exposure, the dietary (food) contribution is about 0.020 mg/kg/day for the U.S. population, and 0.038 mg/kg/day for the highest exposed subgroup (females 20 years old and over). The proposed potato tolerances have been estimated by EPA to contribute approximately 0.00016 mg/kg/day to total dietary exposure. These exposure estimates likely overstate actual dietary exposure, since marketbasket residue levels for cryolite have not been considered. As noted above, the Agency has concurred with the findings of the Surgeon General that adverse health effects (skeletal fluorosis) have not been found in the U.S. population below 8 mg F/L (0.23 mg/kg/day).

2. *Infants and children*. EPA has concluded previously that in rats, the developmental NOEL for cryolite is 3,000 mg/kg/day (1,584 mg/kg/day F), that in mice, the developmental NOEL is 100 mg/kg/day (52.8 mg/kg/day F), and that in rabbits, the developmental NOEL is 30 mg/kg/day (15.8 mg/kg/day F). The NOEL for reproductive toxicity of cryolite determined in a 2-generation rat reproduction study was determined by the Agency to be 46 mg/kg/day (24.3 mg/kg/day F).

These data show clearly that no additional margin of safety is required for exposure of infants and children to cryolite. The developmental NOEL ranges from more than 166x (rabbit) to more than 16,000x (rat) for the maximum combined exposure of infants and children to residues of fluoride from all agricultural uses of cryolite plus drinking water. The reproductive NOEL is about 256x greater than maximum combined exposure of infants and children to residues of fluoride.

F. International Tolerances

No Codex, EC or other international tolerances are in effect for cryolite; thus, potential dietary exposure to fluoride from the agricultural use of cryolite on crops would not include imported foodstuffs.

II. Public Record

A record has been established for this notice under docket control number [PF–712] (including comments and data submitted electronically as described below). A public version of the record, including printed, paper versions of electronic comments, which does not include any information claimed as CBI, is available for inspection from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The public record is located in Room 1132 of the Public Response and Resources Branch, Field Operations Division (7506C), Office of Pesticide Programs, Environmental Protection Agency, Crystal Mall #2, 1921 Jefferson Davis Highway, Arlington, VA.

Electronic comments can be sent directly to EPA at:

opp-docket@epamail.epa.gov

Electronic comments must be submitted as an ASCII file avoiding the use of special characters and any form of encryption.

The official record for this rulemaking, as well as the public version, as described above will be kept in paper form. Accordingly, EPA will transfer all comments received electronically into printed, paper form as they are received and will place the paper copies in the official rulemaking record which will also include all comments submitted directly in writing. The official rulemaking record is the paper record maintained at the address in ''ADDRESSES'' at the beginning of this document.

List of Subjects

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: February 24, 1997.

Peter Caulkins,

Acting Director, Registration Division, Office of Pesticide Programs.

[FR Doc. 97–6015 Filed 3–11–97; 8:45 am]

BILLING CODE 6560–50–F

[PF–715; FRL–5589–6]

Zeneca Ag Products; Pesticide Tolerance Petition Filing

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of filing.

SUMMARY: This notice announces the initial filing of three pesticide petitions proposing the establishment of tolerances for residues of azoxystrobin (not accepted by ANSI) in or on raw agricultural commodities of grape (pesticide petition (PP) 5F4541), pecan (PP 6F4642), and tomato, peach, banana, peanut, and wheat (PP 6F4762). This notice includes a summary of the petitions that was prepared by the petitioner, Zeneca Ag Products.

DATES: Comments, identified by the docket control number [PF–715], must be received on or before, April 11, 1997.

ADDRESSES: By mail, submit written comments to Public Response and Program Resources Branch, Field Operations Division (7506C), Office of Pesticide Programs, Environmental Protection Agency, 401 M St. S.W., Washington, DC 20460. In person, bring comments to Rm. 1132, CM #2, 1921 Jefferson Davis Highway, Arlington, VA 22202. Comments and data may also be submitted electronically by sending electronic mail (e-mail) to: opp-docket@epamail.epa.gov. Electronic comments must be submitted as an ASCII file avoiding the use of special characters and any form of encryption.

Comments and data will also be accepted on disks in WordPerfect 5.1 file format or in ASCII file format. All comments and data in electronic form must be identified by docket control number [PF–715]. Electronic comments on this notice may be filed online at many Federal Depository Libraries. Additional information on electronic submissions can be found below this document.

Information submitted as comments concerning this document may be claimed confidential by marking any part or all of that information as ''Confidential Business Information'' (CBI). CBI should not be submitted through e-mail. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR Part 2. A copy of the comment that does not contain CBI must be submitted for inclusion in the public record. Information not marked confidential may be disclosed publicly by EPA without prior notice. All written comments will be available for public inspection in Rm. 1132 at the address given above, from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays.

FOR FURTHER INFORMATION CONTACT: Cynthia Giles-Parker, Product Manager (22), Registration Division (7505C), Office of Pesticide Programs, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. Office location, telephone number, and e-mail address: Rm. 229, CM #2, 1921 Jefferson Davis Highway, Arlington, VA. 22202, 703–305–5540, e-mail: giles-parker.cynthia@epamail.epa.gov.

SUPPLEMENTARY INFORMATION: EPA has received three pesticide petitions (PP) 5F4541, 6F4642, and 6F4762 from Zeneca Ag Products, 1800 Concord Pike, P.O. Box 15458, Wilmington, DE 19850–5458, proposing pursuant to section 408(d) of the Federal Food, Drug and Cosmetic Act, 21 U.S.C. section 346a(d), to amend 40 CFR part 180 by establishing a tolerance for residues of azoxystrobin (methyl (*E*)–2-[2–[6–(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl]-3-methoxyacrylate) and the *Z*-isomer of azoxystrobin (methyl (*Z*)–2–[2–[6–(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl]-3-methoxyacrylate) in or on the following raw agricultural commodities:

Commodity	Part per million (ppm)
Grapes	1.0 ppm
Pecans	0.01 ppm
Tomato	0.2 ppm
Tomato paste	0.6 ppm
Peanut	0.01 ppm
Peanut oil	0.03 ppm
Peanut hay	1.5 ppm
Peach	0.80 ppm
Banana (whole fruit including peel)	0.5 ppm
Banana pulp	0.05 ppm
Wheat grain	0.04 ppm
Wheat bran	0.12 ppm
Wheat hay	13.0 ppm
Wheat straw	4.0 ppm
Cattle, fat	0.01 ppm
Cattle, mbyp	0.01 ppm
Cattle, meat	0.01 ppm
Goats, fat	0.01 ppm
Goats, mbyp	0.01 ppm
Goats, meat	0.01 ppm
Hogs, fat	0.01 ppm
Hogs, mbyp	0.01 ppm
Hogs, meat	0.01 ppm
Horses, fat	0.01 ppm
Horses, mbyp	0.01 ppm
Horses, meat	0.01 ppm
Milk	0.006 ppm
Poultry, fat	0.01 ppm
Poultry, liver	0.01 ppm
Poultry, mbyp	0.01 ppm
Poultry, meat	0.01 ppm
Sheep, fat	0.01 ppm
Sheep, mbyp	0.01 ppm
Sheep, meat	0.01 ppm

EPA has determined that the petitions contain data or information regarding the elements set forth in section 408(d)(2); 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 petitions.

The proposed analytical methods for non-oily crops are gas chromatography with nitrogen-phosphorus detection (GC-NPD) or in mobile phase using high performance liquid chromatography with ultra-violet detection (HPLC-UV).

The proposed analytical method for oily crops is GC-NPD.

The proposed analytical method for animal tissue and eggs is (GC-NPD).

The analytical methods summarized above have not been validated by the Agency. Public versions of these analytical methods can be obtained from Pesticide Docket, U.S. Environmental Protection Agency, Office of Pesticide Programs, 401 M St., SW., Washington, DC 20460, (703)305–5805.

As required by section 408(d) of the FFDCA, as recently amended by the Food Quality Protection Act, Zeneca Ag Products included in the petition a summary of the petition and authorization for the summary to be

published in the Federal Register in a notice of receipt of the petition. The summary represents the views of Zeneca Ag Products; EPA, as mentioned above, is in the process of evaluating the petition. As required by section 408(d)(3) EPA is including the summary as a part of this notice of filing. EPA may have made minor edits to the summary for the purpose of clarity.

Petition Summary:

A. Residue Chemistry

1. *Plant metabolism*. Plant metabolism has been evaluated in three diverse crops--grapes, wheat and peanuts--which should serve to define the metabolism of azoxystrobin in a wide range of crops. Parent azoxystrobin is the major component found in crops. Azoxystrobin does not accumulate in crop seeds or fruits, in fact very low residues are found in wheat grain, banana pulp, pecan nutmeat, and peanut (nuts). Metabolism of azoxystrobin in plants is complex with more than 15 metabolites identified. These metabolites are present at low levels, typically much less than 5 percent of the Total Recoverable Residue (TRR).

Grapes: In grapes parent azoxystrobin was the major component representing between 34.6 percent and 64.6 percent TRR. The metabolism of azoxystrobin was complex, involving at least six distinct metabolic pathways, yielding a large number of minor metabolites. In total 15 metabolites have been identified. Metabolite Compound 28 (4-hydroxy-6–(2-cyanophenoxy)pyrimidine) was present at levels of up to 5.2 percent TRR, Compound 13 (2-cyanophenol) was present at levels of up to 5.7 percent, with no other metabolites present at levels greater than 4.0 percent TRR.

Wheat: In wheat the total radioactive residues in the grain were very low, ranging from 0.075 to 0.077 ppm azoxystrobin equivalents. As expected, residues in forage and straw were higher (1.02 to 2.79 ppm and 3.06 to 9.41 ppm, respectively).

The only significant residue in the grain was parent azoxystrobin (17.1 –22.0 percent TRR, 0.013 – 0.017 ppm). No metabolite was present at > 3.3 percent TRR.

In wheat straw, the major component of the residue was parent azoxystrobin (22.1 – 43.3 percent TRR, 0.676 – 4.07 ppm). In total, 14 metabolites were identified, the most significant of which was Compound 28 (8.2 – 10.4 percent TRR, 0.319 – 0.731 ppm – sum of free conjugated and bound forms). The *Z*-isomer was present at 2.1 – 3.5 percent TRR (0.064 – 0.329 ppm). No other metabolite was present at > 3.5 percent TRR.

In wheat forage azoxystrobin was the major component of the residue (54.9 – 64.7 percent TRR, 0.56 – 1.81 ppm). The two most significant metabolites were Compound 28 (3.2 – 3.7 percent TRR, 0.038 – 0.090 ppm - total) and *Z*-isomer (1.9 – 2.9 percent TRR, 0.019 – 0.081 ppm). No other metabolite was present at > 1.1 percent TRR.

Peanuts: In peanuts the total radioactive residues in the nuts and hulls were low compared to those in the foliage.

The majority of the residue in the nuts was identified as radiolabeled natural products, resulting from the mineralization of azoxystrobin in soil and subsequent incorporation of the evolved $^{14}CO_2$ via photosynthesis. The major radiolabeled natural products identified were fatty acids and these accounted for 42.1 – 49.1 percent TRR (0.101 – 0.319 ppm). Incorporation of radioactivity into simple sugars was also confirmed, accounting for 5.8 – 8.5 percent TRR (0.014 – 0.042 ppm). The presence of radiolabeled glutamic acid, an amino acid, was also confirmed. Azoxystrobin was not detected in the nut (0.001 ppm) and no individual metabolite was present at a level greater than 0.002 ppm.

In the hay the major component of the residue was parent azoxystrobin (33.0 – 43.8 percent TRR, 13.3 – 20.4 ppm). In total 10 metabolites were identified, the most significant of which was Compound 28, in both the free and conjugated forms (7.0 – 9.0 percent TRR, 2.74 – 3.62 ppm). The next most significant metabolites were Compound 13 in both the free and conjugated forms (6.3 percent TRR, 2.53 ppm) and *Z*-isomer (2.4 – 2.8 percent TRR, 0.965 – 1.30 ppm).

2. *Analytical Method. Non-oily Crops:* Azoxystrobin and *Z*-isomer residues in grape and grain samples are extracted in 90:10/acetonitrile:water. An aliquot of the extract is cleaned up by adsorption chromatography on a silica sorbent. The eluate is evaporated to dryness and taken up in a known volume of acetone for analysis by GC-NPD or in mobile phase for analysis by high performance liquid chromatography with ultraviolet detection (HPLC-UV). The limit of quantitation of the method is typically 0.02 to 0.05 ppm.

Oily Crops: Azoxystrobin and *Z*-isomer residues in oily crop samples are extracted in 90:10/ acetonitrile:water. An aliquot of the extract is cleaned up by passing through a C^{18} sep-pak. All extracts were cleaned up by gel permeation chromatography eluting through alumina and Florisil solid phase extraction cartridges. The eluate was evaporated to dryness and redissolved in a known volume of acetone for analysis by GC-NPD. The limit of quantitation of the method is typically 0.01 ppm.

Animal Tissues (Liver), Milk and Eggs: Residues of azoxystrobin in tissue and egg samples are extracted in acetonitrile . An aliquot of the extract is cleaned up by gel permeation chromatography (GPC) eluting through alumina-n and Florisil solid phase extraction cartridges. The eluate is evaporated to dryness and taken up in a known volume of acetone for analysis by GC-NPD. The limit of quantitation is typically 0.01 ppm.

Residues of azoxystrobin in milk samples are extracted in acetonitrile and partitioned in dichloromethane. The extract is again cleaned up by GPC eluting through alumina-n and Florisil solid phase cartridges. The eluate is evaporated to dryness and taken up in a known volume of acetone for analysis by GC-NPD. The limit of quantitation is typically 0.006 ppm.

3. *Magnitude of residues. Grapes:* Trials were carried out in 1994 in 5 different states: California, New York, Arkansas, Michigan, and Washington. An additional 9 trials were conducted in 1995 in New York, California (6) and Oregon and Washington.

Azoxystrobin 80WG was applied at a rate of 0.25 lb ai/A. A total of 6 applications was made. The first application was at 1 to 5 inch shoot growth, the second at 8 to 12 inch shoot growth. The third application was at bloom plus or minus 2 days. The last three applications were made at 46 (+/– 3), 35 (+/– 3), and 12–14 days prior to normal harvest.

Residues in grapes ranged between 0.20 and 0.84 ppm, supporting the proposed tolerance of 1 ppm. No concentration of residues was seen in grape juice or raisins.

Pecans: Trials were carried out between June and November 1994 in 4 different states: Alabama, Georgia, Mississippi and Texas.

Azoxystrobin 80WG was applied at a rate of 0.2 lb ai/A. A total of 6 applications was made. Applications were made from bud break up to 42 days preharvest on a three week application schedule.

Azoxystrobin and *Z*-isomer residues on pecans after the final spray were < 0.01 ppm, supporting the proposed tolerance of 0.01 ppm.

Banana: A total of 6 residue trials was conducted in Hawaii, Florida, and Puerto Rico during 1995–1996. Azoxystrobin was applied eight times at

a rate of 0.135 lb ai/A. Applications were made every 12–14 days with the last application just prior to harvest. Immediately following the second application, bags were placed over several bunches of bananas in both the treated and untreated plots. The bags were left in place until harvest. Samples of bagged and unbagged bananas were collected immediately after the last application, after the spray deposit had dried. Samples of whole bananas and banana pulp were analyzed for residues of azoxystrobin and the *Z*-isomer.

Azoxystrobin residues on bagged whole bananas sampled immediately after the last application ranged from < 0.01 to 0.15 ppm. Azoxystrobin residues on unbagged whole bananas sampled immediately after the last application ranged from 0.08 to 0.26 ppm. Residues of azoxystrobin in banana pulp were low in both bagged and unbagged bananas ranging from < 0.01 to 0.03 ppm. Residues of *Z*-isomer were < 0.01 ppm in all samples of whole bananas and banana pulp, both bagged and unbagged. These data support the proposed tolerances of 0.5 ppm in whole bananas and 0.05 ppm in banana pulp.

Peaches: Fourteen trials were carried out in North Carolina (2), California (4), Michigan (2), Texas, Arkansas, Pennsylvania (2), Georgia, and South Carolina on peaches during 1995. Azoxystrobin was applied at 0.15 lb ai/A starting at pink bud to 5 percent blossom and repeating at 5–10 day intervals. All the samples were analyzed for azoxystrobin and the *Z*-isomer.

Azoxystrobin residues on peaches, sampled 11–14 days after the final spray, ranged from 0.07 – 0.70 ppm. Residues of the *Z*-isomer were low and ranged from < 0.01 – 0.05 ppm. These data support the proposed tolerance of 0.8 ppm.

Peanuts: Twelve residue trials were carried out in Georgia (2), North Carolina (3), Oklahoma, Texas (2), Florida, and Alabama on peanuts during 1994 and in 1995. Azoxystrobin was applied as a foliar broadcast spray at 0.4 lb ai/A at two spray intervals: 8 to 9 weeks after planting and 12 to 13 weeks after planting.

Azoxystrobin residues on peanut hay, sampled about 50 days after the final spray, ranged from 0.25–0.91 ppm. Residues of the Z-isomer were low and ranged from < 0.02 – 0.38 ppm. A trace residue of azoxystrobin (0.01 ppm), was found in one nutmeat sample only, all the remainder were < 0.01 ppm. These data support the proposed tolerances of 0.01 ppm in the peanut and 1.5 ppm in peanut hay. Processing data indicate a possible 3× concentration in peanut oil supporting a proposed tolerance of 0.03 ppm.

Tomato: Sixteen residue trials were carried out in California (10), Florida (2), New Jersey, North Carolina, and Indiana on tomatoes during 1994 and 1995. Azoxystrobin was applied at 0.1 lb ai/A starting at early fruiting and repeating on a 6–8 day interval until eight applications had been made. Samples of mature fruits were taken 1 day after the final spray and analyzed for azoxystrobin and the *Z*-isomer.

Azoxystrobin residues, one day after the final spray, ranged from 0.01 – 0.16 ppm. Only traces of the *Z*-isomer ranging from < 0.01 – 0.02 ppm were found. These data support the proposed tolerances of 0.2 ppm in tomato; processing data showing a possible 3× concentration in tomato paste support a proposed tolerance of 0.6 ppm.

Wheat: Six magnitude of the residue trials were carried out on wheat in Georgia, Tennessee, Montana, Nebraska, Virginia, and Oregon during 1994. Azoxystrobin was applied twice at growth stages Zadoks 43–45 and 55–59 at 0.2 lb ai/A Samples of hay, straw and grain were analyzed for azoxystrobin and the *Z*-isomer.

Azoxystrobin residues on hay, sampled two weeks after the final spray, were 0.19 to 6.5 ppm. At harvest, 33–74 days after treatment, residues in wheat grain were low and ranged from < 0.01 – 0.03 ppm. Residues on straw ranged from 0.03 – 3.4 ppm.

A total of 16 residue trials were conducted in Mississippi, Illinois, Ohio, Wisconsin, Texas (2), Nebraska, Montana (2), North Dakota, Colorado, Kansas (2), Oklahoma, New Mexico, and California during 1995. Azoxystrobin was applied 2 times at a rate of 0.2 lb ai/A. Application timings were at Zadoks 43–45 (boot) and 30–45 days prior to grain harvest (no later than Zadoks 58, head emergence).

Azoxystrobin residues on hay sampled 13 to 33 days after the last application ranged from 0.09 to 11.1 ppm. Residues of azoxystrobin on straw sampled 36 to 52 days after the last application ranged from 0.03 to 1.31 ppm. Residues of azoxystrobin on grain sampled 36 to 52 days after the last application were low, ranging from < 0.01 to 0.06 ppm.

Residues of *Z*-isomer on hay ranged from < 0.01 to 0.8 ppm. Residues of *Z*-isomer on straw were low, ranging from < 0.01 to 0.13 ppm. Residues of the *Z*-isomer on grain were < 0.01 ppm on all samples. These data support proposed tolerances of 0.04 ppm on grain, 4.0 ppm on straw and 13 ppm on hay. Processing data indicate a possible 3× concentration in wheat bran, supporting a proposed tolerance of 0.12 ppm.

B. Toxicological Profile (Azoxystrobin Technical)

1. *Acute toxicity.*

Study Type	Study Results	Tox. Category
Acute Oral Rat	LD_{50} > 5,000 mg/kg	IV
Acute Dermal Rat	LD_{50} > 2,000 mg/kg	III
Acute Inhalation Rat	LC_{50} = 698 mg/l for females	
	LC_{50} = 962 mg/l for males	III
Eye Irritation Rabbit	Slight irritant, no corneal effects	III
Skin Irritation Rabbit	Slight irritant	IV
Skin Sensitization Guinea Pig	Not a skin sensitizer	

2. *Genotoxicity.* Azoxystrobin gave a weak clastogenic response in mammalian cells *in vitro* at cytotoxic doses. In the whole animal azoxystrobin was negative in established assays for chromosomal damage (clastogenicity) and general DNA damage, at high dose levels (≥ 2,000 mg/kg). The weak clastogenic effects seen *in vitro* are not expressed in the whole animal and azoxystrobin is considered to have no genotoxicity *in vivo*.

Assay	Type	Results
In vitro	Ames	negative
	L5178Y	weakly positive

Assay	Type	Results
.....	IVC	weakly positive
In vivo	Micronucleus	negative
.....	UDS	negative

3. *Reproductive and developmental toxicity. Reproductive toxicity.* Azoxystrobin showed no evidence of reproductive toxicity.

The No Observed Effect Level (NOEL) for toxicity was judged to be 300 ppm azoxystrobin, which for the premating period, translates into a daily dose of 32 mg azoxystrobin/kg body weight/day based on body weight reductions relative to control and liver toxicity in adult males.

The liver toxicity observed in the reproductive toxicity study was manifest as gross distension of the common bile duct accompanied by histological change. The histological changes in the intraduodenal bile duct were characterized by an increase (a hyperplasia) in the number of lining (epithelial) cells and bile duct inflammation (cholangitis). In the liver, there was an increased severity of hepatic proliferative cholangitis. The increased severity of the microscopic liver effects were confined to those animals showing gross bile duct changes, suggesting that these effects were secondary to biliary toxicity.

These observations were confined to male F0 and F1 adult rats and were not detected in female animals or in pups.

Azoxystrobin in Diet (ppm)	Dose (mg/kg/day)
60	6.5
300	32
1,500	162

Developmental Toxicity. There were no adverse effects in the rat or rabbit on the number, survival and growth of the fetuses in utero. Azoxystrobin caused no developmental toxicity in the rat or in the rabbit up to and including dose levels shown to be maternally toxic.

Study Type: Developmental Toxicity	NOEL/LEL (mg/kg/day)	Effect Description
Rabbit (by gavage)	No developmental effects. NOEL for developmental toxicity > 500 mg/kg/day. NOAEL for maternal toxicity = 50 mg/kg/day..	No developmental effects. NOAEL for maternal toxicity = 50 mg/kg/day. LEL for maternal toxicity = 150 mg/kg/day; effects were reduced body weight, clinical effects.
Rat (by gavage)	No developmental effects, NOEL = 25 mg/kg/day for maternal and fetotoxicity.	LEL for fetotoxicity is 100 mg/kg/day; effect was ''delayed ossification''. LEL for maternal toxicity 100 mg/kg/day; effect was reduced body weight.

4. *Subchronic Toxicity.* Azoxystrobin is of low subchronic toxicity in 21–day dermal testing.

5. *Chronic Toxicity. Oncogenicity - Rat:* Azoxystrobin is non-oncogenic in the rat.

Azoxystrobin in Diet (ppm)	Male rat (mg/kg/day)	Female rat (mg/kg/day)
60	3.6	4.5
300	18.2	22.3
1500/750	82.4	117.6

The NOEL/NOAEL for azoxystrobin in the rat is 18 mg/kg bwt/day.

Zeneca suggests that this chronic rat study has the lowest No Observed Adverse Effect Level (NOAEL) of the chronic studies conducted with azoxystrobin. The Reference Dose (RfD) for azoxystrobin should be based upon the NOAEL of 18 mg/kg bwt/day with an uncertainty factor of 100, RfD = 0.18 mg/kg bwt/day.

A dietary inclusion level of 1,500 ppm was established as a Maximum Tolerated Dose (MTD) in female rats, where decrements in body weight gain relative to control of approx. 19 percent at week 53 and 11 percent at week 105 were observed. The maximum reduction relative to control was seen at week 73 (approx. 20 percent). In male rats this dose level was in excess of an MTD (biliary toxicity), resulting in a reduction in the top dose level from 1500 ppm to 750 ppm for the second year of the study. Reductions in male body weight gain relative to control animals were seen throughout the duration of the study with a maximum reduction of approx. 11 percent in the first year (at week 45), continuing into the second year (maximum reduction of approx. 13 percent at week 99).

In the rat, there was no statistical increase in the number of tumor-bearing animals, animals with malignant tumors, benign tumors, multiple tumors, single tumors or metastic tumors in animals treated with azoxystrobin at dose levels of up to 1,500 ppm (up to 117.1 mg azoxystrobin/kg bwt/day) for 2 years.

Oncogenicity - Mouse.

Azoxystrobin is non-oncogenic in the mouse.

Azoxystrobin in Diet (ppm)	Male mouse (mg/kg/day)	Female mouse (mg/kg/day)
50	6.2	8.5
300	37.5	51.3
2000	272.4	363.3

There was no increased tumor incidence or early onset of tumors in mice receiving up to 2,000 ppm azoxystrobin for up to 2 years. Dietary administration of 2,000 ppm Azoxystrobin was associated with reduced growth and food utilization.

An MTD was established in the mouse oncogenicity study based on body weight gain depression and decreased food utilization seen at the highest dose test of 2000 ppm. At this dose level body weight gain was depressed 20 percent at week 13 and 28 percent at week 53 in males, and 11 percent at week 13 and 19 percent at week 53 in females.

There was no statistically significant change or alteration in tumor incidence in the mouse attributable to treatment with azoxystrobin at dose levels of up to 2,000 ppm (up to 363.3 mg azoxystrobin/kg bwt/day) for 2 years.

One-year Feeding Study - Dog. Azoxystrobin was administered to groups of 4 beagle dogs at dose levels of 0, 3, 25 and 200 mg/kg bwt/day, as a daily oral dose.

Adaptive liver responses were observed at 25 and 200 mg/kg bwt/day which were not considered to be toxicologically significant. The adaptive liver responses were increased liver weights and increased serum liver enzyme activities in the absence of any liver histopathology. Liver weights were increased in both sexes at 200 mg/kg bwt/day, and in females at 25 mg/kg bwt/day. Plasma alkaline phosphatase, cholesterol and triglyceride levels were elevated at the top dose in both sexes, with plasma albumin elevated at 200 mg/kg/day in males only. Plasma triglycerides were also elevated at 25 mg/kg bwt/day in males only. No such effects were observed at 3 mg/kg bwt/day.

These changes were not accompanied by any histopathological change in the liver. Such changes in the absence of signs of a toxic lesion are generally considered to reflect the liver compensating for the increased work it must perform in metabolizing the test compound. While they can be considered to be effects of azoxystrobin treatment, these changes are of no toxicological significance.

The NOEL in this study was 200 mg/kg bwt/day.

6. *Animal metabolism*. Azoxystrobin is well absorbed and completely metabolized in the rat. Excretion is rapid and there is no accumulation of azoxystrobin or metabolites. There are no significant plant metabolites that are not animal metabolites.

7. *Metabolite toxicology.* Toxicity testing results on the azoxystrobin parent compound are indicative of the toxicity of all significant metabolites seen in either plants or mammals.

C. Aggregate Exposure

1. *Dietary exposure.* a. *Food*. For the purpose of assessing the potential dietary exposure from these proposed tolerances, EPA generally estimates aggregate exposure based on the Theoretical Maximum Residue Contribution (TMRC) from the tolerances proposed for azoxystrobin as listed above. The TMRC is obtained by multiplying the tolerance level residue for each food by the consumption data which estimate the amount of food and food products eaten by the U.S. population and various population subgroups. Animal feeds (such as wheat forage) are fed to animals; thus, exposure of humans to residue in the animal feeds might result if such residues are transferred to meat, milk or poultry. Animal metabolism and feeding studies indicate that low residues may occur in meat and milk when azoxystrobin is used as proposed. The TMRC for each animal product is obtained by multiplying the tolerance (worst-case) level of residues possible in meat and milk by the food consumption data which estimate the amount of food and food products eaten by various population subgroups. These are very conservative assumptions--100 percent of foods, meat and milk products will contain azoxystrobin residues and those residues would be at the level of the tolerance--that produce a very conservative overestimate of human dietary exposure. Zeneca performed chronic dietary exposure analyses using the food consumption data in the U.S. Department of Agriculture's (USDA) Nationwide Food Consumption Survey for 1989 through 1992 combined and Technical Assessment System Inc.'s ''EXPOSURE 1'' analysis software. The potential exposure for the U.S. population is 0.0009 mg/kg bwt/day. Potential exposure for children's population subgroups ranged from 0.0013 mg/kg bwt/day for children 7–12 Years Old to 0.0029 mg/kg bwt/day for children 1–6 Years Old.

b. *Drinking water.* Azoxystrobin does not leach. It is unlikely that azoxystrobin could be present in drinking water or groundwater. Therefore it is not appropriate to assess aggregate exposure from drinking water.

Azoxystrobin is an analogue of naturally occurring strobilurins which are sensitive to sunlight (photolysis). Azoxystrobin, although more stable than the strobilurins, has a favorable environmental profile. Azoxystrobin is degraded rapidly under agricultural field conditions with a soil half-life of less than 2 weeks. The compound is non-volatile and does not leach, but it is very susceptible to photolysis. Photolysis accounts for the majority of the initial loss of the compound, the remainder being degraded microbially.

Based on laboratory data the predicted mobility of azoxystrobin in soil is relatively low. The soil adsorption coefficient corrected for soil organic matter (K_{oc}) ranges from 300 to 1690. Consequently, the potential mobility is low to medium. As a measure of possible mobility the standard GUS index value is 1.0; which equates to a non-leacher.

Results from field trials support these laboratory data. After using ^{14}C-labeled azoxystrobin as a ''worst case'' field application - bare surface, irrigated and poorly retentive soil (light texture and low organic matter content), the compound was retained in the upper 2 inches or so of the soil throughout its lifetime.

As azoxystrobin does not leach it is very unlikely to enter into water bodies except by accidental, direct over-spray. However, the compound in laboratory tests degrades with a half-life of approximately 7 weeks in flooded anaerobic soils. There is also potential for photolytic degradation in natural aqueous environments; the aqueous photolysis half-life is 11–17 days.

2. *Non-dietary exposure.* Other potential sources of exposure of the general population to residues of pesticides is non-occupation exposure. Since the proposed registrations for azoxystrobin are limited to commercial crop production, turf farms and golf courses, the potential for non-occupational exposure to the general population is not expected to be significant.

D. Cumulative Effects

Azoxystrobin is a new class of chemistry for pesticides, a beta-methoxyacrylate fungicide. Azoxystrobin has the same biochemical mode of action as the naturally occurring strobilurins, inhibition of electron transport. Since there are no other registered pesticides in this chemical class or with this mode of action or mechanism of action, cumulative exposure assessment is not appropriate at this time.

No evidence or information exists to suggest that toxic effects produced by azoxystrobin would be cumulative with those of any other chemical compounds.

E. Safety Determination

1. *U.S. population in general.* Using the conservative assumptions described above, based on the completeness and reliability of the toxicity data, Zeneca estimates that the aggregate exposure to azoxystrobin will utilize 0.5 percent of the RfD for the U.S. population. This chronic dietary exposure analysis is based on food consumption for the combined years 1989–1992 in the USDA's Nationwide Food Consumption Survey and analysis using Technical Assessment Systems, Inc.'s ''EXPOSURE 1'' analysis software. Generally there are no concerns for exposures below 100 percent of the RfD. The EPA defines the RfD to represent the level at or below which daily aggregate dietary exposure over a lifetime will not pose appreciable risk to human health.

2. *Infants and children*. In assessing the potential for additional sensitivity of infants and children to residues of azoxystrobin Zeneca has considered the 2–generation reproduction study in the rat and the developmental toxicity studies in the rat and rabbit. Azoxystrobin showed no evidence of reproductive toxicity. Azoxystrobin caused no developmental toxicity in the rat or rabbit up to and including dose levels shown to be maternally toxic. There were no adverse effects, in the rat or rabbit, on the number, survival and growth of the fetuses in utero.

Based on the current toxicological data requirements, the database relative to pre- and post- natal effects for children is complete. Further, azoxystrobin shows no evidence of reproductive or developmental toxicity, therefore we suggest that use of an additional uncertainty factor is not warranted and that the RfD of 0.18 mg/kg/day is appropriate for assessing aggregate risk to infants and children.

Using the conservative exposure assumption described above, Zeneca concludes that the percent of the RfD that will be utilized by aggregate exposure to residues of azoxystrobin ranges from 0.8 percent for the population subgroups Nursing infants and children 7–12 years old up to 1.6 percent for the population subgroup Children 1–6 years old. Zeneca concludes that there is reasonable certainty that no harm will result to infants and children from aggregate exposure to azoxystrobin residues.

F. International Tolerances

There are no Codex Maximum Residue Levels established for azoxystrobin.

II. Public Record

Interested persons are invited to submit comments on this notice of filing. Comments must bear a notation indicating the docket control number, [PF–715]. All written comments filed in response to this petition will be available in the Public Response and Program Resources Branch, at the address given above from 8:30 a.m. to 4 p.m., Monday through Friday, except legal holidays.

A record has been established for this notice under docket control number [PF–715] (including comments and data submitted electronically as described below). A public version of this record, including printed, paper versions of electronic comments, which does not include any information claimed as CBI, is available for inspection from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The public record is located in Rm. 1132 of the Public Response and Program Resources Branch, Field Operations Division (7506C), Office of Pesticide Programs, Environmental Protection Agency, Crystal Mall #2, 1921 Jefferson Davis Highway, Arlington, VA.

Electronic comments can be sent directly to EPA at:

opp-docket@epamail.epa.gov

Electronic comments must be submitted as ASCII files avoiding the use of special characters and any form of encryption.

The official record for this notice, as well as the public version, as described above will be kept in paper form. Accordingly, EPA will transfer all comments received electronically into printed, paper form as they are received and will place the paper copies in the official record which will also include all comments submitted directly in writing. The official record is the paper record maintained at the address in ''ADDRESSES'' at the beginning of this document.

Authority: 21 U.S.C. 346a.

List of Subjects

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: February 24, 1997.

Peter Caulkins,

Acting Director, Registration Division, Office of Pesticide Programs.

[FR Doc. 97–5683 Filed 3–11–97; 8:45 am]

BILLING CODE 6560–50–F

[OPP–181035; FRL 5591–3]

Mancozeb; Receipt of Application for Emergency Exemption, Solicitation of Public Comment

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA has received a specific exemption request from the Wisconsin Department of Agriculture, Trade, and Consumer Protection (hereafter referred to as the ''Applicant'') to use the pesticide, mancozeb (CAS 8018–01–7), formulated as Dithane DF, to treat up to 5,000 acres of ginseng to control stem and leaf blight. Since this request proposes a use which has been requested or granted in any 3 previous years, and a complete application for registration and petition for tolerance has not yet been submitted to the Agency; and since mancozeb has also been the subject of a Special Review, EPA is soliciting public comment before making the decision whether or not to grant the exemption, in accordance with 40 CFR 166.24(a)(5) and (6).

DATES: Comments must be received on or before March 27, 1997.

ADDRESSES: Three copies of written comments, bearing the identification notation ''OPP–181035,'' should be submitted by mail to: Public Response and Program Resource Branch, Field Operations Division (7506C), Office of Pesticide Programs, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. In person, bring comments to: Rm. 1132, Crystal Mall #2, 1921 Jefferson Davis Highway, Arlington, VA.

Comments and data may also be submitted electronically by sending electronic mail (e-mail) to: opp-docket@epamail.epa.gov. Electronic comments must be submitted as an ASCII file avoiding the use of special characters and any form of encryption. Comments and data will also be accepted on disks in WordPerfect in 5.1