Click here for previous

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	RH 2915 0.05 kg/ha		RH 2915 0.2 kg/ha		RH 2915 0.8 kg/ha	
AG REPEN	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(47)	100	xxxxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	43	xxxxxxxxx
AG STOLO	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(48)	100	xxxxxxxxxxxxxxxxxxxx	57	xxxxxxxxxxx	50	xxxxxxxxxx
CIRS ARV	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	40	xxxxxxxx
(50)	64	xxxxxxxxxxxxx	43	xxxxxxxxx	14	xxx
MAIZE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(58)	79	xxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx	57	xxxxxxxxxxx
SORGHUM	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	25	xxxxx
(59)	71	xxxxxxxxxxxxxx	50	xxxxxxxxxx	14	xxx
RICE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(60)	64	xxxxxxxxxxxxx	57	xxxxxxxxxxx	50	xxxxxxxxxx
PIGEON P	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx
(61)	71	xxxxxxxxxxxxxx	50	xxxxxxxxxx	21	xxxx
COWPEA	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(62)	71	xxxxxxxxxxxxxx	64	xxxxxxxxxxxxx	21	xxxx
CHICKPEA	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx	30	xxxxxx
(63)	71	xxxxxxxxxxxxxx	64	xxxxxxxxxxxxx	21	xxxx
GRNDNUT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(64)	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx	57	xxxxxxxxxxx
COTTON	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(66)	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx	43	xxxxxxxxx

SPECIES	RH 2915 0.05 kg/ha		RH 2915 0.2 kg/ha		RH 2915 0.8 kg/ha	
JUTE	100	xxxxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx	25	xxxxx
(67)	50	xxxxxxxxxx	21	xxxx	14	xxx
KENAF	100	xxxxxxxxxxxxxxxxxxxx	94	xxxxxxxxxxxxxxxxxxx	81	xxxxxxxxxxxxxxxx
(68)	57	xxxxxxxxxxx	50	xxxxxxxxxx	29	xxxxxx
TOBACCO	100	xxxxxxxxxxxxxxxxxxxx	0		0	
(69)	64	xxxxxxxxxxxxx	0		0	
SESAMUM	40	xxxxxxxx	0		0	
(70)	29	xxxxxx	0		0	
TOMATO	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	0	
(71)	71	xxxxxxxxxxxxxx	36	xxxxxxx	0	
OR PUNCT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	58	xxxxxxxxxxxx
(73)	79	xxxxxxxxxxxxxxxx	57	xxxxxxxxxxx	36	xxxxxxx
ELEU IND	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx
(74)	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx	29	xxxxxx
ECH CRUS	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx
(75)	79	xxxxxxxxxxxxxxxx	50	xxxxxxxxxx	29	xxxxxx
ROTT EXA	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(76)	79	xxxxxxxxxxxxxxxx	57	xxxxxxxxxxx	36	xxxxxxx
DIG SANG	100	xxxxxxxxxxxxxxxxxxxx	94	xxxxxxxxxxxxxxxxxxx	81	xxxxxxxxxxxxxxxx
(77)	86	xxxxxxxxxxxxxxxxx	36	xxxxxxx	29	xxxxxx
AMAR RET	100	xxxxxxxxxxxxxxxxxxxx	94	xxxxxxxxxxxxxxxxxxx	0	
(78)	50	xxxxxxxxxx	43	xxxxxxxxx	0	

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	RH 2915 0.05 kg/ha		RH 2915 0.2 kg/ha		RH 2915 0.8 kg/ha	
PORT OLE	100	xxxxxxxxxxxxxxxxxxxx	92	xxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(79)	64	xxxxxxxxxxxxx	36	xxxxxxx	14	xxx
SOL NIG	0		0		0	
(81)	0		0		0	
SNOW POL	100	xxxxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx	70	xxxxxxxxxxxxxx
(83)	79	xxxxxxxxxxxxxxxx	57	xxxxxxxxxxx	50	xxxxxxxxxx
CYP ESCU	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(85)	86	xxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx
CYP ROTU	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(86)	86	xxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx
OXAL LAT	92	xxxxxxxxxxxxxxxxxx	83	xxxxxxxxxxxxxxxxx	17	xxx
(87)	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx	14	xxx

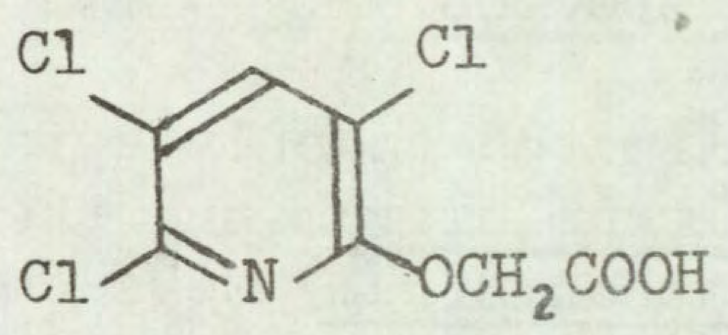
POST-EMERGENCE SELECTIVITY EXPERIMENT

TRICLOPYR

<u>Code number</u> Dowco 233

<u>Chemical name</u> 3,5,6-trichloro-2-pyridyloxyacetic acid

<u>Structure</u>



<u>Source</u> Dow Chemical Co Ltd
Heathrow House
Bath Road
Hounslow
Middlesex TW5 9QY

<u>Information available and suggested uses</u>

A highly active herbicide on woody plants and brush species including ash (<u>Fraxinus</u> spp) which is relatively tolerant to picloram. It has utility for control of unwanted brush and perennial weeds in industrial areas, pastures, rangelands and forestry.

<u>Formulation used</u> 36% w/v a.e. aqueous concentrate (triethylamine salt)

<u>Spray volume</u> for selectivity experiment 345 l/ha

<u>RESULTS</u>

Full results are given in the histograms on pages 34-39 and potential selectivities are summarised in the following table.

RATE (kg a.i./ha)	CROPS: vigour reduced by 15% or less	WEEDS: number or vigcur reduced by 70% or more
0.8	barley perennial ryegrass	<u>Raphanus raphanistrum</u> <u>Solanum nigrum</u> + species below
0.2	species above + wheat oat maize rice	<u>Sinapis arvensis</u>
0.05	None listed as no weeds controlled	None

Comments on results

Activity experiment data, symptoms and pre-emergence selectivities were the subject of a previous report (Richardson and Parker, 1976 b). A high level of activity was found pre- and post-emergence on certain broad-leaved species, symptoms being reminiscent of the related picloram. The tolerance of grasses also suggested that selectivity, post-emergence, was worth investigating.

Post-emergence selectivity among temperate species

Weed control and crop tolerance were limited to only a few species. Only three annual broad-leaved species (Solanum nigrum and the two cruciferae, Sinapis arvensis and Raphanus raphanistrum) were controlled while tolerant crops were barley and perennial ryegrass at 0.8 kg/ha and wheat and oat at 0.2 kg/ha, the two latter species showing only minor effects at the highest dose. All grass, annual composite and Polygonum weed species were resistant. Cirsium arvense, Rumex obtusifolius and the two Caryophyllaceae, Stellaria media and Spergula arvensis were severely reduced, but not controlled by 0.8 kg/ha. Certain crops such as lettuce and large seeded legumes were very sensitive. This corresponds to the pre-emergence selectivity experiment, when cereals were the only tolerant crops with selective control of only a few, mainly broad-leaved weed species (Richardson and Parker, 1976 b). The high activity on solanaceous species, tomato and Solanum nigrum, is significant in view of that found earlier on potato (S. tuberosum) when well established plants were prevented from producing healthy tubers (Richardson and Taylor, unpublished). The tolerance of cereals suggests the possibility of combating volunteer potatoes with triclopyr.

Post-emergence selectivity among tropical species

Triclopyr showed a restricted range of activity in this experiment and only Solanum nigrum (very small when sprayed) was well controlled at 0.8 kg/ha. Other broad-leaved, grass and sedge weeds were all damaged to some extent at the higher doses but none effectively controlled.

Maize and rice were relatively tolerant but potential uses in these crops are not obvious and there were no broad-leaved crops with any useful tolerance.

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	TRICLOPYR 0.05 kg/ha		TRICLOPYR 0.2 kg/ha		TRICLOPYR 0.8 kg/ha	
WHEAT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(1)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx
BARLEY	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(2)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx
OAT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(3)	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx
PER RYGR	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(4)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx
ONION	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(8)	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx
DWF BEAN	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx
(9)	50	xxxxxxxxxx	43	xxxxxxxxx	14	xxx
FLD BEAN	100	xxxxxxxxxxxxxxxxxxxx	67	xxxxxxxxxxxxx	0	
(10)	71	xxxxxxxxxxxxxx	29	xxxxxx	0	
PEA	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	0	
(11)	64	xxxxxxxxxxxxx	50	xxxxxxxxxx	0	
W CLOVER	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(12)	93	xxxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	36	xxxxxxx
RAPE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	70	xxxxxxxxxxxxxx
(14)	93	xxxxxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx	21	xxxx
KALE	100	xxxxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx	80	xxxxxxxxxxxxxxxx
(15)	100	xxxxxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx	36	xxxxxxx

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	TRICLOPYR 0.05 kg/ha		TRICLOPYR 0.2 kg/ha		TRICLOPYR 0.8 kg/ha	
CABBAGE	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx
(16)	93	xxxxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxxx	29	xxxxxx
CARROT	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx
(18)	86	xxxxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx	14	xxx
PARSNIP	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	42	xxxxxxxx
(19)	64	xxxxxxxxxxxxxx	57	xxxxxxxxxxxx	14	xxx
LETTUCE	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	0	
(20)	50	xxxxxxxxxx	29	xxxxxx	0	
SUG BEET	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx
(21)	86	xxxxxxxxxxxxxxxxxx	43	xxxxxxxxx	29	xxxxxx
AVE FATU	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx
(26)	93	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx
ALO MYOS	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx
(27)	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxxx
POA ANN	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx
(28)	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxxx
POA TRIV	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx
(29)	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxxx
SIN ARV	100	xxxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxxx	40	xxxxxxxx
(30)	79	xxxxxxxxxxxxxxxxx	21	xxxx	14	xxx
RAPH RAP	100	xxxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxxx	0	
(31)	93	xxxxxxxxxxxxxxxxxxxx	57	xxxxxxxxxxxx	0	

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	TRICLOPYR 0.05 kg/ha		TRICLOPYR 0.2 kg/ha		TRICLOPYR 0.8 kg/ha	
TRIP MAR	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(33)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx
SEN VULG	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(34)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
POL LAPA	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(35)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
POL AVIC	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(36)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
GAL APAR	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(38)	93	xxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx
CHEN ALB	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(39)	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx
STEL MED	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(40)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	36	xxxxxxx
SPER ARV	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(41)	79	xxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx	43	xxxxxxxxx
VER PERS	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(42)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx
RUM OBTU	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	56	xxxxxxxxxxx
(44)	93	xxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	43	xxxxxxxxx
HOLC LAN	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(45)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	TRICLOPYR 0.05 kg/ha		TRICLOPYR 0.2 kg/ha		TRICLOPYR 0.8 kg/ha	
AG REPEN	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(47)	86	xxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx
AG STOLO	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(48)	79	xxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx
CIRS ARV	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(50)	100	xxxxxxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx	36	xxxxxxx
MAIZE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(58)	93	xxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	57	xxxxxxxxxxx
SORGHUM	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(59)	79	xxxxxxxxxxxxxxxx	57	xxxxxxxxxxx	43	xxxxxxxxx
RICE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(60)	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx
PIGEON P	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx	0	
(61)	50	xxxxxxxxxx	14	xxx	0	
COWPEA	100	xxxxxxxxxxxxxxxxxxxx	87	xxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(62)	57	xxxxxxxxxxx	50	xxxxxxxxxx	43	xxxxxxxxx
CHICKPEA	0		0		0	
(63)	0		0		0	
GRNDNUT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(64)	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx
COTTON	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(66)	64	xxxxxxxxxxxxx	57	xxxxxxxxxxx	29	xxxxxx

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	TRICLOPYR 0.05 kg/ha		TRICLOPYR 0.2 kg/ha		TRICLOPYR 0.8 kg/ha	
JUTE	100	xxxxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx
(67)	57	xxxxxxxxxxx	43	xxxxxxxxx	29	xxxxxx
KENAF	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	56	xxxxxxxxxxx
(68)	79	xxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	14	xxx
TOBACCO	100	xxxxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx
(69)	57	xxxxxxxxxxx	14	xxx	43	xxxxxxxxx
SESAMUM	30	xxxxxx	20	xxxx	0	
(70)	21	xxxx	7	x	0	
TOMATO	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(71)	71	xxxxxxxxxxxxxx	29	xxxxxx	14	xxx
OR PUNCT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(73)	86	xxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx	50	xxxxxxxxxx
ELEU IND	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(74)	79	xxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx	50	xxxxxxxxxx
ECH CRUS	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(75)	93	xxxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	43	xxxxxxxxx
ROTT EXA	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(76)	93	xxxxxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx	57	xxxxxxxxxxx
DIG SANG	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(77)	79	xxxxxxxxxxxxxxxx	57	xxxxxxxxxxx	50	xxxxxxxxxx
AMAR RET	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(78)	57	xxxxxxxxxxx	57	xxxxxxxxxxx	43	xxxxxxxxx

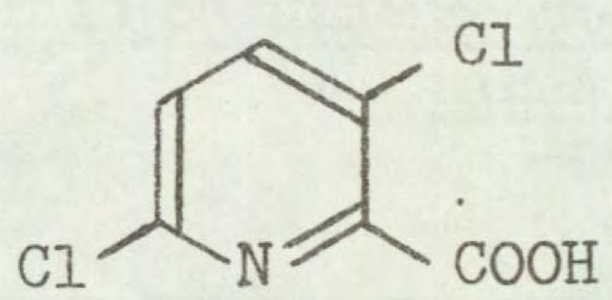
SPECIES	TRICLOPYR 0.05 kg/ha		TRICLOPYR 0.2 kg/ha		TRICLOPYR 0.8 kg/ha	
PORT OLE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(79)	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	36	xxxxxxx
SOL NIG	90	xxxxxxxxxxxxxxxxxx	40	xxxxxxxx	70	xxxxxxxxxxxxxx
(81)	43	xxxxxxxxx	36	xxxxxxx	14	xxx
SNOW POL	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(83)	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx	50	xxxxxxxxxx
CYP ESCU	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(85)	79	xxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx
CYP ROTU	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(86)	86	xxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	57	xxxxxxxxxxx
OXAL LAT	92	xxxxxxxxxxxxxxxxxx	92	xxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(87)	71	xxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx

DOWCO 290

Code number   Dowco 290   Trade name   Lontrel

Chemical name   3,6-dichloropicolinic acid

Structure



Source   Dow Chemical Co Ltd
Heathrow House
Bath Road
Hounslow
Middlesex   TW5 9QY

Information available and suggested uses

Post-emergence control of broad-leaved weeds with a spectrum confined mainly to members of the Compositae, Polygonaceae, Umbelliferae and Papilionaceae. Tolerant crops are: cereals, maize, sorghum, flax, grasses and brassicae, such as oil seed rape. In most situations it will form part of a herbicide mixture with products such as dalapon and benazolin. Mixtures with mecoprop and dichlorprop are also available.

Formulation used   30% w/v a.e. aqueous concentrate (alkanolamine salt)

Spray volume   for selectivity experiment 345 l/ha

RESULTS

Full results are given in the histograms on pages 43-48 and potential selectivities are summarised in the following table.

RATE (kg a.i./ha)	CROPS: vigour reduced by 15% or less	WEEDS: number or vigour reduced by 70% or more
0.8	wheat barley oat perennial ryegrass cabbage radish maize sorghum rice	Rumex obtusifolius + species below

RATE (kg a.i./ha)	CROPS: vigour reduced by 15% or less	WEEDS: number or vigour reduced by 70% or more
0.2	species above + rape kale	Senecio vulgaris Cirsium arvense + species below
0.05	species above + onion sugar beet kenaf	Tripleurospermum maritimum Solanum nigrum

Comments on results

Activity test data, symptoms and pre-emergence selectivity was reported previously for this herbicide (Richardson and Parker, 1976 b). A high level of foliar and surface pre-emergence activity was found on dwarf bean and Polygonum amphibium in the activity experiment, symptoms being typical of those caused by picloram with severe epinastic and growth regulatory effects, while kale and grasses were relatively tolerant, suggesting the possibility of selective weed control, both pre- and post-emergence. This was verified in the pre-emergence test when composite and polygonaceous weeds in particular were selectively controlled in cereals, perennial ryegrass and brassica crops. Certain crops eg carrot, lettuce and legumes were also highly sensitive (Richardson and Parker, 1976 b).

Post-emergence selectivity among temperate species

Composite weeds, were very sensitive, Tripleurospermum maritimum, Senecio vulgaris and the perennial, Cirsium arvense being controlled at the lower doses. Solanum nigrum, at 0.05 kg/ha and Rumex obtusifolius at 0.8 kg/ha were the only other weeds to be controlled. Polygonum species showed some resistance. All grass weeds and certain broad-leaved weeds were resistant, notably Stellaria media, Veronica persica and crucifers.

Perennial ryegrass and the cereals tolerated the high dose of 0.8 kg/ha as did two of the brassica crops, cabbage and radish, while the other two, kale and rape were only slightly reduced in vigour at this dose. Onion and sugar beet tolerated 0.05 kg/ha and were reduced in vigour by only 29% at 0.2 kg/ha. Lettuce, parsnip, carrot and all four leguminous crops were very sensitive.

The importance of composite weeds in cereals and brassica crops, indicates that Dowco 290 may have a high potential for use in these crops. The possibility of controlling established Cirsium arvense in these crops and perennial ryegrass is very interesting. The post-emergence weed control and crop tolerance spectrum is similar to that found pre-emergence (Richardson and Parker, 1976 b).

Post-emergence selectivity among tropical species

As with pre-emergence treatments of this compound (Richardson and Parker 1976 b) grass weeds and cereals were highly tolerant and were almost unaffected by the highest dose. Several of the legume crops were again extremely sensitive but other broad-leaved crops and the broad-leaved weeds Amaranthus and Portulaca were not so severely affected. Solanum nigrum and tomato were severely damaged at the lowest dose. There is a potential for control of specific weed problems involving Solanaceae, Leguminosae and perhaps Compositae in the cereals, kenaf and perhaps jute, as well as in perennial crops.

Activity on important tropical Compositae including Mikania micrantha and Eupatorium odoratum is being studied in a further experiment.

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	DOWCO 290 0.05 kg/ha		DOWCO 290 0.2 kg/ha		DOWCO 290 0.8 kg/ha	
WHEAT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(1)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
BARLEY	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(2)	93	xxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx
OAT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(3)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
PER RYGR	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(4)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx
ONION	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(8)	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	50	xxxxxxxxxx
DWF BEAN	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx
(9)	50	xxxxxxxxxx	29	xxxxxx	7	x
FLD BEAN	0		0		0	
(10)	0		0		0	
PEA	50	xxxxxxxxxx	0		0	
(11)	14	xxx	0		0	
W CLOVER	100	xxxxxxxxxxxxxxxxxxxx	85	xxxxxxxxxxxxxxxxx	80	xxxxxxxxxxxxxxxx
(12)	43	xxxxxxxxx	21	xxxx	14	xxx
RAPE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(14)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx
KALE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(15)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	DOWCO 290 0.05 kg/ha		DOWCO 290 0.2 kg/ha		DOWCO 290 0.8 kg/ha	
CABBAGE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(16)	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx
CARROT	100	xxxxxxxxxxxxxxxxxxxx	62	xxxxxxxxxxxx	62	xxxxxxxxxxxx
(18)	50	xxxxxxxxxx	21	xxxx	14	xxx
PARSNIP	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx
(19)	64	xxxxxxxxxxxxx	29	xxxxxx	14	xxx
LETTUCE	100	xxxxxxxxxxxxxxxxxxxx	0		0	
(20)	43	xxxxxxxxx	0		0	
SUG BEET	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(21)	93	xxxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx
AVE FATU	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(26)	86	xxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx	57	xxxxxxxxxxx
ALO MYOS	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(27)	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
POA ANN	100	xxxxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(28)	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx
POA TRIV	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(29)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
SIN ARV	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(30)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx
RAPH RAP	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(31)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	DOWCO 290 0.05 kg/ha		DOWCO 290 0.2 kg/ha		DOWCO 290 0.8 kg/ha	
TRIP MAR	100	xxxxxxxxxxxxxxxxxxxx	85	xxxxxxxxxxxxxxxxx	65	xxxxxxxxxxxxx
(33)	29	xxxxxx	14	xxx	14	xxx
SEN VULG	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(34)	50	xxxxxxxxxx	14	xxx	14	xxx
POL LAPA	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(35)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx
POL AVIC	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(36)	86	xxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	64	xxxxxxxxxxxxx
GAL APAR	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(38)	100	xxxxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx
CHEN ALB	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(39)	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx
STEL MED	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(40)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
SPER ARV	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(41)	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx
VER PERS	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(42)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
RUM OBTU	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(44)	100	xxxxxxxxxxxxxxxxxxxx	50	xxxxxxxxxx	29	xxxxxx
HOLC LAN	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(45)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	DOWCO 290 0.05 kg/ha		DOWCO 290 0.2 kg/ha		DOWCO 290 0.8 kg/ha	
AG REPEN	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(47)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
AG STOLO	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(48)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx
CIRS ARV	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(50)	36	xxxxxxx	21	xxxx	21	xxxx
MAIZE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(58)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx
SORGHUM	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(59)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
RICE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(60)	100	xxxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx
PIGEON P	87	xxxxxxxxxxxxxxxxx	0		0	
(61)	50	xxxxxxxxxx	0		0	
COWPEA	100	xxxxxxxxxxxxxxxxxxxx	62	xxxxxxxxxxxx	0	
(62)	64	xxxxxxxxxxxxx	29	xxxxxx	0	
CHICKPEA	0		0		0	
(63)	0		0		0	
GRNDNUT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(64)	71	xxxxxxxxxxxxxx	57	xxxxxxxxxxx	50	xxxxxxxxxx
COTTON	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(66)	71	xxxxxxxxxxxxxx	64	xxxxxxxxxxxxx	57	xxxxxxxxxxx

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	DOWCO 290 0.05 kg/ha		DOWCO 290 0.2 kg/ha		DOWCO 290 0.8 kg/ha	
JUTE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(67)	79	xxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx	57	xxxxxxxxxxx
KENAF	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(68)	86	xxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx
TOBACCO	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx
(69)	64	xxxxxxxxxxxxx	57	xxxxxxxxxxx	21	xxxx
SESAMUM	100	xxxxxxxxxxxxxxxxxxxx	70	xxxxxxxxxxxxxx	20	xxxx
(70)	50	xxxxxxxxxx	43	xxxxxxxxx	7	x
TOMATO	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	90	xxxxxxxxxxxxxxxxxx
(71)	29	xxxxxx	14	xxx	21	xxxx
OR PUNCT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(73)	79	xxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
ELEU IND	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(74)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx
ECH CRUS	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(75)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx
ROTT EXA	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(76)	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
DIG SANG	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(77)	100	xxxxxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx
AMAR RET	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(78)	86	xxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx

POST-EMERGENCE SELECTIVITY EXPERIMENT

SPECIES	DOWCO 290 0.05 kg/ha		DOWCO 290 0.2 kg/ha		DOWCO 290 0.8 kg/ha	
PORT OLE	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(79)	79	xxxxxxxxxxxxxxxx	57	xxxxxxxxxxx	57	xxxxxxxxxxx
SOL NIG	100	xxxxxxxxxxxxxxxxxxxx	80	xxxxxxxxxxxxxxxx	50	xxxxxxxxxx
(81)	29	xxxxxx	14	xxx	7	x
SNOW POL	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(83)	86	xxxxxxxxxxxxxxxxx	93	xxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
CYP ESCU	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(85)	71	xxxxxxxxxxxxxx	86	xxxxxxxxxxxxxxxxx	79	xxxxxxxxxxxxxxxx
CYP ROTU	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
(86)	93	xxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx
OXAL LAT	100	xxxxxxxxxxxxxxxxxxxx	100	xxxxxxxxxxxxxxxxxxxx	92	xxxxxxxxxxxxxxxxxx
(87)	71	xxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx	71	xxxxxxxxxxxxxx

ACKNOWLEDGEMENTS

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Appendix 1. Species, abbreviations, varieties and stages of growth at spraying and assessment for post-emergence selectivity test

	Designation and computer serial number	Cultivar or source	Stage of growth at spraying	Stage of growth at assessment (untreated controls, leaf numbers exclusive of cotyledons)
Temperate species				
Wheat (*Triticum aestivum*)	WHEAT (1)	Maris Dove	5 leaves, tillering	9-11 leaves tillering
Barley (*Hordeum vulgare*)	BARLEY (2)	Maris Mink	3 leaves	8-13 leaves, tillering
Oat (*Avena sativa*)	OAT (3)	Condor	3½ leaves	8-11 leaves, tillering
Perennial ryegrass (*Lolium perenne*)	PER RYGR (4)	S 23	3 leaves	8-14 leaves, tillering
Onion (*Allium cepa*)	ONION (8)	Robusta	2 leaves	2½-3 leaves
Dwarf bean (*Phaseolus vulgaris*)	DWF BEAN (9)	The Prince	1½ trifoliate leaves	2½ trifoliate leaves
Field bean (*Vicia faba*)	FLD BEAN (10)	Maris Bead	2½-3½ leaves	8 leaves
Pea (*Pisum sativum*)	PEA (11)	Dark Skinned Perfection	4 leaves	10 leaves
White clover (*Trifolium repens*)	W CLOVER (12)	S 100	2½-3 trifoliate leaves	10 trifoliate leaves
Rape (*Brassica napus oleifera*)	RAPE (14)	Victor	2½ leaves	4½-5 leaves
Kale (*Brassica oleracea acephala*)	KALE (15)	Marrowstem	2½-3 leaves	3½-4 leaves
Cabbage (*Brassica oleracea capitata*)	CABBAGE (16)	Primo	2½-3½ leaves	5½-6 leaves
Carrot (*Daucus carota*)	CARROT (18)	Chantenay Red Core	2½-3 leaves	5 leaves

Appendix 1. (cont.)

	Designation and computer serial number	Cultivar or source	Stage of growth at spraying	Stage of growth at assessment (untreated controls, leaf numbers exclusive of cotyledons)
Parsnip (Pastinaca sativa)	PARSNIP (19)	Avon-resister	1-2 leaves	2½-3 leaves
Lettuce (Lactuca sativa)	LETTUCE (20)	Unrivalled	4-6 leaves	10 leaves
Sugar beet (Beta vulgaris)	SUG BEET (21)	Klein monogerm	3-3½ leaves	6 leaves
Avena fatua	AVE FATU (26)	Farthinghoe 1972	3 leaves	6-10 leaves, tillering
Alopecurus myosuroides	ALO MYOS (27)	B and S supplies, 1972	4½ leaves, tillering	2-3 tillers
Poa annua	POA ANN (28)	WRO 1974	2-3 leaves	6 tillers
Poa trivialis	POA TRIV (29)	cv. Omega	4 leaves, tillering	7-8 tillers
Sinapis arvensis	SIN ARV (30)	WRO 1971	3½-4½ leaves	7 leaves
Raphanus raphanistrum	RAPH RAP (31)	Long Black Spanish	2½ leaves	5 leaves
Tripleurospermum maritimum	TRIP MAR (33)	WRO 1975	6 leaves	12 leaves
Senecio vulgaris	SEN VULG (34)	WRO 1974	2-4½ leaves	12 leaves, flowering
Polygonum lapathifolium	POL LAPA (35)	WRO 1974	4-5 leaves	11 leaves, flowering
Polygonum aviculare	POL AVIC (36)	WRO 1976	3½ leaves	6-7 axillaries
Galium aparine	GAL APAR (38)	WRO 1975	1-2½ whorls	25 whorls
Chenopodium album	CHEN ALB (39)	B and S supplies, 1975	6-8 leaves	15 leaves
Stellaria media	STEL MED (40)	B and S supplies, 1975	6-8 leaves	20 leaves
Spergula arvensis	SPER ARV (41)	WRO 1968	2½ whorls	20-25 whorls

Appendix 1. (cont.)

	Designation and computer serial number	Cultivar or source	Stage of growth at spraying	Stage of growth at assessment (untreated controls, leaf numbers exclusive of cotyledons)
Veronica persica	VER PERS (42)	WRO 1975	4 leaves	25 leaves, flowering
Rumex obtusifolius	RUM OBTU (44)	Tackley, 1972	1-2 leaves	3½-4 leaves
Holcus lanatus	HOLC LAN (45)	WRO 1973	3 leaves, starting to tiller	5-6 tillers
Agropyron repens	AG REPEN (47)	WRO Clone 31*	2½-3 leaves	2-3 tillers
Agrostis stolonifera	AG STOLO (48)	B and S supplies, 1975	9 leaves, tillering	5-6 tillers
Cirsium arvense	CIRS ARV (50)	WRO Clone 1**	2-5 leaves	9 leaves
Tropical species (grown under higher temperature regime)				
Maize (Zea mays)	MAIZE (58)	Julia	4 leaves	6½-7½ leaves
Sorghum (Sorghum bicolor)	SORGHUM (59)	YE 90L	2½ leaves	7-7½ leaves
Rice (Oryza sativa)	RICE (60)	Blue Bonnet	3 leaves	5-5¼ leaves
Pigeon pea (Cajanus cajan)	PIGEON P (61)	Jamaica 1975	0-½ tri foliate leaf	5-6 trifoliate leaf
Cowpea (Vigna unguiculata)	COWPEA (62)	Nigeria 1974	1-1½ trifoliate leaves	3 trifoliate leaves
Chickpea (Cicer arietinum)	CHICKPEA (63)	India 1976	2½-3 pinnate leaves	16-17 pinnate leaves
Groundnut (Arachis hypogaea)	GRNDNUT (64)	S 38	4 pinnate leaves	20 pinnate leaves
Soyabean (Glycine max)	SOYABEAN (65)	Amsoy	Bad germination	-
Cotton (Gossypium hirsutum)	COTTON (66)	26 J	2 leaves	4½ leaves
Jute (Corchorus olitorius)	JUTE (67)	Egypt 1971	4½-5 leaves	3-12 leaves

* one node rhizome pieces   ** root fragments

Appendix 1. (cont.)

	Designation and computer serial number	Cultivar or source	Stage of growth at spraying	Stage of growth at assessment (untreated controls, leaf numbers exclusive of cotyledons)
Kenaf (Hibiscus cannabinus)	KENAF (68)	Tanzania 1968	2½-3 trifoliate leaves	7 leaves
Tobacco (Nicotiana tabacum)	TOBACCO (69)	Yellow Mammoth	3-4 leaves	5½-6½ leaves
Sesamum (Sesamum indicum)	SESAMUM (70)	var S. Uganda 1972	2 leaves	8-10 leaves
Tomato (Lycopersicum esculentum)	TOMATO (71)	Eurocross BB	2 pinnate leaves	5 pinnate leaves
Oryza punctata	OR PUNCT (73)	Swaziland 1974	2-2½ leaves	5-6 leaves, tillering
Eleusine indica	ELEU IND (74)	Rhodesia 1967	4½ leaves	8½-10 leaves, tillering
Echinochloa crus-galli	ECH CRUS (75)	WRO 1972	4 leaves	6½-7½ leaves
Rottboellia exaltata	ROT EXAL (76)	Rhodesia 1971	4 leaves	5½-6½ leaves
Digitaria sanguinalis	DIG SANG (71)	WRO 1973	4 leaves	6 leaves, tillering
Amaranthus retroflexus	AMAR RET (78)	WRO 1972	6½ leaves	12-14 leaves
Portulaca oleracea	PORT OLE (79)	WRO 1973	6-11 leaves	numerous leaves, flowered
Solanum nigrum	SOL NIG (81)	B and S supplies, 1973	½-2½ leaves	8-11 leaves
Snowdenia polystachya	SNOW POL (83)	Ethiopia 1974	4 leaves	6½-8½ leaves
Cyperus esculentus	CYP ESCU (85)	WRO Clone 2* (ex South Africa	4-5 leaves	8-10 leaves
Cyperus rotundus	CYP ROTU (86)	WRO Clone 1* (ex Rhodesia)	6½ leaves	12-14 leaves
Oxalis latifolia	OXAL LAT (87)	WRO Clone 2** (ex Cornwall)	1 trifoliate leaf	4-5 trifoliate leaves, flowering

* tubers ** bulbs

ABBREVIATIONS

ångström	Å
Abstract	Abs.
acid equivalent*	a.e.
acre	ac
active ingredient*	a.i.
approximately equal to*	$\simeq$
aqueous concentrate	a.c.
bibliography	bibl.
boiling point	b.p.
bushel	bu
centigrade	C
centimetre*	cm
concentrated	concd
concentration	concn
concentration × time product	ct
concentration required to kill 50% test animals	LC50
cubic centimetre*	cm^3
cubic foot*	ft^3
cubic inch*	in^3
cubic metre*	m^3
cubic yard*	yd^3
cultivar(s)	cv.
curie*	Ci
degree Celsius*	°C
degree centigrade*	°C
degree Fahrenheit*	°F
diameter	diam.
diameter at breast height	d.b.h.
divided by*	÷ or /
dry matter	d.m.
emulsifiable concentrate	e.c.
equal to*	=
fluid	fl.
foot	ft
freezing point	f.p.
from summary	F.s.
gallon	gal
gallons per hour	gal/h
gallons per acre	gal/ac
gas liquid chromatography	GLC
gramme	g
hectare	ha
hectokilogram	hkg
high volume	HV
horse power	hp
hour	h
hundredweight*	cwt
hydrogen ion concentration*	pH
inch	in.
infra red	i.r.
kilogramme	kg
kilo ($\times 10^{3}$)	k
less than	<
litre	l.
low volume	LV
maximum	max.
median lethal dose	LD50
medium volume	MV
melting point	m.p.
metre	m
micro ($\times 10^{-6}$)	μ
microgramme*	μg
micromicro (pico: $\times 10^{-12}$)*	μμ
micrometre (micron)*	μm (or μ)
micron (micrometre)*×	μm (or μ)
miles per hour*	mile/h
milli ($\times 10^{-3}$)	m
milliequivalent*	m.equiv.
milligramme*	mg
millilitre	ml

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

millimetre*	mm
millimicro* (nano: $\times 10^{-9}$)	n or mµ
mini mum	min.
minus	-
minute	min
molar concentration*	M (small cap)
molecule, molecular	mol.
more than	>
multiplied by*	×
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: $\times 10^{-12}$)	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*	$\sqrt{\ }$
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 onl
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.

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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

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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

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