

## **DO YOU WANT FOREST PESTICIDES WITH THOSE SHELLFISH AND OYSTERS?**

### **I. BACKGROUND**

#### **CARBARYL**

CARBARYL (Sevin) is a toxic insecticide used on a large scale in forestry application to kill insects such as bark beetles. When used on forests, label restrictions require stream buffer zones to keep Carbaryl out of water bodies. Carbaryl is a cholinesterase inhibitor and is toxic to humans. It is classified as a likely human carcinogen by the United States Environmental Protection Agency (EPA.) It kills various beneficial insect and crustacean species along with intended pest victims. Carbaryl is acutely toxic to honeybees, destroying colonies of bees foraging in an area where the chemical has been applied. Carbaryl is illegal in several countries, including the United Kingdom, Austria, Denmark, Sweden, Germany and Angola.

Carbaryl is sprayed by shellfish growers in Washington State directly in estuaries and on mudflats to kill ghost shrimp. As a result, EPA allows oysters containing up to 0.25 parts per million (ppm) Carbaryl to be consumed by the public.

#### **GLYPHOSATE**

GLYPHOSATE (Roundup/Rodeo) is a broad-spectrum systemic herbicide used to kill weeds, especially perennials. It is typically sprayed and absorbed through the leaves, injected into the trunk, or applied to the stump of a tree, or broadcast or used in the cut-stump treatment as a forestry herbicide. Glyphosate is the most used herbicide in the USA. In the US, 5-8 million pounds are used every year on lawns and yards and 85-90 million pounds are used annually in US agriculture. When used on forests, label restrictions Glyphosate state that it should not be applied directly to surface water.

Glyphosate is sprayed by shellfish growers, federal and state agencies, and others in Washington State directly in estuaries and on mudflats to kill *Spartina*, a form of cord grass. As a result, EPA allows shellfish containing up to 3.0 ppm of Glyphosate and fish containing up to 0.25 ppm to be consumed by the public.

#### **IMAZAPYR**

Imazapyr (Arsenal, Assault) is a non-selective herbicide used for the control of a broad range of weeds including terrestrial annual and perennial grasses and broadleaved herbs, woody species, and riparian and emergent aquatic species. It is used for vegetation control in forests. Label restrictions include warnings to not treat irrigation ditches or water used for irrigating crops.

Imazapyr is sprayed by shellfish growers, federal and state agencies, and others in Washington State directly in estuaries and on mudflats to kill *Spartina*, in Washington State directly in estuaries and on mudflats to kill *Spartina*, because Glyphosate was not doing the job. EPA allows fish to contain up to 1.00 ppm and shellfish 0.10 ppm of Imazapyr. Milk has a Imazapyr tolerance of 0.01 ppm!

II. SHELLFISH PESTICIDE/HERBIDE RESIDUE TOLERANCES

SUMMARY: Environmental Protection Agency (EPA) Carbaryl residue tolerance in oysters is 0.25 parts per million (ppm). This is higher than residue tolerances for sweet potatoes. Almonds, chestnuts, hazelnuts, pecans, pistachios, sunflower seeds and walnuts have Carbaryl residue tolerances of 1.0 ppm.

EPA Gylphosate residue tolerance in shellfish is 3.0 ppm. This is 30 times higher than coconuts, peanuts, pineapple, and sunflower seeds; 15 times higher than bamboo shoots, bananas, cranberry, figs, grapes, kiwifruit, olives, strawberry, and leafy vegetables; 12 times higher than fish; 3 times higher than coffee beans and pine nuts.

EPA Imazapyr residue tolerance in fish is 1.00 ppm and shellfish 0.10 ppm of Imazapyr. This is 100 times and 10 times higher respectfully than milk.

CARBARYL

[Code of Federal Regulations]
[Title 40, Volume 23]
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[CITE: 40CFR180.169]

[Page 457-458]

TITLE 40--PROTECTION OF ENVIRONMENT
CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)
PART 180\_TOLERANCES AND EXEMPTIONS FROM TOLERANCES FOR PESTICIDE CHEMICALS IN

Subpart C\_Specific Tolerances

Sec. 180.169 Carbaryl; tolerances for residues.

(a) General. (1) Tolerances are established for residues of the insecticide carbaryl (1-naphthyl N-methylcarbamate), including its hydrolysis product 1-naphthol, calculated as 1-naphthyl N-methylcarbamate, in or on the following food commodities:

Table with 2 columns: Commodity and Parts per million. Rows include Almond (1), Beet, garden, roots (5), Chestnut (1), Hazelnut (1), and Oyster (0.25).

Peanut.....	5
Pecan.....	1
Pistachio.....	1
Potato.....	0.2 (N)

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Sunflower, seed.....	1
Sweet potato, roots.....	0.2
Walnut.....	1

(b) Section 18 emergency exemptions. [Reserved]

(c) Tolerances with regional registrations. Tolerances with regional registration are established for the insecticide carbaryl (1-naphthyl N-methylcarbamate) in or on the following food commodities.

Commodity	Parts per million
Dill, fresh.....	0.2

(d) Indirect or inadvertent residues. [Reserved]

[65 FR 33695, May 24, 2000, as amended at 66 FR 38955, July 26, 2001; 67 FR 49615, July 31, 2002; 70 FR 44492, Aug. 3, 2005]

## GLYPHOSATE

[CITE: 40CFR180.364]

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Sec. 180.364 Glyphosate; tolerances for residues.

(a) General. Tolerances are established for residues of glyphosate N-(phosphonomethyl)glycine resulting from the application of glyphosate, the isopropylamine salt of glyphosate, the ethanolamine salt of glyphosate, the dimethylamine salt of glyphosate, the ammonium salt of glyphosate, and the potassium salt of glyphosate in or on the following food commodities:

Commodity	Parts per million
Asparagus.....	0.5
Bamboo, shoots.....	0.2
Banana.....	0.2

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Coconut.....	0.1
Coffee, bean.....	1.0
Cranberry.....	0.2
Egg.....	0.05
Fig.....	0.2
<b>Fish.....</b>	<b>0.25</b>
Grape.....	0.2
Kiwifruit.....	0.2
Nut, pine.....	1.0
Olive.....	0.2
Peanut.....	0.1
Pineapple.....	0.1
<b>Shellfish.....</b>	<b>3.0</b>
Strawberry.....	0.2
Sunflower, seed.....	0.1
Vegetable, leafy, except brassica, group 4.....	0.2

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- (b) Section 18 emergency exemptions. [Reserved]
  - (c) Tolerances with regional registrations. [Reserved]
  - (d) Indirect or inadvertent residues. [Reserved]

[45 FR 64911, Oct. 1, 1980]

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## IMAZAPYR

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[Page 574]

TITLE 40--PROTECTION OF ENVIRONMENT  
CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)  
PART 180\_TOLERANCES AND EXEMPTIONS FROM TOLERANCES FOR PESTICIDE  
CHEMICALS IN

Subpart C\_Specific Tolerances

Sec. 180.500 Imazapyr; tolerances for residues.

(a) General. Tolerances are being established for residues of the herbicide imazapyr, [2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid], applied as the acid or ammonium salt, in or on the following raw agricultural commodities:

Commodity	Parts per million
Cattle, fat.....	0.05
Cattle, kidney.....	0.20
Cattle, meat.....	0.05
Cattle, meat byproducts, except kidney.....	0.05
Corn, field, forage.....	0.05
Corn, field, grain.....	0.05
Corn, field, stover.....	0.05
<b>Fish.....</b>	<b>1.0</b>
Goat, fat.....	0.05
Goat, kidney.....	0.20
Goat, meat.....	0.05
Goats, meat byproducts, except kidney.....	0.05
Grass, forage.....	100
Grass, hay.....	30
Horse, fat.....	0.05
Horse, kidney.....	0.20
Horse, meat.....	0.05
Horse, meat byproducts, except kidney.....	0.05
Milk.....	0.01
Sheep, fat.....	0.05
Sheep, kidney.....	0.20
Sheep, meat.....	0.05
Sheep, meat byproducts, except kidney.....	0.05
<b>Shellfish.....</b>	<b>0.10</b>

- (b) Section 18 emergency exemptions. [Reserved]
- (c) Tolerances with regional registrations. [Reserved]
- (d) Indirect or inadvertent residues. [Reserved]