PROJECT TITLE: Evaluation of Buckle, Fargo and Hoelon for pigeongrass control.

YEAR/PROJECT: 1989/754

PROJECT PERSONNEL: Leader - Vern R. Stewart, Todd K. Keener - Research Specialist, NWARC, Kalispell, MT.
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OBJECTIVE: To evaluate the performance of Buckle with Fargo for PPI herbicide action against pigeongrass with a Hoelon comparison used as POST standard.

SUMMARY: Yield, test weight, % plump, and height were not significantly reduced by Buckle ,Fargo, or Hoelon treatments. All treatments provided excellant control of pigeongrass.

RESEARCH METHODS:

Prior to planting both Buckle and Fargo treatments were applied to the test area and preplant incorporated. Herbicides were applied using a tractor-mounted research-type sprayer at 24.85 gpa with 8002 nozzles at 32 psi. Herbicides were incorporated with a cultivator with 7' sweeps and harrow. Plots were 10'X 20' with three replications. Hoelon was applied post emergence to barley in the four leaf stage. A Hege 125B plot combine was used to harvest the experiment.

Planting data:

Crop was Gallatin spring barley planted at 50#/A using a press type drill with 7" spacing to 1 1/2 inches depth. Seedbed was prepared by fall plowing, spring disc followed by a vibrashank cultivator prior to being culti-packed.

Maintenence spray: Buctril at .375 ai/A

Application data:	PPI	Post
Date:	5/5/89	6/2/89
Air temp:	76	60
Soil temp:	63	57
Rel Humid:	15	37
Wind (mph)	3 ssw	0 ssw
Cloud cover:	clear	prtly cldy
Soil moisture:	top/dry sub/good	top/good sub/v.good
Crop stage:	N/A	4 leaf barley
Weed stages	N/A	Pigeongrass 2 leaf (Setaria viridis) Broadleaves seedling (various species)

RESULTS:

No injurious effects were detected on Gallatin spring barley with the application of Buckle, Fargo and Hoelon for weed control. There were no statistical differences in the parameters measured. Pigeongrass control was 93% or better for each of the herbicides tested. Although percent stand was less in the Buckle plots no effects on yield were found. Table 1.

FUTURE PLANS:

At this writing, there are no future plans.

Table 1. Agronomic data from the Buckle Herbicide Trial. Northwestern Agricultural Research Center, Kalispell, MT 1989.
Date planted: May 8, 1989 Date harvested: Sept. 5, 1989

Treatment	Appln.	Rate lb ai/A	Yield Bu/A	Test Wt. Lb/Bu	% Plump	Height Inches
Buckle	PPI	1.0	21.96	50.00	94.13	19.03
Buckle	PPI	1.25	28.48	49.70	94.53	19.57
Fargo	PPI	1.0	29.53	50.73	92.17	19.53
Fargo	PPI	1.25	29.80	49.57	94.70	19.43
Hoelon	Post	.75	25.15	50.03	94.90	19.43
Check	---	---	28.98	50.30	95.40	19.57
OVERALL MEAN =			27.33	50.06	94.31	19.43
F-RATIO TRTS =			1.939	1.813	.4062	.1521
P-VALUE TRTS =			.1694	.1935	.8589	.9842
CV (SE/MEAN) =			8.188	.6253	1.877	2.674
LSD(0.05 by t)=			7.05	.9863	5.578	1.637

Table 2. Agronomic data from the Buckle Herbicide Trial. Northwestern Agricultural Research Center, Kalispell, MT 1989.
Date planted: May 8, 1989 Date harvested: Sept. 5, 1989

Treatment	Appln.	Rate lb ai/A	PIGEON /sq ft 6/12	PIGEON /sq ft 7/28	Percent PIGR Control	Percent Injury	Percent Stand
Buckle	PPI	1.0	6.4	4.4	98.33	.3333	91.67
Buckle	PPI	1.25	1.9	1.9	94.00	.0000	91.67
Fargo	PPI	1.0	2.5	3.2	93.33	3.333	98.33
Fargo	PPI	1.25	2.4	3.0	95.00	.0000	95.00
Hoelon	Post	.75	1.9	1.9	100.0	.0000	96.67
Check	---	---	4.4	4.8	.0000	.0000	98.33
OVERALL MEAN =			3.24	3.206	80.11	.6111	95.28
F-RATIO TRTS =			1.11	2.143	164.4**	.9417	2.020
P-VALUE TRTS =			0.42	.1371	.0000	.5070	.1557
CV (SE/MEAN) =			53.3	25.92	3.829	226.0	2.258
LSD(0.05 by t)=			5.45	2.618	9.665	4.352	6.780