

APPENDIX H: PARAQUAT INCIDENTS

In the Ecological Incident Information System (EIIS) Paraquat was separated into 'Paraquat' and 'Paraquat Dichloride,' but for our risk assessment, they are synonymous.

Paraquat

Plant Incidents

I014409-001 UNDETERMINED LEGALITY

4/24/1992 WA Possible Likelihood

This incident was reported in the Washington State Dept. of Health Annual Report 1993, Pesticide Incident Reporting Review Panel, April 1994, prepared by the Washington State Department of Agriculture. It was alleged that paraquat herbicide drifted onto a radish crop causing damage. Alleged infractor applied a federal restricted use pesticide without a license or supervision. No action by the State was taken. No analysis.

I013884-038 REGISTERD USE

7/28/1998 WA Probable Likelihood

This is from the 1999 Annual Report from the Washington State Department of Health Pesticide Incident Reporting and Tracking Review Panel, November 2000, from the 1998 PIRT Data. Over spray of paraquat on peas affected ornamental and vegetable garden plants. State inspector observed paraquat symptoms.

I013884-014 UNDETERMINED LEGALITY

5/1/1998 WA Possible Likelihood

This is from the 1999 Annual Report from the Washington State Department of Health Pesticide Incident Reporting and Tracking Review Panel, November 2000, from the 1998 PIRT Data. Suspects spots on apple leave were caused by paraquat drift from application to potatoes. The paraquat was applied to a non-crop area (indicated applied to potatoes earlier) and drifted to non-bearing organic apples.

I014409-024 MISUSE

8/28/1992 WA Possible Likelihood

This incident was reported in the Washington State Dept. of Health Annual Report 1993, Pesticide Incident Reporting Review Panel, April 1994, prepared by the Washington State Department of Agriculture. Application of paraquat onto a wheat field drifted on to an alfalfa field. Operation pressure above maximum is allowed by rule. No State Action.

Terrestrial Incidents

None Reported

Aquatic Incidents

None Reported

Paraquat Dichloride

Plant Incidents

I005660-005 MISUSE (ACCIDENTAL)

1997 WI Probable Likelihood

This incident is included in a summary of Clomazone events reported in Wisconsin in the spring of 1997. Both Clomazone and Paraquat Dichloride are listed as probable of reported incident.

I005880-005 MISUSE (ACCIDENTAL)

1997 WI Probable Likelihood

This is part of a summary of events caused by Clomazone in Wisconsin in the spring of 1997. Command 3ME was applied in a minimum till operation and the pesticide drifted 300' where it damaged ash trees, flowers, oats, and alfalfa/clover. Both Clomazone and Paraquat Dichloride are listed as probable of reported incident.

I007371-033 MISUSE (ACCIDENTAL)

6/17/1997 PA Probable Likelihood

For the control of weeds in a corn field, Bladex 90 DF (Cyanazine) and Gramoxone (paraquat) were applied but, evidently, there was sufficient drift to cause damage to a nearby lawn. A \$1,000 fine was assessed against the applicator. The same wording in this report was used to describe incidents I007371-034 and I007371-035, suggesting that there was one spraying but multiple complaints of lawn damage.

I007371-034 MISUSE (ACCIDENTAL)

6/17/1997 PA Probable Likelihood

A corn field was sprayed with Bladex 90 DF (Cyanazine) and Gramoxone (paraquat) but the drift evidently damaged a nearby lawn. The wording used in this report is exactly the same as that used to record I007371-033 and I007371-035, suggesting that there was one spraying but multiple complaints of lawn damage. A civil penalty of \$1,000 was assessed against the applicator.

I007371-035 MISUSE (ACCIDENTAL)

6/17/1997 PA Probable Likelihood

A combination of Bladex 90 DF (Cyanazine) and Gramoxone (paraquat) was applied to a corn field but there was enough drift to damage a nearby lawn. A civil penalty of \$1,000 was assessed against the applicator. The wording in the report used as the basis for this incident is the same as that used for I007371-033 and I007371-034, which indicates that there was one spraying but multiple complaints arising from that spraying.

I012366-023 UNDETERMINED LEGALITY

5/9/2000 VA Possible Likelihood

To comply with 6(a)2 requirements, Dow reported a complaint from Fulks Run, VA, that PYTHON damaged 120 acres of field corn. Also applied by a truck-mounted sprayer were BICEP, PRINCEP, and GRAMOXONE. The Problem Description was as follows: "Variable corn height and vigor since emergence. Ear production was less than normal during July,

August, and September observations. Final yield was substantially less due to narrow stalks and absent ears. Plants showed varying planting depths from outset. Plant stress evident in short plants in many areas and many of these areas yielded less silage tonnage versus comparable fields.

I013636-029 REGISTERD USE

5/1/1996 OR Possible Likelihood

Grower claims that Goal injured the peppermint crop and reduced yield. Tank mix was Gramoxone along with other unknown ingredients. Incident I016354-001 has this comment regarding the previous reporting: "The litigation matter previously reported to the EPA under DERBI No. 129020 has now been resolved following the granting of summary judgment to Dow Agrosiences on 8/11/04. A judgment dismissing the case with prejudice also was entered on 8/11/04. This matter was originally reported to the EPA on 12/20/02."

I009573-009 UNDETERMINED LEGALITY

5/11/1999 AL Possible Likelihood

To comply with 6(a)2 regulations, Novartis reported a complaint from a resident of Scottsboro, AL, alleging that 75% of a 200-acre crop of field corn was damaged by Bicep II. The case was "settled with inventory - 2 cases of Exceed- at Jackson Farmers COOP." According to the information supplied by Novartis, under the heading of Other Products Involved, GRAMOXONE was mentioned, therefore it may have been contributing to the incident.

I011838-055 REGISTERD USE

6/19/2001 NC Possible Likelihood

To comply with 6(a)2 requirements, Valent reported a complaint from Leweiston-Woodville, NC, that Valor damaged two sites of peanuts. DUAL, FRONTIER AND GRAMOXONE were also involved. Damage was reported as Phytotoxicity: Stunted growth.

I013554-040 MISUSE

5/24/2002 IL Probable Likelihood

To comply with 6(a)2 requirements, Syngenta reported a complaint from La Fayette, IL, that GRAMOXONE MAX damaged a crop of field corn. There is some confusion about the acreage because, on the page devoted to the specifics of this incident, it is shown to be 1040 acres, of which 76.92% were affected, but on the summary page the acreage treated is given as 65, of which 50 were affected. The symptom was said to be "Stand reduction" and the Injury Type was "Residue injury" which is interpreted to mean carryover. GRAMOXONE MAX is not registered for use on corn, so a residue of it on such a crop would be likely to cause damage. Another product that was said to be involved was BICEP II MAGNUM but no details of its use were given. It is registered for use on corn and, therefore, was probably not responsible for the damage.

I014034-009 REGISTERD USE

4/29/2003 GA Possible Likelihood

The company reported that they received a telephone call. The caller stated there was damage to 60 acres of cow pasture grass which was killed due to an application of a mixture of Gramoxone

Max (100-1074) and Grazon P+D (62719-182). The company did not investigate the incident at this time. The caller wanted to know when the cows could graze.

I012684-010 REGISTERD USE

5/23/2001 VA Possible Likelihood

To comply with 6(a)2 requirements, Valent reported a complaint from Waverly, VA, that VALOR damaged all 5 acres of a peanut crop. DUAL and GRAMOXONE were also applied; the ambiguity associated with the single term, DUAL, causes there to be uncertainty over what it constitutes. GRAMOXONE, however, is not registered for use on peanuts. The damage symptom was described as: "Phytotoxicity. Slow to emerge." This is a PA severity incident because the total crop was affected.

I011838-091 UNDETERMINED LEGALITY

5/26/2001 OK Possible Likelihood

To comply with 6(a)2 requirements, Valent reported a complaint from Holdenville, OK, that VALOR damaged two sites of peanuts, one of 60 acres and one of 20. Other products applied were PROWL and CYCLONE but no details of their use were given. The symptoms of damage were described as: "Phytotoxicity: Burnt peanuts, dead plants."

I011838-038 UNDETERMINED LEGALITY

6/17/2001 GA Possible Likelihood

To comply with 6(a)2 requirements, Valent reported a complaint from Lenox, GA, that VALOR damaged 25 acres of peanuts (15 acres in one site and 10 in another). Other products used were PROWL and GRAMOX but no details were given. The symptoms of plant damage were "Burnt & wilted plants."

I001131-001 REGISTERD USE

6/27/1994 AR Possible Likelihood

To comply with 6(a)2 regulations, DuPont reported a complaint from Jacksonville, AK, that trees and vegetables were injured by the aerial application of Gramoxone Extra (a Zeneca product) and Canopy Herbicide (a DuPont product). Plant symptoms began to appear within 24 hours of the application.

I007371-008 MISUSE (ACCIDENTAL)

5/20/1997 PA Highly Probable Likelihood

Gramoxone (paraquat) and Canopy (Metribuzin plus Chlorimuron ethyl) were applied to a soybean field by a private applicator. Low amounts of residues were found just beyond the property line, and a warning was issued to the applicator for the violation.

I016940-005 MISUSE (INTENTIONAL)

1/26/2005 CA Probable Likelihood

The CA Dept. of Pesticide Regulation reported through EPA Region 9 that an aerial application of Gramoxone herbicide was sprayed on 120 of 184 acres of wheat. The application was meant for the adjacent alfalfa field. The damaged of the wheat field was valued at \$30,000.00.

Terrestrial Incidents

I008168-001 REGISTERD USE

6/8/1998 VA Probable Likelihood

On May 25, 1998, a cornfield in Broadway, VA was sprayed with a mixture of Princep 4L (Simazine), Extrazine II 4L (Atrazine and Simazine), Asana XL (Esfenvalerate), and Gramoxone Extra (paraquat). Two weeks later a neighbor noticed some dead Canadian geese and notified the Office of Pesticide Services, Division of Consumer Protection, Dept. of Agriculture and Consumer Services of Virginia. An inspection was made on June 26 at which time soil and vegetation samples were taken along the bank near the creek in which the geese were found. Substantial concentrations of Simazine, Atrazine, and Cyanazine were found in these samples even though they were taken a month after the spraying. No analyses were made for paraquat or Esfenvalerate. The applicator was fined \$520 for spraying too close to the creek that was affected.

I000097-015 UNDETERMINED LEGALITY

5/20/1989 VA Unlikely Likelihood

On May 20, 1989, twelve birds were found dead or dying in a yard near North Garden, Virginia. They included robins, starlings, a chipping sparrow, and a grackle. Paraquat was sprayed in the area and Furadan 15-G (Carbofuran) was applied in a nearby corn field. Granules of Furadan were observed in the oral cavity and gizzard of one of the robins. Residue analysis detected Carbofuran in the gizzards of three birds analyzed. Brain cholinesterase was depressed in two of the birds analyzed. The cause of death of the birds was diagnosed as Carbofuran toxicosis.

I007334-001 UNDETERMINED LEGALITY

6/18/1998 IL Possible Likelihood

There were two reports on this incident, one from EPA Region V and the other from a citizen through the IL Dept. of Agriculture. Crop damage and four bird deaths occurred after the spraying of multiple herbicides, under very strong windy conditions, from a commercial applicator half a mile away. The pesticides sprayed were identified as Gramoxone, Canopy, and Dual.

Aquatic Incidents

B0000-502-18 UNDETERMINED LEGALITY

6/4/1981 VA Possible Likelihood

One of the incidents reported for 1981 by the VA Tidal Fisheries Division was a fish kill in Frederick County on June 4. Runoff of paraquat from adjacent fields was involved, the theory being that it killed the vegetation in the pond and caused a low D.O. (2.0 ppm at 1200 hours). Also, the organisms in the stream feeding the pond were destroyed by toxic concentrations of paraquat.

I003654-012 REGISTERD USE

11/29/1993 NC Unlikely Likelihood

A fish kill took place in Monroe on November 29, 1993, in a pond near two fields that had been treated with pesticides; one of the fields had also been treated with turkey litter. The fish kill occurred after a heavy rain.

B000175-001 REGISTERD USE

4/1/1992 KY Unlikely Likelihood

This report did not give supporting residue analysis data or any other information pertinent to this event. Letter of report, dated 05/07/92, did not give incident date, therefore, estimated to be 04/01/92. Three pesticides were implicated in this incident. They were Paraquat, Permethrin, and Bicep* (Atrazine and Metolachlor). Fertilizer was also applied and a heavy rain followed application. According to the report a fish kill of 1-2 inch fish occurred 2 days following the rain. In the opinion of ICI technicians it was believed that the fish kill was related to high fertilizer levels and low DO. It was noted that there was no apparent herbicidal effects following runoff of water possibly containing paraquat.

I009314-005 REGISTERD USE

6/2/1997 IN Possible Likelihood

In Madison, IN, of unknown cause but of suspected pond turnover, a fish kill occurred from alleged pesticide use. This report is in compliance with FIFRA 6(a)(2). Dead bluegill, bass and crappies died in a one acre pond which was 250 feet from the edge of a treated field. This distance was entirely covered by heavy sod which showed no signs of herbicide damage.

I005805-001 UNDETERMINED LEGALITY

1/1/1997 IN Possible Likelihood

Dead Bluegills, bass and crappies. This is one acre pond is 250 feet from the edge of a treated field with entire distance covered by heavy sod. Sod shows no sign of herbicide damage. Suspect pond turnover.

I008768-007 UNDETERMINED LEGALITY

6/3/1999 Possible Likelihood

The allegations which follow do not include an identified state or county. However, it was stated that inclusion was counted in the FATALITIES TO FISH OR WILDLIFE Severity Category "W-A" and that a non-DuPont pesticide was also involved, namely: GRAMOXONE.

Approximately 200 dead fish, bluegill and bass combined, were reported by a Conservation Officer that were found in a 3/4 acre pond. At least two frogs also were found dead, but there were no deaths among pond catfish.