

combined residues of 0.55 ppm. The proposed tolerance for raisins is 2.5 ppm for combined residues of dinotefuran and its two major metabolites based on the average concentration factor of 4.0 for processing grapes to raisins. The grape juice processing studies established an average concentration factor of 1.3 for residues of dinotefuran and its metabolites 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine, and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea, because the product of multiplying the grape HAFT times the average concentration factor for processing grapes into juice is less than the proposed grape tolerance, a separate tolerance is not proposed for grape juice.

For potatoes, residue trials were performed at 17 locations and 2 studies processing potatoes into chips, granules, and wet peel were performed with potatoes that were treated with exaggerated application rates. The proposed tolerance for combined residues of dinotefuran and its metabolites 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine, and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea, on potatoes is 0.05 ppm. The maximum combined residues found on potatoes were less than 0.05 ppm with maximum residues of dinotefuran less than 0.03 ppm. The HAFT result was 0.04 ppm of combined residues. The average concentration factors for processing potatoes into chips, granules, and wet peel were 2.2, 3.65, and less than 1 respectively. No separate tolerance is proposed for wet peel. Based on the average concentration factors and the HAFT, tolerances for combined residues of dinotefuran, 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine, and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea, are proposed for potato chips at 0.1 ppm and for potato granules at 0.15 ppm.

For fruiting vegetables (crop group 8) residue trials were conducted for the three representative commodities, tomatoes, bell pepper, and non-bell pepper. The proposed tolerance for combined residues of dinotefuran, 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine, and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea, in or on fruiting vegetables is 0.7 ppm. The maximum combined residue for the representative fruiting vegetables was 0.58 ppm on peppers. The HAFT result for combined residues on tomatoes was 0.20 ppm. Three studies for processing tomatoes into tomato puree and tomato paste were performed with tomatoes that were treated at exaggerated application rates. The average concentration factors determined in these studies were 1.8 for processing

tomatoes into puree and 4.8 for processing tomatoes into paste. Since the product of the average concentration factor for puree and the HAFT for tomatoes is less than the proposed tolerance for fruiting vegetables, no separate tolerance is proposed for tomato puree. A combined tolerance of 1.0 ppm is proposed for tomato paste, based on the average concentration factor for processing of 4.8 and the HAFT of 0.20 ppm for tomatoes.

For vegetables, brassica head, and stem crop subgroup (crop subgroup 5-A), residue trials were conducted with three representative crops, broccoli, cauliflower, and cabbage. The proposed tolerance for combined residues of dinotefuran, 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine, and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea, 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine, and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea, on stem and head brassica vegetables is 1.4 ppm. The maximum combined residue in field trials was 1.25 ppm on broccoli.

Metabolism studies in livestock and poultry (nature of residue studies with goats and hens), established that dinotefuran was rapidly metabolized and excreted and that there was very little transmittal of residues of dinotefuran and its metabolites to meat, milk, or eggs. For goats fed 10 ppm of radiolabeled dinotefuran, the total radioactive residues (TRR) in meat and milk were less than 0.05 ppm.

The maximum livestock dietary burden from feeding cotton commodities and potatoes (which all contain residues at the proposed tolerance levels) was 1.9 ppm for beef cattle and 1.9 ppm for dairy cattle. To provide for the possible transmittal of the residues of dinotefuran and its metabolites, 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine, and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea, in cattle and other livestock, tolerances are proposed for combined residues of dinotefuran, 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine, and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea, in milk at 0.05 ppm, in meat (from cattle, goats, hogs, horses, and sheep) at 0.05 ppm and in meat byproducts, including fat, liver, and kidney, (from cattle, goats, hogs, horses, and sheep) at 0.05 ppm. These proposed tolerances are based on the results of a cow feeding study where dairy cows received dosages of combined residues of dinotefuran and its metabolites and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea, representing 5ppm (1X), 15 ppm (3X), and 50 ppm (10X) in the daily diet. The dosages contained dinotefuran, 1-methyl-3-(tetrahydro-3-

furylmethyl)guanidine, and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea, in a 3:1:1 ratio, thus, the 5 ppm level contained 3 ppm of dinotefuran, 1 ppm of 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine, and 1 ppm of 1-methyl-3-(tetrahydro-3-furylmethyl)-urea. The dosing period was 29 to 30 days, whole milk, skim milk, and cream were analyzed through the collection period and meat, fat, and edible tissues were analyzed at conclusion of the dosing period.

There were only low levels of residues transmitted to milk, meat, fat, and edible tissues in the study. No dinotefuran residues (<0.01 ppm) were measured in milk from 5 ppm dosage cows. Maximum residues of dinotefuran in milk were 0.012 ppm in the 3X level cows and 0.032 ppm in the 10X level cows. No detectable residues of parent dinotefuran were found in muscle, fat, or edible tissues from cows at any dosage level. Milk, muscle, fat, and edible tissues were also analyzed for 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine, and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea, the two dinotefuran metabolites included in the combined residues in the proposed tolerance expression. Transmittal of quantifiable residues of 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine was found at the 1X dosage level with maximum residues of 0.013 ppm of 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine in milk and at the 10X level with 0.011 ppm of 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine in milk and 0.02 ppm of 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine in muscle, liver, and kidney. Quantifiable residues of 1-methyl-3-(tetrahydro-3-furylmethyl)-urea were found in the 1X dosage level, with 1-methyl-3-(tetrahydro-3-furylmethyl)-urea residues up to 0.02 ppm in whole milk and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea residues of 0.011 to 0.012 in muscle, liver, and kidney. The 1-methyl-3-(tetrahydro-3-furylmethyl)-urea residues increased proportional to dosage with the 10X level having 1-methyl-3-(tetrahydro-3-furylmethyl)-urea residues of up to 0.24 ppm in milk, 0.13 ppm in muscle, 0.07 ppm in fat, 0.12 ppm in liver, and 0.18 ppm in kidney. In the cow feeding study at the 1X dosage level comprising combined residues of dinotefuran, 1-methyl-3-(tetrahydro-3-furylmethyl)guanidine, and 1-methyl-3-(tetrahydro-3-furylmethyl)-urea of 5 ppm of diet, the total combined residues for milk, muscle, fat, liver, and kidney were each less than 0.05 ppm. Since the maximum theoretical combined