yellow apple varieties. **Formulation type** GR; WP; EC; DP; DS; FT; CS; CS; KN; Aerosol; Coating agent. **Compatibility** Compatible with many other pesticides, but incompatible with copper-containing compounds. **Principal tradename** 'Basudin' (Ciba-Geigy), 'Dianon' (Nippon Kayaku), 'Diazol' (Makhteshim-Agan), 'Ectoban' (for veterinary use) (Agropharm), 'Knox-out' (Elf Atochem). **Mixtures** [*diazinon* +] disulfoton; pyrethrins; lindane; petroleum oils.

ANALYSIS

Product analysis by glc with FID (*CIPAC Handbook,* 1980, **1A,** 1199; *Anal. Methods Pestic. Plant Growth Regul.,* 1972, **6,** 345; *AOAC Methods,* 1990, 971.08, 982.06). **Residues** determined by glc with TID or MCD (*ibid.,* 968.24, 970.33, 970.52; *Analyst* [*London*], 1980, **105,** 515; *Man. Pestic. Residue Anal.,*1987, **I,** 5, 6, S8, S10, S13, S17, S19; *Anal. Methods Residues Pestic.,* 1988, Part I, M2, M5, M12).

MAMMALIAN TOXICOLOGY

Reviews *Pesticide residues in food - 1993.* FAO Plant Production and Protection Paper, in press. *Pesticide residues in food - 1993 evaluations. Part II - Toxicology.* World Health Organisation, in preparation. **Acute oral** LD_{50} for rats 300-400, mice 80-135, guinea pigs 250-355 mg/kg. **Skin and eye** Acute percutaneous LD_{50} for rats > 2150, rabbits 540-650 mg/kg. Mild skin and eye irritant (rabbits). **Inhalation** LC_{50} (4 h) for rats 3.5 mg/l air. **NOEL** (90 d) for rats 0.1, dogs 0.02 mg/kg daily. **ADI** (JMPR) 0.002 mg/kg b.w. [1993]. **Toxicity class** WHO II; EPA II or III.

ECOTOXICOLOGY

Birds Acute oral LD_{50} for mallard ducklings 3.5, young pheasants 4.3 mg/kg. **Fish** LC_{50} (96 h) for bluegill sunfish 16, rainbow trout 2.6-3.2, carp 7.6-23.4 mg/l. **Bees** Highly toxic to bees. **Daphnia** EC_{50} (24 h) 1.4 mg/l.

ENVIRONMENTAL FATE

Animals The principal metabolites are diethyl thiophosphate and diethyl phosphate.
Plants Studies with ^{14}C-labelled diazinon show a rapid absorption and translocation in plants. Metabolism proceeds via hydrolysis and subsequent transformation and degradation of the hydroxypyrimidine derivatives to carbon dioxide.
Soil and water Degradation involves oxidation to the phosphate (diazoxon) and hydrolysis (J. Pardue *et al., J. Agric. Food Chem.* 1970, **18**, 405-408). DT_{50} *c.* 11-21 d (laboratory). Diazinon is fairly strongly adsorbed onto soil, K_{OM} 332 mg/g o.m. Mobility is low.