US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: August 23, 1978

SUBJECT: Metolachlor degration products.
(5G1556, 5F1606, 6G1706 and 7F1913) Caswell #188dd

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THRU: Acting Deputy Chief
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A permanent tolerance of 0.1 ppm in corn grain (except popcorn) has been established for residues of the herbicide, Metolachlor and its metabolites pursuant to 40 CFR 180.368 (FR 41:178, 9/13/76); see PP #5F1606.

Temporary tolerances were granted on 4/23/76 for residues of 0.1 ppm in soybeans, 1.25 ppm in soybean hay and forage and 0.02 ppm in meat, eggs, poultry and milk. This was renewed on 2/9/78. See PP #6G1708.

PP #7F1913 proposes the permanent tolerances noted above and is pending.

Metolachlor is the first Candidate Chemical in the Generic Standards Program in SPRD.

The metabolism of Metolachlor in corn, soybeans and animals has been discussed most recently in the review of 6/14/77, D. Reed, PP #7F1913.

Comparing the structure of the parent, (2-(chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)acetamide) (CGA 24705; Dual) with that of one of the major metabolites, 2-((2-ethyl-6-methylphenyl)amino)propanol (CGA 37913), we note the loss of the monochloroacetyl moiety (MCA).

The analytical method apparently does not detect this compound. Thus, we cannot determine whether MCA may be present in food as a residue of Metolachlor. It seems to be possible, theoretically.

We are concerned that MCA may be a metabolite and part of the residue of Metolachlor in food because monochloroacetic acid is considered by FDA to be an adulterant when present in food at detectable levels of 10 ppb or more (21 CFR 189.155(b)).*

We query RCB as to whether the potential for residues of MCA in soybeans, corn grain, meat, milk, poultry and eggs has been addressed.

We defer to RCB as to the type and quantity of data needed to resolve the question if it has not been addressed.

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* According to Clinical Toxicology of Commercial Products, III, ed., Gleason et al, Williams & Wilkins, Baltimore, 1969. MCA is a toxicant similar in its action to that of monoflouroacetate, (Compound 1080) but not as potent. It is a metabolic inhibitor.

R/D Init: REngler 8/23/78
DRitter/ccw