Table_____. The effect of different chemicals on stand of crimson clover and Alamo oats, and production of oat forage, when applied to Coastal Bermudagrass to force dormancy. College Station, Texas. 1958[1/]

Treatment	#/Ac.	Number of plants per 1 foot of row[2/] Oats	Clover	Pounds of air-dry oat forage per acre Feb. 20	April 8	Total forage produced
Maleric hydrazide	1	6	17	961	1212	2173
" "	2	8	18	967	909	1876
" "	3	5	18	290	735	1025
" "	4	8	13	388	649	1037
Dalapon	2	9	13	724	1030	1754
"	4	6	14	220	1001	1221
"	8	6	16	259	698	957
"	12	8	16	297	526	823
Check	--	6	14	589	710	1299

Analysis of variance for combined forage yield values

Source of variation	df	SS	MS	F(cal)
Total	35	24146328		
Reps	3	581151	193717	
Treats	8	7351323	918915	1.36
Reps. vs Treats (error)	24	161213854	675577	

1/ Ammonium nitrate was placed 3 inches deep in 10" rows at a rate of 30 pounds of actual nitrogen per acre. Treble superphosphate was placed 3 inches deep in 10: rows at a rate of 60 pounds of P_2O_5 per acre. Alamo oats was seeded 1 inch deep and 2 inches above each band of ammonium nitrate. Crimson clover was seeded at 1/2 to 1" deep and above each band of treble superphosphate. Chemicals were applied immediately after seeding. Water volume for sprays was 40 gallons per acre. Fertilization, seeding and chemical application was made on October 30, 1957.

2/ Counts on stand of clover & oats were made on November 19, 1957.

Table _____. The effect of different herbicides on alfalfa plant stand, and seedling growth. College Station, Texas. 1957-58[1/]

Treatment	#/Ac.	Number of alfalfa plants per 1 ft. of row	Air-dry weight in grams per 2 ft. of row[2/] Plant sample wt.	Root sample wt.
4(2,4-DB) ester	.5	27	11	3
4(2,4-DB) ester	1	23	6	2
4(2,4-DB) ester	1.5	21	7	2
4(2,4-DB) amine	.5	28	10	3
4(2,4-DB) amine	1	30	10	3
4(2,4-DB) amine	1.5	25	7	2
DNBP[3/]	1	45	17	4
DNBP	2	34	8	2
DNBP	3	30	9	2
Check	--	43	17	4
LSD	.05	7.7	5.4	1.4
	.01	10.4	7.3	1.8

1/ Alfalfa seeded - October 30, 1957. Chemicals applied on December 18, 1957 when alfalfa seedlings were in 5 to 7 trifoliate leaf stage.

2/ Plant samples were taken on March 6, 1958.

3/ DNBP - Premerg

Table_____. The effect of different herbicides on weed density and yield of Southwest Common Alfalfa. College Station, Texas. 1957-58[1/]

Treatment	#/Ac.	Number of [2/] broadleaved weeds per sq. ft.	Pounds air-dry forage per acre May 8, 1958	Pounds air-dry forage per acre June 18, 1958
4(2,4-DB) ester	.5	5	2355	1258
4(2,4-DB) ester	1	2	2677	1161
4(2,4-DB) ester	1.5	5	2710	1161
4(2,4-DB) amine	.5	7	3129	1484
4(2,4-DB) amine	1	8	2871	1257
4(2,4-DB) amine	1.5	11	2742	1226
DNBP	1	9	2839	1903
DNBP	2	2	3613	1096
DNBP	3	2	3387	1258
Check	--	19	3323	1452
LSD	.05	9	N.S.	N.S.
	.01	12		

1/ Alfalfa was seeded on October 30, 1957. Herbicides were applied on December 18, 1957 when alfalfa was in 5 to 7 trifoliate leaf stage.

2/ Weed counts were made on February 26, 1958.

Table_____. Herbicides, rate of application, and hay yields during 1958. Tyler, Texas.

Treatment	#/Ac.	Air-dry yield in pounds per acre			
		June 4	August 5	October 27	Season Production
2,4-D	.5	2708	2724	1582	7014
2,4-D	1	3026	2919	1451	6396
4(2,4-DB)	.75	3125	3125	1642	7892
4(2,4-DB)	1.5	2640	2648	1556	6844
Silvex	.75	2448	2488	1687	6623
Silvex	1.5	3006	3022	1779	7807
2,3,6-TBA	.75	3085	3026	1173	7284
2,3,6-TBA	1.5	2747	2712	1381	6840
Check	---	2588	2647	1959	7194

Table_____. The effectiveness of different herbicides for the control of curly dock (Rumex crispus) in a hay meadow containing a clover-grass mixture. Tyler, Texas. 1958[1/]

Treatment	#/Ac.	Curly dock plants per 50 sq. ft. Experiment #1[2/] March 11	Experiment #1 June 4	Experiment #2 March 11	Experiment #2 June 4
2,4-D	.5	5	2	25	8
2,4-D	1	2	0	29	4
4(2,4-DB)	.75	18	1	12	2
4(2,4-DB)	1.25	13	0	23	5
Silvex	.75	16	5	29	20
Silvex	1.25	13	10	35	29
2,3,6-TBA	.75	10	4	19	9
2,3,6-TBA	1.25	11	2	17	0
Check	---	49	51	22	20
LSD	.05		22		18
	.01		30		25

1/ Chemicals were applied on March 11, 1958.

2/ The plots in experiment #1 were treated with the same chemicals in 1957, but, at different rates.

Table_____. Herbicides, rates of application, and hay yields during 1958. Tyler, Texas[1]/

Treatment	#/Ac.	Air-dry yield in pounds per acre			
		June 4	August 5	October 27	Season Production
2,4-D	.5	663	2587	2210	5460
2,4-D	1	1282	2648	2263	6193
4(2,4-DB)	.75	808	3006	2609	6423
4(2,4-DB)	1.5	641	2727	1898	5260
Silvex	.75	1593	2687	1769	6049
Silvex	1.5	1172	2488	2210	5870
2,3,6-TBA	.75	1039	2727	1879	5645
2,3,6-TBA	1.5	1310	2866	2164	6340
Check	---	629	2727	2388	5994

1/ Herbicide applications were reapplied on the plots treated in 1957 with same chemicals with exception of rates and 2,3,6-TBA treatments. The 2,3,6-TBA treatments were substituted for Amitrol which was used on the same plots in 1957.

The Use of Selected Treatments to Force Dormancy of Bermudagrass to Permit Early Sod Seeding of Goliad Barley, Angleton, 1957-58.

Treatment	Lbs. per acre oven dry forage 3-25-58		
	Barley	Canarygrass	Total
Sod mowed 1/	900	250	1150
4 lbs. dalapon 1/	510	350	860
8 lbs. dalapon 1/	530	380	910
12 lbs. dalapon 1/	150	500	650
16 lbs. dalapon 1/	40	840	880
Sod mowed 2/	560	210	770
4 lbs. dalapon 2/	660	180	840
8 lbs. dalapon 2/	850	180	1030
12 lbs. dalapon 2/	550	240	790
16 lbs. dalapon 2/	600	180	780
Sod 3" high	710	220	930
Dow General 1/	630	290	920
Dow General* 1/	850	210	1060
LSD .05	253	248	

1/ Spray application and planting made October 3, 1957.

2/ Spray application made October 3. Planted October 26, 1957.

Dalapon was applied with water as a carrier. 30 gals. of water per acre were used.

Dow General 1/ was applied at the rate of 1½ pints in 3 gals. diesel in 30 gals. water.

Dow General* 1/ was applied at the rate of 6 pints in 6 gals. diesel in 45 gals. water.

Fertilized at time of planting at a rate of 30-40-0.

Dead bermudagrass was clipped and removed from plots on Jan. 15, 1958. The barley had made very little growth up to this date.

Twelve and 16 pounds of dalapon per acre did not seem to effect emergence of the barley, but did have a severe effect on the young seedlings, killing many of them.

The annual canarygrass came up voluntarily.

Effect of Rates and Types of Herbicide on Curly Dock and White Clover, Angleton, 1958

Treatment	Rep. 1		Rep. 2		Rep. 3		Ave.	
	Dock	Clov.	Dock	Clov.	Dock	Clov.	Dock	Clov.
Control	100	100	100	100	100	100	100	100
1/2 lb. 2,4,5-Tamine	100	100	100	80	90	20	96	66
1 lb. 2,4,5-Tamine	100	80	100	20	80	80	93	60
1/2 lb. kuron	100	100	80	20	80	20	86	46
1 lb. kuron	80	20	80	0	90	10	83	10
1/2 lb. 2,4-DB	20	80	0	80	10	100	10	86
1 lb. 2,4-DB	10	100	0	80	10	80	6	86

All ratings for curly dock and clover are made in comparison to the control plots. This was a visual rating made on April 25, 1958.

The spray applications were made on February 5, 1958.

The white clover came into these plots voluntarily. Differences in treatment may be partially due to differences in volunteer stand of the clover.

The effect of several herbicides and rates of application on bur clover and Coreopsis cardaminsefolia growing with the burclover, Angleton, 1958.

Herbicide	Rate in pounds/acre	Lbs. dry forage/acre bur clover	% ground cover bur clover	No. of plants C. cardaminsefolia per 4 sq. ft.
None		610	87	38
2,4-D Butyric	.4	280	82	3
	.8	90	42	5
	1.2	90	53	1
2,4,5-T Amine	.4	110	53	21
	.8	120	70	2
	1.2	20	30	6
Silvex ester	.4	0	15	98
	.8	0	7	62
	1.2	0	T	26
2,4-D acetic	.4	0	8	3
	.8	0	4	1
LSD .05		236		22

Bur clover was a volunteer growth on Angletongrass sod. The clover was clipped to a uniform height on January 24, 1958. It was allowed to make a recovery growth and then sprayed on February 4, 1958. Water was used as a carrier for the herbicides at the rate of 30 gallons per acre.

The percent of ground cover of provided by the bur clover was estimated. It indicates general trend in the effect of the several herbicides but is not intended as an accurate measure.

Observations February 18 - two weeks after herbicide application:

.8 lb. 2,4-D acetic had wilted the bur clover more severly than the .4 lb. rate had wilted the bur clover.

Silvex ester at all rates had severely affected the bur clover.

.4 lb. 2,4,5-T amine had only a slight apparent effect, if any, on the bur clover.

.8 lb. 2,4,5-T amine caused some wilt in each rep.

1.2 lb. 2,4,5-T amine wilted bur clover in all reps but all rates of silvex were more damaging than this rate of 2,4,5-T amine.

2,4-D butyric did not have any apparent effect at any rate.

(over)

2,4-D butyric, 2,4-D acetic and 2,4,5-T amine all effected the weed at the heavier rates. The effect of .4 lb. 2,4,5-T amine was not pronounced.

Silvex at all rates used was very detrimental to burclover, but its effect on Coreopsis cardaminsefolia was only slightly evident at the heaviest rate used. Apparently, eliminating the bur clover removed it as a competitor with the weed, thereby, increasing the number of weed plants per plot when compared with the control plots.

Spray material was applied on February 4. Weed count made on June 23, 1958.

Effect of Two Rates of Several Herbicides on Curly Dock, Rumex Crispus, Angleton, 1958

Herbicide Rate in lbs. per acre	No. of plants per 4 sq. ft. Rep. 1	Rep. 2	Rep. 3	Ave.
Control	29	25	14	23
1/2 lb. silvex	25	14	21	20
1 lb. silvex	38	23	30	30
1/2 lb. 2,4, 5-T amine	65	34	21	40
1 lb. 2,4, 5-T amine	66	47	19	44
1/2 lb. 2, 4-D Butyric	4	7	4	5
1 lb. 2,4-D Butyric	0	6	0	2
LSD .05				19

This test was conducted on an area on which the curly dock had come up voluntarily. The stand of dock was not uniform over the entire area. White clover also grew voluntarily on the area.

Both silvex and 2,4,5-T amine had an adverse effect on the clover but none was apparent on the dock. Part of the increase in number of dock plants on the silvex and 2,4,5-T amine plots can be explained by the fact that clover did not offer as much competition to the dock on these plots as on the control plots.

2,4-D Butyric was effective against the dock but had no apparent effect on the white clover.

The spray materials were applied on February 5. Weed counts were made on June 23, 1958.

Table_____. The effect of herbicides on the growth of Bermudagrass. Kirbyville, Texas. 1958.

Treatment	#/Ac.	Bermudagrass cover[1]/ Before treatment June 5	After treatment July 12	Increase in cover
2,4-D	.5	32	45	13
2,4-D	1	20	44	24
4(2,4-DB)	.75	25	31	6
4(2,4-DB)	1.25	32	41	9
2,3,6-TBA	.75	33	40	7
2,3,6-TBA	1.25	20	31	11
Silvex	.75	32	34	2
Silvex	1.25	31	37	6
Check	-----	28	29	1
LSD	.05			11.7
	.01			15.9

1/ Coverage was determined using a frequency evaluation procedure. A value of 48 would represent Bermudagrass occurring over the entire area sampled while a value of 24 would represent approximately 50 per cent coverage.