Click here for previous

ACTIVITY EXPERIMENT

PPG 1259

		0.025 kg a.i./ha	0.1 kg a.i./ha	0.4 kg a.i./ha
DWARF BEAN	F	xxxxxxxxxxxxxx xxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxx
	S	xxxxxxxxxxxxxx xxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxx
	P	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx
	I	xxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx
KALE	F	xxxxxxxxxxxxxx xxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxx
	S	xxxxxxxxxxxxxx xxxxxxxxxx	xxxxxxxxxxxxxx xx	xxxxxxxx xx
	P	xxxxxxxxxxxxxx+ xxxxxxxxxxxxxx	xxxxxxxxxxxxxx+ xxxxxxxxxxxxxx	xxxxx xxxxxxx
	I	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxx xxxxxxxxxxxxx	xxxxxxxxxxxx xxxxxxxxxx
POLYGONUM AMPHIBIUM	F	xxxxxxxxxxxxxx xxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxx
	S	xxxxxxxxxxxxxx xxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxx
	P	xxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx+ xxxxxxxxxxxxx	xxxxxxxxxxxxxx+ xxxxxxxxxxx
	I	xxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxx xxxxxxxxxxx
PERENNIAL RYEGRASS	F	xxxxxxxxxxxxxx xxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxx
	S	xxxxxxxxxxxxxx xxxxxxxxxx	xxxxxxxxxxxx xxxx	xxxxxxxxxxx xx
	P	xxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxx xxxxxxxxxxxxx	xxxxxxxxxxxx xxxxxxxxx
	I	xxxxxxxxxxxxxx+ xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxx
AVENA FATUA	F	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx
	S	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxx xxxxxxxxx
	P	xxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxx xxxxxxxxxxxxx
	I	xxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx+ xxxxxxxxxxxxxx	xxxxxxxxxxxx xxxxxxxxxxxxxx
ELYMUS REPENS	F	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx
	S	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxx
	P	xxxxxxxxxxxxxx+ xxxxxxxxxxxxxx	xxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxx xxxxxxxxxxxxx
	I	xxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx+ xxxxxxxxxxxxxx

Key: F = post-emergence, foliar application
S = post-emergence, soil drench
P = pre-emergence, surface film
I = pre-planting, incorporated

TRIAL NUMBER 34

PPG 1259

SPECIES	0.025 kg/ha		0.100 kg/ha		0.400 kg/ha	
WHEAT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(1)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
WHEAT+S	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(2)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
BARLEY	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(3)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
BARLEY+S	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(4)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxx
OAT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(5)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
PER RYGR	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(6)	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
ONION	94	xxxxxxxxxxxxxxxxxx	82	xxxxxxxxxxxxxxxx	82	xxxxxxxxxxxxxxxx
(8)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
DWF BEAN	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	0	
(9)	100	xxxxxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxx	0	
FLD BEAN	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(10)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx
W CLOVER	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	70	xxxxxxxxxxxxxx
(12)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx
RAPE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx
(14)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx
KALE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	70	xxxxxxxxxxxxxx
(15)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	43	xxxxxxxxx

TRIAL NUMBER 34

PPG 1259

SPECIES	0.025 kg/ha		0.100 kg/ha		0.400 kg/ha	
CABBAGE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	0	
(16)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	0	
SWEDE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	20	xxxx
(17)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	21	xxxx
CARROT	90	xxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx	70	xxxxxxxxxxxxxx
(18)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	57	xxxxxxxxxxx
PARSNIP	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	0	
(19)	86	xxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	0	
LETTUCE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	0	
(20)	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxx	0	
SUG BEET	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	20	xxxx
(22)	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxx	21	xxxx
BETA VUL	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	0	
(23)	93	xxxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxx	0	
BROM STE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(24)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxx
AVE FATU	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(26)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
ALO MYOS	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(27)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
POA ANN	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(28)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx
POA TRIV	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	80	xxxxxxxxxxxxxxxx
(29)	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxx	36	xxxxxxx

TRIAL NUMBER 34

PPG 1259

SPECIES	0.025 kg/ha		0.100 kg/ha		0.400 kg/ha	
SIN ARV	100	xxxxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx	10	xx
(30)	100	xxxxxxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx	14	xxx
RAPH RAP	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	40	xxxxxxxx
(31)	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	29	xxxxxx
CHRY SEG	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	75	xxxxxxxxxxxxxxx
(32)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx
MAT PERF	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	62	xxxxxxxxxxxx
(33)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx
SEN VULG	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	12	xx
(34)	93	xxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	21	xxxx
POL LAPA	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	0	
(35)	100	xxxxxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx	0	
LAM PUR	100	xxxxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	0	
(37)	57	xxxxxxxxxx	43	xxxxxxxxx	0	
GAL APAR	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	20	xxxx
(38)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxx	43	xxxxxxxxx
CHEN ALB	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	10	xx
(39)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	21	xxxx
STEL MED	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	0	
(40)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxx	0	
SPER ARV	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	0	
(41)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxx	0	
VER PERS	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	70	xxxxxxxxxxxxxx
(42)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx

TRIAL NUMBER 34

PPG 1259

SPECIES	0.025 kg/ha		0.100 kg/ha		0.400 kg/ha	
VI ARVE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	11	xx
(43)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	14	xxx
RUM OBTU	100	xxxxxxxxxxxxxxxxxxxx	57	xxxxxxxxxxx	0	
(44)	86	xxxxxxxxxxxxxxxxx	43	xxxxxxxxx	0	
EL REPEN	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(47)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
MAIZE+S	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(56)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxx
MAIZE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(57)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
SOL NIG	100	xxxxxxxxxxxxxxxxxxxx	89	xxxxxxxxxxxxxxxxx	0	
(31)	79	xxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	0	

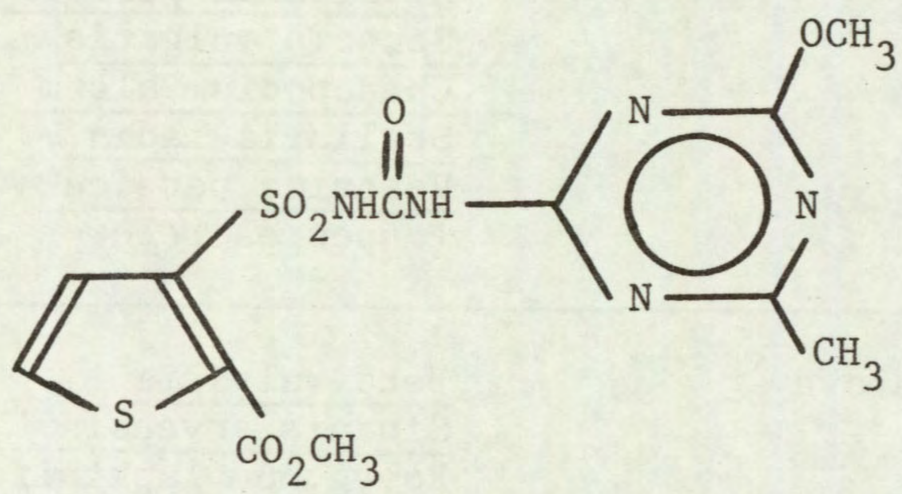
DPX-M6316

Code number DPX-M6316 Trade name/s Harmony

Common name

Chemical name Methyl 3-(3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl) ureidosulphonyl) thiophene-2-carboxylate

Structure



Source

Du Pont (UK) Ltd
Wedgwood Way
Stevenage SG1 4QN
Herts

Information available and suggested uses
Post-emergence in cereals c.0.06 kg/ha

Formulation used 75% a.i. water dispersible granules

Spray volume 372 l/ha (activity experiment)
300 l/ha (post-emergence selectivity)

RESULTS

Full results are given in the histograms on pages 34-38 and potential selectivities are summarised in the following table.

RATE (kg a.i./ha)	CROPS: vigour reduced by less than 15%	WEEDS: number or vigour reduced by 70% or more
0.16	wheat ± safener (NA) barley ± safener (NA) maize ± safener (NA) oat	Poa annua Poa trivialis Lamium purpureum Viola arvensis + species below
0.04	species above+ pea	Raphanus raphanistrum Matricaria perforata Senecio vulgaris Chenopodium album Stellaria media Veronica persica + species below
0.01	species above	Beta vulgaris Sinapis arvensis Polygonum lapathifolium Spergula arvensis Rumex obtusifolius

Comments on results

Activity experiment

The foliar spray was very effective on broad-leaved species, more so than the soil drenches, post-emergence. Perennial ryegrass was also sensitive to both post-emergence treatments. Pre-emergence activity was also high on the smaller-seeded annuals, kale and perennial ryegrass, with the surface spray much more effective than when incorporated. However, Polygonum amphibium was more sensitive pre-emergence with incorporation. Avena fatua and Elymus repens were quite tolerant to all four methods of application, as was dwarf bean, pre-emergence.

Symptoms on susceptible species

A powerful inhibition of growth was the most prominent symptom common to all four methods of application. This was accompanied by various effects on pigmentation, varying from a bright yellow in plants such as P.amphibium to a reddening in other species e.g. dwarf bean. Necrosis developed later. Some inhibition of root development was observed in some species e.g. dwarf bean. Some effects on germination and/or emergence were noted with kale and perennial ryegrass, usually at the higher doses. In some instances where true leaves developed with broad-leaved species these were often deformed (strap shaped) as well as being very chlorotic. These symptoms are similar to those reported previously for other sulfonyl-ureas such as chlorsulfuron (Richardson et al., 1980).

Post-emergence selectivity

A broad-spectrum of annual weeds was controlled, including five at the lowest dose of 0.01 kg/ha. Veronica persica was among six species controlled at 0.04 kg/ha while Viola arvensis and Lamium purpuneum were controlled at 0.16 kg/ha. In fact only three broad-leaved species were not adequately controlled (Galium aparine, Chrysanthemum segetum and Solanum nigrum) though all were visibly affected at 0.16 kg/ha. Grass weeds were generally resistant, the two exceptions being Poa annua and Poa trivialis. However, Alopecurus myosuroides, though not controlled, was visibly reduced in vigour at all doses.

The four cereals, (wheat, barley, oat, maize) and peas were the only crops to show tolerance. The level of tolerance was high with the cereals, all withstanding 0.16 kg/ha. Thus it was not possible to determine any safening effects of NA with wheat, barley and maize though barley looked slightly more vigorous with NA. Most broad-leaved crops and onion were very sensitive.

There is a very close resemblance of DPX-M6316 to chlorosulfuron, both in level and type of activity, weed and crop tolerance spectra (Richardson et al., 1980; Sionis et al., 1985). However, differences in pre-emergence selectivity and persistence appear to exist in current work, (Richardson and West 1986, in preparation). The unexpected tolerance of peas found post-emergence needs verification.

ACTIVITY EXPERIMENT

DPX M6316

		0.0125 kg a.i./ha	0.05 kg a.i./ha	0.2 kg a.i./ha
DWARF BEAN	F	xxxxxxxxxxxxxx xxxxxx	xxxxxxxxxxxxxx xxxxx	xxxxxxxxxxxxxx xxxxx
	S	xxxxxxxxxxxxxx xxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxx
	P	xxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxx
	I	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxx
KALE	F	xxxxxxxxxxxxxx xxxxxx	xxxxxxxxxxxxxx xxxxx	xxxxxxxxxxxxxx xxxx
	S	xxxxxxxxxxxxxx xxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxx	xxxxxxxxxxxxxx xxxxxx
	P	xxxxxxxxxxxxxx+ xxxxxxxxxxx	xxxxxxxxxxxxxx+ xxxxx	xxxxxxxxxxxxx xxxx
	I	xxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxx xxxxxxxxxxxx	xxxxxxxxxxxx xxxxxxxx
POLYGONUM AMPHIBIUM	F	xxxxxxxxxxxxxx xxxxx	xxxxxxxxxxxxxx xxx	o o
	S	xxxxxxxxxxxxxx xxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxx	xxxxxxxxxxxx xxxx
	P	xxxxxxxxxxx xxxxxxxxxx	xxxxxxxxxxxx xxxxxxxx	xxxxx xxx
	I	xxxxxxxxxxxx xxxxxxxxxxxx	xxxxxxxxxxxxxx+ xxxxxxx	o o
PERENNIAL RYEGRASS	F	xxxxxxxxxxxxxx xxxxxxxxx	xxxxxxxxxxxxxx xxxxxx	xxxxxxxxxxxxxx xxxx
	S	xxxxxxxxxxxxxx xxxxxxx	xxxxx xxxxxxxx xxxxx	xxxxxxxxxxxxxx xxxx
	P	xxxxxxxx xxxxxxx	xxxxx xxxx	xx xx
	I	xxxxxxxxxxxxxx xxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxx	xxxxxx xxxxx
AVENA FATUA	F	xxxxxxxxxxxxxx xxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxx
	S	xxxxxxxxxxxxxx xxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxx
	P	xxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxx xxxxxxxxxxxxxx
	I	xxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx+ xxxxxxxxxxxxxx
ELYMUS REPENS	F	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx
	S	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx xxxxxxxxxxxxxx
	P	xxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx+ xxxxxxxxxxxxxx	xxxxxxxxxxxxxx+ xxxxxxxxxxx
	I	xxxxxxxxxxxxx xxxxxxxxxxxxxx	xxxxxxxxxxxxxx+ xxxxxxxxxxxxxx	xxxxxxxxxxxxxx+ xxxxxxxxxxxx

KEY: F = post-emergence, foliar application
S = post-emergence, soil drench
P = pre-emergence, surface film
I = pre-planting, incorporated

TRIAL NUMBER 34

DPX M6316

SPECIES	0.010 kg/ha		0.040 kg/ha		0.160 kg/ha	
WHEAT (1)	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx
WHEAT+S (2)	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx
BARLEY (3)	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx
BARLEY+S (4)	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx	100 93	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxx
OAT (5)	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx	100 100	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxx	100 86	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxx
PER RYGR (6)	100 43	xxxxxxxxxxxxxxxxxxxx xxxxxxxxx	90 29	xxxxxxxxxxxxxxxxxx xxxxxx	70 21	xxxxxxxxxxxxxx xxxx
ONION (8)	35 36	xxxxxxx xxxxxxx	71 21	xxxxxxxxxxxxxx xxxx	35 29	xxxxxxx xxxxxx
DWF BEAN (9)	100 43	xxxxxxxxxxxxxxxxxxxx xxxxxxxxx	100 29	xxxxxxxxxxxxxxxxxxxx xxxxxx	100 29	xxxxxxxxxxxxxxxxxxxx xxxxxx
FLD BEAN (10)	100 43	xxxxxxxxxxxxxxxxxxxx xxxxxxxxx	100 43	xxxxxxxxxxxxxxxxxxxx xxxxxxxxx	100 29	xxxxxxxxxxxxxxxxxxxx xxxxxx
W CLOVER (12)	100 43	xxxxxxxxxxxxxxxxxxxx xxxxxxxxx	90 29	xxxxxxxxxxxxxxxxxx xxxxxx	90 21	xxxxxxxxxxxxxxxxxx xxxx
RAPE (14)	100 57	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxx	100 43	xxxxxxxxxxxxxxxxxxxx xxxxxxxxx	70 21	xxxxxxxxxxxxxx xxxx
KALE (15)	100 71	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxx	100 57	xxxxxxxxxxxxxxxxxxxx xxxxxxxxxxx	100 36	xxxxxxxxxxxxxxxxxxxx xxxxxxx

TRIAL NUMBER 34

DPX M6316

SPECIES	0.010 kg/ha		0.040 kg/ha		0.160 kg/ha	
CABBAGE (16)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	62	xxxxxxxxxxxx
	57	xxxxxxxxxxx	50	xxxxxxxxxx	21	xxxx
SWEDE (17)	100	xxxxxxxxxxxxxxxxxxxx	70	xxxxxxxxxxxxxx	0	
	50	xxxxxxxxxx	29	xxxxxx	0	
CARROT (18)	70	xxxxxxxxxxxxxx	50	xxxxxxxxxx	10	xx
	50	xxxxxxxxxx	29	xxxxxx	14	xxx
PARSNIP (19)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
	29	xxxxxx	29	xxxxxx	14	xxx
LETTUCE (20)	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx	50	xxxxxxxxxx
	50	xxxxxxxxxx	14	xxx	14	xxx
SUG BEET (22)	100	xxxxxxxxxxxxxxxxxxxx	70	xxxxxxxxxxxxxx	10	xx
	21	xxxx	21	xxxx	7	x
BETA VUL (23)	80	xxxxxxxxxxxxxxxx	80	xxxxxxxxxxxxxxxx	80	xxxxxxxxxxxxxxxx
	29	xxxxxx	21	xxxx	14	xxx
BROM STE (24)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
AVE FATU (26)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxx
ALO MYOS (27)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
	86	xxxxxxxxxxxxxxxx	64	xxxxxxxxxxxx	50	xxxxxxxxxx
POA ANN (28)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
	79	xxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx	29	xxxxxx
POA TRIV (29)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
	64	xxxxxxxxxxxxx	43	xxxxxxxxx	29	xxxxxx

TRIAL NUMBER 34

DPX M6316

SPECIES	0.010 kg/ha		0.040 kg/ha		0.160 kg/ha	
SIN ARV	50	xxxxxxxxxx	50	xxxxxxxxxx	40	xxxxxxxx
(30)	14	xxx	14	xxx	14	xxx
RAPH RAP	100	xxxxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx	70	xxxxxxxxxxxxxx
(31)	43	xxxxxxxxx	21	xxxx	14	xxx
CHRY SEG	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(32)	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxx	64	xxxxxxxxxxxx
MAT PERF	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(33)	36	xxxxxxx	21	xxxx	14	xxx
SEN VULG	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	87	xxxxxxxxxxxxxxxx
(34)	36	xxxxxxx	21	xxxx	14	xxx
POL LAPA	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	70	xxxxxxxxxxxxxx
(35)	29	xxxxxx	14	xxx	14	xxx
LAM PUR	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(37)	43	xxxxxxxxx	36	xxxxxxx	29	xxxxxx
GAL APAR	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(38)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	43	xxxxxxxxx
CHEN ALB	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(39)	57	xxxxxxxxxxx	21	xxxx	14	xxx
STEL MED	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(40)	43	xxxxxxxxx	29	xxxxxx	14	xxx
SPER ARV	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxx
(41)	29	xxxxxx	14	xxx	14	xxx
VER PERS	100	xxxxxxxxxxxxxxxxxxxx	10	xx	0	
(42)	57	xxxxxxxxxxx	14	xxx	0	

TRIAL NUMBER 34

DPX M6316

SPECIES	0.010 kg/ha		0.040 kg/ha		0.160 kg/ha	
VI ARVE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	44	xxxxxxxxx
(43)	57	xxxxxxxxxxx	36	xxxxxxx	14	xxx
RUM OBTU	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(44)	29	xxxxxx	29	xxxxxx	29	xxxxxx
EL REPEN	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(47)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx
MAIZE+S	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(56)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
MAIZE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(57)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
SOL NIG	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(81)	86	xxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx

ACKNOWLEDGEMENTS

We are most grateful to the joint Letcombe/WRO Statistics Section for processing the experimental data; Messrs R M Porteous and S L Burbank for technical and practical assistance; to Mrs J Wallsworth and Mrs M Cox for the preparation and typing of this report; to Mrs S Cox and her staff for its reproduction and to the commercial firms who provided the chemicals and relevant data.

REFERENCES

RICHARDSON, W.G. and DEAN, M.L. (1974) The activity and post-emergence selectivity of some recently developed herbicides: oxadiazon, U-29, 722, U-27,628, metflurazone, norflurazone, AC 50,191, AC 84,777 and iprymidam. Technical Report Agricultural Research Council Weed Research Organization, 32, pp.74.

RICHARDSON, W.G. and PARKER, C. (1977) The activity and post-emergence selectivity of some recently developed herbicides: KUE 2079A, HOE 29152, RH 2915, triclopyr and Dowco 290. Technical Report Agricultural Research Council Weed Research Organization, 42, pp.53.

BOLTON, B.J.G., ROSE, P.W., FISK, A.P. and RICHARDSON, W.G. (1985) Grass and broad-leaved weed control in winter cereals with SMY 1500. Proceedings 1985 British Crop Protection Conference - Weeds, 3, 915-922.

HACK, H., EUE, L., STRANG, R.H. and ZECK, W.M. (1985) SMY 1500 - a new selective herbicide for weed control in winter cereals. Proceedings 1985 British Crop Protection Conference - Weeds, 1, 35-42.

RICHARDSON, W.G., WEST, T.M. and PARKER, C. (1980) The activity and post-emergence selectivity of some recently developed herbicides: R 40244, DPX 4189, acifluorfen, ARD 34/02 (NP55) and PP009. Technical Report Agricultural Research Council Weed Research Organization, 61, pp.57.

SIONIS, S.D., DROBNY, H.G., LEFEBVRE, P. and UPSTONE, M.E. (1985) DPX - M 6316 - a new sulfonylurea cereal herbicide. Proceedings 1985 British Crop Protection Conference - Weeds, 1, 49-54.

Appendix I. Species, abbreviations, varieties and stages of growth at spraying and assessment for post-emergence selectivity test.

Species	Designation and computer serial number	Cultivar or source	Stage of growth at spraying	Stages of growth at assessment (untreated controls, leaf numbers exclusive of cotyledons)
Wheat (Triticum aestivum)	WHEAT (1)	Armada	2.5 leaves	1-2 tillers
Wheat+safener	WHEAT+S (2)	Armada	2.5 leaves	1-2 tillers
Barley (Hordeum vulgare)	BARLEY (3)	Igri	2.5 to 3 leaves	2 tillers
Barley+safener	BARLEY+S (4)	Igri	2.5 to 3 leaves	7-8 leaves, 1 tiller
Oat (Avena sativa)	OAT (5)	Peniarth	2.5 leaves	3 tillers
Perennial ryegrass (Lolium perenne)	PER RYGR (6)	S 23	2 leaves	3-5 tillers
Onion (Alium cepa)	ONION (8)	Rijnsburg Robusta	2 leaves	2.5 leaves
Dwarf bean (Phaseolus vulgaris)	DWF BEAN (9)	Masterpiece	2 unifoliate leaves	2 trifoliate leaves
Field bean (Vicia faba)	FLD BEAN (10)	Maris Bead	2.5 leaves	7 leaves
Pea (Pisum sativum)	PEA (11)	Meteor	-	8 leaves
White clover (Trifolium repens)	W CLOVER (12)	Huia	1 trifoliate leaf	14 trifoliate leaves
Rape (Brassica napus oleifera)	RAPE (14)	Bienvenue	1.5 to 2 leaves	4 leaves
Kale (Brassica oleracea acephala)	KALE (15)	Marrowstem	2 leaves leaves	4.5 to 5 leaves
Cabbage (Brassica oleracea capitata)	CABBAGE (16)	Derby Day	1.5 to 2 leaves	8 leaves
Swede (Brassies napus)	SWEDE (17)	Acme	2 leaves	4 leaves

Species	Designation and computer serial number	Cultivar or source	Stage of growth at spraying	Stages of growth at assessment (untreated controls, leaf numbers exclusive of cotyledons)
Carrot (Daucus carota)	CARROT (18)	Chantenay Red Core	1.5 to 2 leaves	5 to 6 leaves
Parsnip (Pastinaca sativa)	PARSNIP (19)	White Gem	1.5 leaves	3 to 4 leaves
Lettuce (Lactuca sativa)	LETTUCE (20)	Great Lakes	1.5 to 2 leaves	6 to 7 leaves
Sugar beet (Beta vulgaris)	SUG BEET (22)	Monotri	2 leaves	4-5 leaves
Beta vulgaris	BETA VUL (23)	WRO 1981 ex Attleborough	2 leaves	4-5 leaves
Bromus sterilis	BROM STE	WRO 1982 (24)	2.5 leaves	7 tillers
Avena fatua	AVE FATU (26)	WRO 1980	2.5 leaves	7 tillers
Alopecurus myosuroides	ALO MYOS (27)	WRO 1984	2.5 leaves	11 tillers
Poa annua	POA ANN (28)	B and S Supplies, 1985	1 tiller	12 tillers
Poa trivialis	POA TRIV (29)	Emorsgate 1984	1 tiller	11 tillers
Sinapis arvensis	SIN ARV (30)	WRO 1982	4-5 leaves	6 leaves, flowering
Raphanus raphanistrum	RAPH RAP (31)	French Breakfast	2 leaves	6-8 leaves
Chrysanthemum segetum	CHRY SEG (32)	WRO 1983	4 to 5 leaves	14 leaves
Matricaria perforata	MAT PERF (33)	WRO 1981	4 leaves	12 leaves
Senecio vulgaris	SEN VULG (34)	WRO 1983	5 to 6 leaves	10 leaves, flowering

Species	Designation and computer serial number	Cultivar or source	Stage of growth at spraying	Stages of growth at assessment (untreated controls, leaf numbers exclusive of cotyledons)
Polyonum lapathifolium	POL LAPA (35)	B and S Supplies 1985	2 to 2.5 leaves	5 leaves, flowering
Lamium purpureum	LAM PUR (37)	B and S Supplies 1985	2 to 4 leaves	Numerous leaves, flowering
Galium aparine	GAL APAR (38)	Hatherop	2 whorls	Numerous whorls
Chenopodium album	CHEN ALB (39)	B and S Supplies 1985	6 leaves	10 leaves, flowering
Stellaria media	STEL MED (40)	B and S Supplies 1984	4 leaves	16 leaves, flowering
Spergula arvensis	SPER ARV (41)	B and S Supplies 1985	1.5 whorls	10 whorls, flowering
Veronica persica	VER PERS (42)	WRO, 1983	4-6 leaves	12 leaves, flowering
Viola arvensis	VI ARVE (43)	B and S Supplies 1984	3 to 4 leaves	Numerous leaves, flowering
Rumex obtusifolius	RUM OBTU (44)	B and S Supplies 1985	2 to 2.5 leaves	4 to 5 leaves
Elymus repens	EL REPEN (47)	WRO Clone 31*	2 leaves	9-14 leaves, tillering
Maize+ safener (Zea mays)	MAIZE+S (56)	LG 11	2.5 to 3 leaves	5-5½ leaves
Maize (Zea mays)	MAIZE (57)	LG 11	3 leaves	5-5½ leaves
Solanum nigrum	SOL NIG (81)	B and S Supplies 1984	2.5 leaves	11 leaves

* one node rhizome pieces

ABBREVIATIONS

ångstrom	Å	freezing point	f.p.
Abstract	Abs.	from summary	F.s.
acid equivalent*	a.e.	gallon	gal
acre	ac	gallons per hour	gal/h
active ingredient*	a.i.	gallons per acre	gal/ac
approximately equal to*	≃	gas liquid chromatography	GLC
aqueous concentrate	a.c.	gramme	g
bibliography	bibl.	hectare	ha
boiling point	b.p.	hectokilogram	hkg
bushel	bu	high volume	HV
centigrade	C	horse power	hp
centimetre*	cm	hour	h
concentrated	concd	hundredweight*	cwt
concentration	concn	hydrogen ion concentration*	pH
concentration x time product	ct	inch	in.
concentration required to kill 50% test animals	LC50	infra red	i.r.
		kilogramme	kg
cubic centimetre*	cm^3	kilo ($x10^3$)	k
cubic foot*	ft^3	less than	<
cubic inch*	in^3	litre	l.
cubic metre*	m^3	low volume	LV
cubic yard*	yd^3	maximum	max.
cultivar(s)	cv.	median lethal dose	LD50
curie*	Ci	medium volume	MV
degree Celsius*	^oC	melting point	m.p.
degree centigrade	^oC	metre	m
degree Fahrenheit*	^oF	micro ($x10^{-6}$)	μ
diameter	diam.	microgramme*	μg
diameter at breast height	d.b.h.	micromicro (pico: $x10^{-12}$)*	μμ
divided by*	÷ or /	micrometre (micron)*	μm (or μ)
dry matter	d.m.	micron (micrometre)*†	μm (or μ)
emulsifiable concentrate	e.c.	miles per hour*	mile/h
		milli ($x10^{-3}$)	m
equal to*	=	milliequivalent*	m.equiv.
fluid	fl.	milligramme	mg
foot	ft	millilitre	ml

† The name micrometre is preferred to micron and μm is preferred to μ.

millimetre*	mm
millimicro* (nano: $x10^{-9}$)	n or mμ
minimum	min.
minus	-
minute	min
molar concentration*	M (small cap)
molecule, molecular	mol.
more than	>
multiplied by*	x
normal concentration*	N (small cap)
not dated	n.d.
oil miscible concentrate	o.m.c. (tables only)
organic matter	o.m.
ounce	oz
ounces per gallon	oz/gal
page	p.
pages	pp.
parts per million	ppm
parts per million by volume	ppmv
parts per million by weight	ppmw
percent(age)	%
pico (micromicro: $x10^{-12}$)	p or μμ
pint	pint
pints per acre	pints/ac
plus or minus*	±
post-emergence	post-em
pound	lb
pound per acre*	lb/ac
pounds per minute	lb/min
pound per square inch*	lb/in^2
powder for dry application	p. (tables only)
power take off	p.t.o.
precipitate (noun)	ppt.
pre-emergence	pre-em.
quart	quart
relative humidity	r.h.
revolution per minute*	rev/min
second	s
soluble concentrate	s.c.
soluble powder	s.p.
solution	soln
species (singular)	sp.
species (plural)	spp.
specific gravity	sp. gr.
square foot*	ft^2
square inch	in^2
square metre*	m^2
square root of*	$\surd$
sub-species*	ssp.
summary	s.
temperature	temp.
ton	ton
tonne	t
ultra-low volume	ULV
ultra violet	u.v.
vapour density	v.d.
vapour pressure	v.p.
varietas	var.
volt	V
volume	vol.
volume per volume	v/v
water soluble powder	w.s.p. (tables only)
watt	W
weight	wt
weight per volume*	w/v
weight per weight*	w/w
wettable powder	w.p.
yard	yd
yards per minute	yd/min

* Those marked * should normally be used in the text as well as in tables etc.

WEED RESEARCH ORGANIZATION

TECHNICAL REPORTS

(Price includes surface mail; airmail £2.00 extra)

(* denotes Reports now out of print)

6. The botany, ecology, agronomy and control of Poa trivialis L. rough-stalked meadow-grass. November 1966. G P Allen. Price - £0.25

7. Flame cultivation experiments 1965. October 1966. G W Ivens. Price - £0.25

8. The development of selective herbicides for kale in the United Kingdom. 2. The methylthiotriazines. Price - £0.25

10. The liverwort, Marchantia polymorpha L. as a weed problem in horticulture; its extent and control. July 1968. I E Henson. Price - £0.25

11. Raising plants for herbicide evaluation; a comparison of compost types. July 1968. I E Henson. Price - £0.25

*12. Studies on the regeneration of perennial weeds in the glasshouse; I. Temperate species. May 1969. I E Henson. Price - £0.25

13. Changes in the germination capacity of three Polygonum species following low temperature moist storage. June 1969. I E Henson. Price - £0.25

14. Studies on the regeneration of perennial weeds in the glasshouse. II. Tropical species. May 1970. I E Henson. Price - £0.25

15. Methods of analysis for herbicide residues. February 1977. (second edition). Price - £5.75

16. Report on a joint survey of the presence of wild oat seeds in cereal seed drills in the United Kingdom during spring 1970. November 1970. J G Elliott and P J Attwood. Price - £0.25

17. The pre-emergence selectivity of some newly developed herbicides, Orga 3045 (in comparison with dalapon), haloxydine (PP 493), HZ 52.112, pronamide (RH 315) and R 12001. January 1971. W G Richardson, C Parker and K Holly. Price - £0.25

18. A survey from the roadside of the state of post-harvest operations in Oxfordshire in 1971. November 1971. A Phillipson. Price - £0.25

*19. The pre-emergence selectivity of some recently developed herbicides in jute, kenaf and sesamum, and their activity against Oxallis latifolia. December 1971. M L Dean and C Parker. Price - £0.25

* 20. A survey of cereal husbandry and weed control in three regions of England. July 1972. A Phillipson, T W Cox and J G Elliott. Price - £0.35

21. An automatic punching counter. November 1972. R C Simmons. Price - £0.30

22. The pre-emergence selectivity of some newly developed herbicides: bentazon, BAS 3730H, metflurazone, SAN 9789, HER 52.123, U 27,267. December 1972. W G Richardson and M L Dean. Price - £0.25

23. A survey of the presence of wild oats and blackgrass in parts of the United Kingdom during summer 1972. A Phillipson. Price - £0.25

24. The conduct of field experiments at the Weed Research Organization. February 1973. J G Elliott, J Holroyd and T O Robson. Price - £1.25

25. The pre-emergence selectivity of some recently developed herbicides: lenacil, RU 12068, metribuzin, cyprazine, EMD-IT 5914 and benthiocarb. August 1973. W G Richardson and M L Dean. Price - £1.75.

26. The post-emergence selectivity of some recently developed herbicides: bentazon, EMD-IT 6412, cyprazine, metribuzin, chlornitrofen, glyphosate, MC 4379, chlorfenprop-methyl. October 1973. W G Richardson and M L Dean. Price - £3.31

27. Selectivity of benzene sulphonyl carbamate herbicides between various pasture grasses and clover. October 1973. A M Blair. Price - £1.05

28. The post-emergence selectivity of eight herbicides between pasture grasses: RP 17623, HOE 701, BAS 3790, metoxuron, RU 12068, cyprazine, MC 4379, metribuzin. October 1973. A M Blair. Price - £1.00

* 29. The pre-emergence selectivity between pasture grasses of twelve herbicides: haloxydine, pronamide, NC 8438, Orga 3045, chlortoluron, metoxuron, dicamba, isopropalin, carbetamide, MC 4379, MBR 8251 and EMD-IT 5914. November 1973. A M Blair. Price - £1.30

30. Herbicides for the control of the broad-leaved dock (Rumex obtusifolius L.). November 1973. A M Blair and J Holroyd. Price - £1.06

31. Factors affecting the selectivity of six soil acting herbicides against Cyperus rotundus. February 1974. M L Dean and C Parker. Price - £1.10

32. The activity and post-emergence selectivity of some recently developed herbicides: oxadiazon, U-29,722, U-27,658, metflurazone, norflurazone, AC 50-191, AC 84,777 and iprymidam. June 1974. W G Richardson and M L Dean. Price - £3.62

33. A permanent automatic weather station using digital integrators. September 1974. R C Simmons. Price £0.63.

34. The activity and pre-emergence selectivity of some recently developed herbicides: trifluralin, isopropalin, oryzalin, dinitramine, bifenox and perfluidone. November 1974. W G Richardson and M L Dean. Price - £2.50

35. A survey of aquatic weed control methods used by Internal Drainage Boards, 1973. January 1975. T O Robson. Price - £1.39

36. The activity and pre-emergence selectivity of some recently developed herbicides: Bayer 94871, tebuthiuron, AC 92553. March 1975. W G Richardson and M L Dean. Price - £1.54

37. Studies on Imperata cylindrica (L.) Beauv. and Eupatorium odoratum L. October 1975. G W Ivens. Price - £1.75

38. The activity and pre-emergence selectivity of some recently developed herbicides: metamitron, HOE 22870, HOE 23408, RH 2915, RP 20630. March 1976. W G Richardson, M L Dean and C Parker. Price - £3.25

39. The activity and post-emergence selectivity of some recently developed herbicides: HOE 22870, HOE 23408, flamprop-methyl, metamitron and cyperquat. May 1976. W G Richardson and C Parker. Price - £3.20

40. The activity and pre-emergence selectivity of some recently developed herbicides: RP 20810, oxadiazon, chlornitrofen, nitrofen, flamprop--isopropyl. August 1976. W G Richardson, M L Dean and C Parker. Price - £2.75.

41. The activity and pre-emergence selectivity of some recently developed herbicides: K 1441, mefluidide, WL 29226, epronaz, Dowco 290 and triclopyr. November 1976. W G Richardson and C Parker. Price - £3.40.

42. The activity and post-emergence selectivity of some recently developed herbicides: KUE 2079A, HOE 29152, RH 2915, Triclopyr and Dowco 290. March 1977. W G Richardson and C Parker. Price - £3.50

43. The activity and pre-emergence selectivity of some recently developed herbicides: dimefuron, hexazinone, trifop-methyl, fluothiuron, buthidazole and butam. November 1977. W G Richardson and C Parker. Price - £3.75.

44. The activity and selectivity of the herbicides: ethofumesate, RU 12709 and isoproturon. December 1977. W G Richardson, C Parker, & M L Dean. Price - £4.00

45. Methods of analysis for determining the effects of herbicides on soil soil micro-organisms and their activities. January 1978. M P Greaves, S L Cooper, H A Davies, J A P Marsh & G I Wingfield. Price - £4.00

46. Pot experiments at the Weed Research Organization with forest crop and weed species. February 1978. D J Turner and W G Richardson. Price - £2.70

47. Field experiments to investigate the long-term effects of repeated applications of MCPA, tri-allate, simazine and linuron - effects on the quality of barley, wheat, maize and carrots. July 1978. J D Fryer, P D Smith and J W Ludwig. Price - £1.20.

48. Factors affecting the toxicity of paraquat and dalapon to grass swards. March 1978. A K Oswald. Price - £2.90

49. The activity and post-emergence selectivity of some recently developed herbicides: NP 48, RH 5205 and Pyridate. May 1978. W G Richardson and C Parker. Price - £2.50

50. Sedge weeds of East Africa - II. Distribution. July 1978. P J Terry. Price - £1.50

51. The activity and selectivity of the herbicides methabenzthiazuron, metoxuron, chlortoluron and cyanazine. September 1978. W G Richardson and C Parker. Price - £2.20.

52. Antidotes for the protection of field bean (Vicia faba L.) from damage by EPTC and other herbicides. February 1979. A M Blair. Price - £1.35

53. Antidotes for the protection of wheat from damage by tri-allate. February 1979. A M Blair. Price - £2.00

54. The activity and pre-emergence selectivity of some recently developed herbicices: alachlor, metolachlor, dimethachlor, alloxydim-sodium and fluridone. April 1979. W G Richardson and C Parker. Price - £3.00

55. The activity and selectivity of the herbicides carbetamide, methazole, R 11913 and OCS 21693. May 1979. W G Richardson and C Parker. Price - £1.80

56. Growing weeds from seeds and other propagules for experimental purposes. July 1979. R H Webster. Price - £1.10

57. The activity and pre-emergence selectivity of some recently developed herbicides: R 40244, AC 206784, pendimethalin, butralin, acifluorfen and FMC 39821. December 1979. W G Richardson, T M West and C Parker - Price - £3.55

58. The tolerance of fenugreek (Trigonella foenumgraecum L.) to various herbicides. December 1979. W G Richardson. Price - £1.55

59. Recommended tests for assessing the side-effects of pesticides on the soil microflora. April 1980. M P Greaves, N J Poole, K H Domsch, G Jagnow and W Verstraete. Price - £2.00

60. Properties of natural rainfalls and their simulation in the laboratory for pesticide research. September 1980. R C Simmons. Price - £1.25

61. The activity and post-emergence selectivity of some recently developed herbicides: R 40244, DPX 4189, acifluorfen, ARD 34/02 (NP 55) and PP 009. November 1980. W G Richardson, T M West and C Parker. Price - £3.75

62. The activity and pre-emergence selectivity of some recently developed herbicides: UBI S-734, SSH-43, ARD 34/02 (= NP 55), PP 009 and DPX 4189. February 1981. W G Richardson, T M West and C Parker. Price - £3.50

63. The activity and post-emergence selectivity of some recently developed herbicides: SSH-41, MB 30755, AC 213087, AC 222293 and Dowco 433. May 1981. W G Richardson, T M West and C Parker. Price - £3.50

64. The activity and pre-emergence selectivity of some recently developed herbicides: chlomethoxynil, NC 20484 and MBR 18337. March 1982. W G Richardson, T M West and C Parker. Price - £3.00

65. A system for monitoring environmental factors in controlled environment chambers and glasshouses. June 1982. R C Simmons. Price - £1.50

66. The activity and pre-emergence selectivity of some recently developed herbicides: AC 213087 and AC 222293. December 1982. W G Richardson, T M West and C Parker. Price - £2.00

67. The activity and post-emergence selectivity of some recently developed herbicides: trifopsime, glufosinate, RH 8817, MBR 18337 and NC 20484. December 1982. W G Richardson, T M West and C Parker. Price - £3.25

68. The activity and pre-emergence selectivity of some recently developed herbicides: WL 49818, WL 82830, WL 83627, WL 83801 and DPX 5648. December 1982. W G Richardson, T M West and C Parker. Price - £4.00

69. The activity and late post-emergence selectivity of some recently developed herbicides: AC 252925, DOWCO 453, HOE 33171 and HOE 35609. March 1983. W G Richardson, T M West and G P White. Price - £3.25

70. The potential of various herbicides for selective control of weed grasses and Stellaria media in newly sown ryegrass/clover leys and ryegrass seed crops. May 1983. F W Kirkham Price - £1.75

71. A feasibility study of the use of chemicals for rural amenity areas. Sponsored by the Countryside Commission. September 1983. E J P Marshall Price - £5.00

72. The activity and late post-emergence selectivity of FBC 32197. November 1983. W G Richardson, T M West and G P White. Price - £1.25

73. Paraquat persistence - statistical analysis of the WRO long term trial. January 1984. R J Hance, T H Byast, P D Smith and T M Weight. Price - £1.00

74. The activity and post-emergence selectivity of some recently developed herbicides: AC 252214, DPX-T6376, and chlorazifop. February 1984. W G Richardson, T M West and G P White. Price - £2.00.

75. The effect of temperature and soil moisture on the activity of isoproturon and chlortoluron on Alopecurus myosuroides and winter wheat. May 1984. A M Blair. Price - £2.00

76. A laboratory rainfall simulator for pesticide studies. May 1984. R C Simmons. Price - £2.00

77. Experiments on the effects of the herbivorous fish, grass carp (Ctenopharyngodon idella Val.) on aquatic vascular plants, algae, zooplankton and phytoplankton and the importance of water temperature on the success of weed control. September 1984. M C Fowler. Price - £3.50.

78, The activity and post-emergence selectivity of some recently developed herbicides: MCPA-thioethyl, MT-124, tridiphane, aclonifen and RST 20024 H. October 1984. W G Richardson and T M West. Price - £5.40

79. A preliminary study on the effect of some agricultural herbicides on a range of field margin flora. November 1984. J E Birnie. Price - £2.50

80. The activity and pre-emergence selectivity of some recently developed herbicides: imazaquin, isoxaben, metsulfuron-methyl, aclonifen and orbencarb. December 1984. W G Richardson and T M West. Price - £6.50

81. The side effects of alloxydim sodium, sethoxydim, acifluorfen and fluazifop-butyl on legume growth and nodulation. January 1985. J M Bebb, M P Greaves and W G Richardson. Price - £3.00

82. An IRGA system for continuous monitoring of CO_2 and H_2O vapour exchange in replicate plants growing in controlled environments. January 1985. C R Merritt and R C Simmons. Price - £3.00

83. A laboratory pot sprayer for use with controlled environment chambers. February 1985. R C Simmons and J A Drinkwater. Price - £2.50

84. Maps of the changes in the weeds of Boddington Barn field over twenty years (1961-1981). March 1985. R J Chancellor. Price - £4.50

85. The use of bentazone and pyridyl herbicides alone and in mixtures for the control of creeping thistle (Cirsium arvense L.) in grassland. April 1985. W G Richardson, A K Oswald and T M West. Price - £1.50

86. The activity and pre-emergence selectivity of some recently developed herbicides: metazachlor, butamifos, MT-124, tridiphane, MK 616 and prodiamine. May 1985. W G Richardson and T M West. Price - £7.00.

87. The potential use of grass growth retardants at Sullom Voe terminal, Shetland. A report prepared for W J Cairns and Partners, 16 Randolph Crescent, Edinburgh, Environmental Consultants to BP Petroleum Development Ltd as Operators of Sullom Voe Terminal. May 1985. E J P Marshall. Price - £3.00.

88. A further study of the effect of six cereal herbicide treatments on a range of broad-leaved field margin plants. June 1985. J E Birnie. Price - £2.50

89. The activity, pre-and post-emergence selectivity of diflufenican. December 1985. W G Richardson and T M West. Price - £3.00

90. The pre-emergence selectivity in warm-climate species of some recently developed herbicides: imazaquin, AC263 499, cinmethylin and isoxaben January 1986. C Parker and A K Wilson. Price - £2.60

91. The activity, pre-emergence selectivity and persistence of some recently developed herbicides: DOWCO 453, Quizalofop-ethyl, BAS 517 00H, cinmethylin, AC263,499 and RST 20024H. W G Richardson and T M West. Price - £6.20

92. The activity and post-emergence selectivity of some recently developed herbicides: SMY 1500, PPG 884, PPG 1259 and DPX-M 6316. W G Richardson and T M West. February 1986. Price - £4.20.