

BRITISH COLUMBIA DEPARTMENT OF AGRICULTURE

DEVELOPMENT AND EXTENSION BRANCH

DISTRICT

ANNUAL REPORT

DISTRICT: WILLIAMS LAKE

NAME: P. Fofonoff & G. Elgie

ADDRESS: 540 Borland Street

DATE: Dec. 29, 1980

GENERAL SUMMARY

(Weather, Livestock and Crop Production, Seasonal highlights, significant Extension activities and append weather records)

A mild winter prevailed over much of the Cariboo-Chilcotin area. Rain during the winter months removed snow cover resulting in extensive winter damage to legumes. Very dry soil moisture conditions in April indicated the possibility of a drought, but higher than normal precipitation (376.6 mm) during the months of May to September recovered production on both hayland and range. As a result of exceptionally high precipitation in June, July and August, forage crop losses were high. Wetlands harvesting was delayed until fall and many were not harvested due to very wet soil conditions.

Cattle came to market generally in good condition. Approximately 13.5% fewer cattle were shipped through the B.C. Livestock Co-op at Williams Lake in 1980 with an average price of \$474.44, which was \$55.99 per head less than 1979. Returns for yearling steers were \$10.-\$15./cwt and steer calves \$15.-\$20./cwt lower than 1979. A high incidence of pink-eye occurred in all classes of livestock.

Extension activities were carried out extensively during the year. Major projects included fertility and variety trials on wetlands and irrigated land, weed control and the Farm Management Program. Financial Management Workshops were held in Williams Lake and Tatla Lake. An Agribusiness seminar was held at Williams Lake and 100 Mile House. A round bale silage field day was held at Miocene and 134 Mile Ranches. The "Management and Improvement of Organic Wetlands in the Interior of B. C." publication was updated and revised. A wetland manual was developed for Resource users to approach wetland interphase areas on Crown land. New policy such as the Lease to Licence Conversion, the new Agricultural Lease Policy and the proposed Provincial Forests are a major concern to agriculture in the Cariboo. Ministry involvement on resource management continues to increase.

High interest rates at lending institutions has put pressure on the A.L.D.A. program for land development projects. Some 16 applications were approved for a total of \$302,081. The rangeland disc has played an important role in range improvements.

On-going programs such as Bull Control, Grasshopper Control, R.O.P. Fall Fairs, 4-H Activities, land clearing and Land Commission inspections, Farm Management, forage crop recommendations, A.R.D.S.A. proposals, producer meetings constituted a full year.

WEATHER RECORD - WILLIAMS LAKE AIRPORT (MINISTRY OF TRANSPORT)

Altitude - 3088 ft.

December 1, 1979 - November 30, 1980

TEMPERATURE

PRECIPITATION

SUNSHINE

Date	High			Low			Mean			20 yr. av. Mean			Rain (mm)	Snow (cm)	Total (mm)	20 yr. av. Mean (mm)		Days of No sun	Total Hours	19 yr. av. Mean		Max. Poss. Hours	Percentage
	C	C	C	C	C	C	C	C	C	C	C	C				C	C			C	C		
Dec/79	6.1	-32.6	-3.5	-7.65	13.6	45.5	50.6	39.8	9	49.5	48.7	240.8	20.8										
Jan/80	4.1	-33.7	-11.5	-10.17	6.2	9.5	13.1	40.8	7	104.4	69.7	259.7	40.8										
Feb.	9.1	-22.1	-4.2	-3.48	17.3	13.9	27.4	24.3	10	57.2	108.0	278.4	20.5										
Mar.	9.1	-19.6	-2.2	-.62	4.8	66.4	56.1	22.5	2	135.7	161.5	366.8	37.0										
Apr.	23.3	-5.1	7.3	4.36	5.6	0	5.6	21.8	0	221.9	208.2	416.2	53.3										
May	27.0	-0.5	10.8	8.62	77.2	0	77.2	31.5	1	224.2	262.0	484.1	46.3										
June	25.8	0.6	12.3	12.99	101.6	0.2	101.8	45.0	0	241.7	279.4	497.0	48.6										
July	26.9	3.4	14.3	15.37	67.7	0	67.7	48.3	1	286.6	311.9	497.3	57.6										
Aug.	25.0	-0.9	12.6	14.98	84.1	0	84.1	42.7	0	246.2	279.4	451.0	54.6										
Sept.	24.9	-1.6	10.6	10.36	45.8	0	45.8	30.3	2	175.0	184.6	378.9	46.2										
Oct.	23.5	-6.4	6.3	5.04	10.7	0	10.7	29.5	3	154.3	135.0	328.6	47.0										
Nov.	14.2	-17.0	0.2	2.10	21.1	22.8	14.2	31.6	5	81.2	68.9	265.4	30.6										
Average Annual Mean										4.33	455.7	158.3	524.3	408.1	40	1977.9	2117.3	4464.2	44.3				

May to Sept. (inclusive)	°C		mm		Growing Months (Precip.)		May to Sept. (Inclusive)	
	High	Low	Total	Ave. Monthly	April to July (Incl.)	1980 (mm)	Total Hours	Monthly Mean
20 yr. av. Mean	27.0	-1.6	376.6	75.3	252.3	1980 (mm)	1173.7	234.7
Mean Temp.	12.1	12.5	39.6	39.6	146.6	20 yr. ave. (mm)	2308.3	2308.3
20 yr. av. Mean	12.5	12.5	39.6	39.6	146.6	Mon. Ave. of Max.	461.7	461.7

(19 yr. figure X 19 years) + 1980 figure

	1980	1979	1978	1977	1975	1975	* 1974	1973	1972	1971	1970
Highest Temp. and Date	27.0 May 5	33.6 July 20.	32.5 Aug. 3	33.6 July 26	26. July 25	33.9 July 10	90.2 Aug. 2	89.2 July 19	88.0 Aug. 8	93.8 July 31	89.2 July 16
Last Frost of Spring and Temperature	May 3 -0.5	June 15 -0.9	May 29 -1.2	May 28 1.6	May 19 0.0	May 26 -1	June 7 32.0	June 11 32.0	May 19 30.8	May 17 31.2	June 11 31.9
First Frost of Fall and Temperature	Aug. 25 -0.9	Oct. 2 -1.6	Sept. 16 -1.4	Sept. 1 0.0	Sept. 8 -0.7	Sept. 9 0.0	Sept. 11 32.0	Aug. 29 29.0	Sept. 18 29.9	Sept. 15 31.5	Sept. 4 31.8
First Reported snowfall	Nov. 14	Nov. 17	Nov. 7	Oct. 2	Oct. 13	Oct. 23	Sept. 28	Oct. 12	Sept. 17	Oct. 13	Sept. 23
Persistent Snow cover (12 month basis)	Nov. 21	Nov. 25	Nov. 8	Nov. 16	Nov. 24	Nov. 16	Nov. 7	Nov. 1	Nov. 30	Nov. 26	Nov. 19
Total Rainfall	455.7	138.9	278.2	295.9	237.0	212.3	5.32	4.73	6.74	6.20	4.36
Total Snow	158.3	0.4	1.0	8.8	6.0	31.2	.40	1.3	6.30	6.5	.6
Total Rain & Water Equivalent of Snow	594.3	139.3	279.2	313.8	245.0	246.4	5.37	4.85	7.30	6.96	4.41
Sunshine, Total Hours	1977.9	1541.7	1533.4	1387	1196	1415.8	1520	1550.	1533.8	1467	1560.7
Thunderstorm, Days Reported	25	21	23	20	18	21	10	8	12	17	15
Frost Free Days	114	160	109	95	102	106	94	68	122	120	83
17 Year Average Frost Free Days	94.3	93.1	88.65	87.2	86.6	85.4	83.9	83.1	101	99	97.9

A) All temperatures prior to 1974 (inclusive) are recorded in Fahrenheit, and 1975 and after are in Celsius.

E) All rainfall and snowfall measurements prior to 1974 (inclusive) are expressed in inches, and for 1975 and subsequent years rain is (mm) and snowfall (cm) and equivalent totals (mm).

1981

(2)

SETTLEMENT

(Settlement, - acquisition and sale of land)

I SUMMARY STATEMENT

See Page 2A

II DETAILS (Include statistics when available- Land Department- Immigration etc.)

The following ranches changed hands in 1980. Onward-Mission Ranch owned by the Oblate Brothers sold to Mikulasik, 600 head; B. Denk at Horsefly sold to Norm Hudson; 60 head; Al Ranch owned by Dr. Francis sold to Buck Sackman, 200 head; Deer Park Ranch owned by R. Moon sold to Riske Creek Ranching, 300 head; Flying Arrow Ranch, Buffalo Creek owned by Jack Higgins sold to Glen Grafe, 200 head; Big Stone Ranch owned by D. Valburg sold to Dave Ridley, Don Ray, Buffalo Creek sold, 50 head, Sky Ranch owned by O. Dorsey sold to Ray Thompson & B. Watt, 200 head (Cooper Creek Ranch, Nemiah Valley Ranch owned by J. Von Trapp sold to Heinz Hentz of Spain, Cactus Flat Cattle Co. Voyne Purjue, Nemiah Valley sold to a German citizen, 300 head; OK Cattle Co, Big Bar sold to C & A Mink Ranch, 700 head, S. Erickson, Horsefly, sold to J. Ridley, 125 head, Ike Scheffler Macalister sold to Larry Steffens, 100 Head, J. Wynstra, Horsefly

(3) LAND CLEARING AND DEVELOPMENT sold to H. Hentz, New Estro Ranchito Ltd. (Spanish)

I SUMMARY STATEMENT

From 32 applications, a total of \$302,081. was applied for through -> the A.L.D.A. program. 10 uncompleted applications were carried over from last year from which 7 contracts were issued. Amount applied for Clearing - \$164,265. Irrigation \$137,816.

II DETAILS (append data table)

	1980	1979	1978	1977	1976	1975	1974
No. of applications	32	41	30	31	27	23	46
No. approved	16	24	18	19	19	14	28
Not approved	16	4	2	3	1	0	0
No. of contracts	16	24	18	19	19	14	28
Acres cleared	851	1311	1310				

BUILDING PERMITS

	1980	1979	1978
Value	\$8,572,134	\$10,342,482	\$5,359,852.
No. of Permits	255	259	257
Single Family Units	70	90	58
Apt. Units	32 (2)	147 (12)	-
Others (Comm., Ind., & Instit.)	183	101	189

LEASED LAND

	1980	1979	1978	1977
Agriculture	40 (2,000 Ha)	79	47(in review)	91 (in review)
Grazing	157 (12,000 Ha)	100	61	153
Reviews	210	223	-	-
Residential	31	120	43	87

Purchases of Agricultural Leases:

1976	- 5
1977	-22
1978	-12
1979	-18
1980	-approx. 30
1981	19

Since the new Agricultural Lease Policy came into effect on July 1st, 1980, about 20,000 acres have been applied for in the Cariboo Land District. In 1980 only 2,000 hectares were applied for prior to Policy change.

12,000-15,000

5000 approved

approved.

old. Policy

250
296
296

Since the new Ag Lease Policy came into effect on July 1, 1980, approx. 4,900 ha. have been applied for in the Cariboo Land District. Approx. 2,000 Ha. were approved under the old Policy."

(4) Cont'd.

C. HORTICULTURAL CROPS

I SUMMARY STATEMENT (Vegetable and Fruit Production)

All sweet corn was grown for roadside sales only.

II DETAILS (append production and crop value tables for vegetables and Fruit production. This is not required in major fruit growing areas when reported by Horticulture Branch)

Potatoes - About 2 acres were grown. Varieties were Netted Gem, Norgold and Norland. Yields were about 15 ton/acre and asking price of \$15.00/cwt.

Corn - Sweet corn of about 3 acres yielded 3,000 dozen and sold for \$1.40/dozen. Varieties grown were Tasty Nu, Northern Sweet and Northern Vee Northern Vee yielded poorly and did not produce a very large cob.

(4) Cont'd.

D. SOIL FERTILITY (Cropping practices, fertilizer use, soil productivity, etc.)

I SUMMARY STATEMENT

The soil testing service was used by about 40 producers this year, which was almost 120 actual samples.

II DETAILS

Some fertilizers available for 1980 (prices effective until Dec. 31)

	<u>per tonne</u>	<u>per 22 tonne truckload</u>
16-20-0	\$290.	\$285.
34-0-0	228.	223.
0-0-62	260.	255.
11-51-0	409.	404.
13-16-10	290.	285.

All prices F.O.B. Williams Lake

Further increases are expected in spring of 1981.

A Soil Fertility Seminar sponsored by the B.C. Federated Co-operative was held in Williams Lake on Nov. 6, 1980.

E. WEEDS

I SUMMARY STATEMENT

Weed control continued on a spot application basis on crown and private land throughout the Cariboo Region.

II DETAILS (append weed inspectors report if applicable)

In conjunction with other Ministries, a major weed control program was carried out in the Cariboo. Approximately 55 acres of private land was sprayed mainly for Canada Thistle and Knapweed using the Cariboo Regional District spray unit and B.C. Ministry of Agriculture and Food back pack units. Regional District provided chemical to landowners. B.C.M.A.F. (Kamloops) treated spot infestations of knapweed (report enclosed)

The Range Division of the Ministry of Forests sprayed approximately 35.8 acres of noxious weeds particularly the knapweed species. (report enclosed).

The Ministry of Highways controlled noxious weeds on road right-of-way for a two week period (Horsefly-Likely). Biological control trials continue to be monitored with little success on control of musk and bull thistle.

Two animals were reported lost to poison hemlock.

REPORT ON KNAPWEED CONTROL IN THE THOMPSON - NICOLA - CARIBOO -
CHILCOTIN AREAS BY THE BRITISH COLUMBIA MINISTRY OF AGRICULTURE -

1980

The 1980 knapweed containment programme was carried out from May 1 - August 29, 1980. Mr. D. Ralph, in his third year on our programme, did a commendable job as crew supervisor in 1980. He was assisted by Mr. H. Bawtree until June 1. I was not allowed to retain Mr. Bawtree as his father works for the same Branch of the Ministry. A suitable replacement was not found until July 1 in the person of Mr. C. Newsom.

The four-wheel drive vehicle supplied this year greatly enhanced our access to remote infestations. Unfortunately the vehicle was of poor quality resulting in numerous breakdowns which led to the loss of eight days of spraying time. The spray unit continued to operate with no mechanical problems.

Weather conditions were extremely unfavourable this summer. Rain and windy conditions throughout the control area during May, June and the first half of July severely hampered control efforts. Our crew sprayed knapweed on many roadsides, on Indian Reserves and on Crown and private lands from Tatlayoko Lake in the Chilcotin district and north to Quesnel to Princeton in the south. The B.C. Ministry of Agriculture Porta-Tank spray rig, available on loan to ranchers, again received a full summers use in the Kamloops district.

All spray work carried out by our crew was directed against diffuse and spotted knapweed with the following exceptions:

- a) Houndstongue - Robbins Range, Lac Le Jeune and Princeton area, particularly along Highway 5 south.
- b) Russian knapweed - Jackson Ranch, Stump Lake; Willow Ranch, Trapp Lake.

Our crew spent a great deal of time pulling and disposing of knapweed found within the city limits of Kamloops where spraying is not allowed by the Ministry of Environment.

Tordon 22K (picloram) was applied at seven ounces active ingredient per acre (0.49 kg/ha). Method of application was by handgun except for large patches which were suitable for boomless nozzle application.

An estimated 150 acres were sprayed by the Kamloops based unit in 1980 using a total of 30 gallons of Tordon 22K. This figure is substantially lower than in previous years due to the above

mentioned administrative and technical problems. All treated areas were recorded in a diary and marked on the "Knapweed Containment War Map" - scale 1:50,000 topographic.

Students under the direction of the B.C.M.A. office at Williams Lake were involved in spot treatment of the weed using backpack and truck mounted sprayers. An estimated five acres were treated in 1980.

Efficacy of 1979 Control Work

Surveying of infestations treated in 1978 and 1979 showed knapweed control to be good to excellent with a few exceptions on gravelly soil where control was poor.

The following is a list of areas treated by the Ministry of Agriculture (Kamloops) in 1980:

Kamloops South

Campbell Creek Road
Highway 5 south from Kamloops to 13 kilometers north of Princeton
Lac Le Jeune Road to Lac Le Jeune Provincial Park
Mitchell Ranch - Lac Le Jeune Road
Jocko Lake entrance
R. Jackson Ranch - Stump Lake (powerline)
Coldwater Road
Haughton Ranch - Knutsford
Stump Lake Ranch range
Rose Hill area and Scott's Ranch
Frolek - Stump Lake Range
Old Mining Camp - off Lac Le Jeune Road
Runaway Lanes - Hamilton Hill Merritt (Highway 5)
Peter Hope Lake entrance - Highway 5 (Guichon range)
Range west of Napier Lake - Highway 5
Microwave tower and adjacent roads - Knutsford

Kamloops West

Christian - 8 Mile Ranch
Department of National Defence property - Kamloops
Hillside Drive - below Dufferin
6 Mile Ranch - road and hydro line
Afton Mine range seeding site
Whispering Pines range - Savona
Old highway - Kamloops to Afton Mines
Dominic Lake Road and Duffy Lake Road

Kamloops East

Kamloops Wildlife Park
Range Roads - Campbell, Robbin Range areas
Barnhartvale Road - Rabozci, Walley, Peterson
Old Vernon Highway - Barnhartvale to Highway 97 West
DeMarni Ranch - Robbin Range Road
Campbell Range
Bestwick Range

Kamloops - North Thompson

Jamieson Creek entrance
Heffley Creek - Bedard, Stewart, Ling, Brady
Vinsulla - Donchi
Heffley Creek garbage disposal site
Knouff Lake subdivision
Devick's Ranch
McLure Landfill
McGillivray Lake Road
Tod Mountain Road

Cache Creek - North

Venables Valley
Highway 12 - Lillooet to Highway 97 and adjacent range
West side of Highway 97 - 20 Mile to Clinton
Hat Creek - Gordon Parke Ranch
McColl Range - Clinton - B. C. Rail (51 Mile Creek)
Quesnel - between bridges in town and Alexandria
100 Mile House - left side bridge
Casey Automotive - 135 Mile
140 Mile Store
Hinche's Ranch - 141 Mile - Old Cariboo Highway
Williams Lake Drive-In
Tatlayoko Lake - logged area
Drummond Lake - R. Moon Ranch
Chimney Valley Road
Seton Portage
Hydro line north of Williams Lake - Adam's Auto Wreckers

In addition to the areas mentioned above numerous secondary roads and rangelands in the control area were surveyed and found to be free of the knapweed species.

Backpack sprayers provided to a number of Ministry offices in 1978 and 1979 for loan to ranchers continue to prove beneficial in promoting weed control and demonstrating efficacy of recommended control procedures.

Suggestions for 1981

- (1) That the B. C. Ministry of Agriculture hire a two-man crew as in 1980 (Kamloops base) to treat small patches of knapweed in priority areas and to re-survey areas treated in 1980 to catch missed plants. This programme serves not only to bring knapweed under control in key areas but is an excellent extension and demonstration tool for promoting weed control. The four-wheel drive vehicle supplied this year increased our accessibility to infestations on steep, rocky rangelands and was much appreciated.
- (2) Two-way Forest Service frequency radios must be supplied in 1981 to maintain daily contact with Forest Service spray crews and programme coordinators. A much more efficient programme and greater public service is guaranteed with these units. All B. C. Forest Service spray rigs are so equipped at a cost of \$70.00 per month per rig.
- (3) That the B. C. Ministry of Agriculture give consideration to paying knapweed spray crew members at the equivalent rate of B. C. Forest Service crews. The two crews often work in daily coordination, performing the same tasks, with a large salary differential.
- (4) That the B.C.F.S. Range Division continue their excellent expanded efforts on Crown lands under their jurisdiction.
- (5) That the B. C. Ministry of Highways expand their knapweed control efforts. The excellent programme by Highways Landscape Division (Kamloops) in 1979 was cut in half in 1980 to the severe detriment of the whole containment programme. It is essential that two spray trucks and a full time supervisor/expediter be employed on roadways (both trunk and secondary) in the Kamloops district to maintain a good measure of knapweed control.
- (6) That the B.C.F.S. Range Division retain R. Drinkwater, Forest Agrologist, on a permanent basis to continue his efforts in spray programme coordination and mapping and expiditing of control efforts on Coordinated Resource Management Plans.
- (7) That the B. C. Ministry of Agriculture take a strong stand against those groups and individuals who wish to halt spraying with Tordon. Protection of our grasslands from knapweed invasion depends on the continued use of this herbicide until such time as effective alternatives are forthcoming.
- (8) That the B. C. Ministry of Agriculture continue to financially support biocontrol research on knapweeds. Encouraging results are being obtained but a major thrust is needed now to realize effective biocontrol as early as possible.

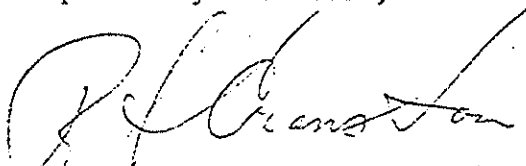
(9) That the B. C. Ministry of Agriculture purchase three, 100 gallon, rancher loaned spray tanks. These can be used by private individuals in areas where environmental activist appeals are threatening regional government run programmes and where accessibility to spray equipment is inadequate.

All involved in the containment effort deeply appreciate the effort and co-operation extended by the Western Indian Agricultural Corporation in the second year of their knapweed control programme on Indian Reserves.

Continuing support by B. C. Rail, C. P. Rail and C. N. Rail is gratefully acknowledged.

A report on the total 1980 Knapweed Containment Programme in British Columbia will be produced and forwarded shortly.

Respectfully submitted,



R. S. Cranston, P.Ag.
Weed Specialist

RSC/gc

Weed Control

Total area actually sprayed - 14.5 ha. (35.8 acres)

Diffuse Knapweed	7.8
Spotted Knapweed	1.3
Russian Knapweed	.2
Canada Thistle	3.6
Burdock	3.0
Handstongue	1.5
Leafy Spurge	1.3
Toadflax	<u>.6</u>
* Total	19.3 ha.

* Calculated replicators 4.8 ha (11.8 acres)

Due to replicators in calculations, (ie the total area sprayed and recorded for many of the infestations, contained two or three species), the total area calculated is higher than the actual area sprayed.

The weed control program was initiated in the Cariboo Forest Region in the summer of 1979. The focus of the program is the control of noxious weeds, particularly the Knapweed species which are invading the Cariboo from the south. A total of 14.5 ha was sprayed throughout the Cariboo region. The majority of the weeds sprayed, approx 9.5 ha, were located in the Clinton area, with the remaining 5 ha located throughout the rest of the Forest region. A complete set of maps and spray records were compiled and maintained of all spraying projects. Extension surveillance work was also carried out and recorded to locate infested areas as well as to monitor these areas sprayed last year. The cost was approximately \$ 588.76 per ha. (\$ 238.27 per acre).

Section 2.4.671	Chemical: Knapweed, Thistle, leafy Spurge, Burdock etc.	14.5 ha	\$ 15,882
2.4.59	Herbicide application (duplicating & totalling)	14.5 ha	\$ 15,882

(4)

CROPS

I SUMMARY STATEMENT (Production, marketing, - problems concerning all crops)

Very dry conditions during the month of April indicated the possibility of a drought, but high precipitation levels during the growing months recovered production levels. Icing conditions caused extensive loss on legumes throughout the district. Production increased on dryland sites as a result of exceptionally high precipitation. Harvesting losses were high due to wet weather.

A CEREALS

I SUMMARY STATEMENT

Most cereal crops including barley, oats, and triticale were grown as rotational crops and were utilized as green feed, silage and cereal hay. Grain was harvested in the Alkali and Hanceville areas.

II DETAILS (append production and crop value table for both cereal and forage seed crops)

John Skaggs - Hanceville - Oats - 100 bu/acre
Winter Wheat - 75 bu/acre
Cereal Silage - 3-3.5 tons/acre D.M.

(4) Cont'd

B. FORAGE CROPS

I SUMMARY STATEMENT (hay, pasture and forage seed crops)

Winterkill reduced yields on grass-legume stands throughout the region. Higher than normal precipitation delayed harvest, resulting in lower feed quality. Wetlands were only partially harvested due to wet soil conditions. Alfalfa seed production was established in the Cariboo Chilcotin.

II DETAILS (Include hay production data. Refer to cereal crops table for forage seed production)

Forage Crop Insurance Program - Federal-Provincial Government Crop Insurance contracts covered a total of 2,850 Ha or 7,000 acres for the area. Sixty percent of the insured growers had valid losses. Claims were settled for a total of \$100,000.00 or an average of \$3,150.00 per claim. Losses were for both winter kill and rain damage. Three contracts were cancelled. Nineteen new applications were approved for the 1981 Crop year.

Upland forage crops under dryland conditions (timothy-clover-alfalfa-brome) yielded 2-2½ tons/acre. Irrigated alfalfa-grass crops yielded 4-4½ ton/acre. It is estimated 40% of all crops harvested has some degree of spoilage as a result of wet weather. Corn silage yields were 7-8 tons/acre d.m.

Managed wetlands under fertilization and water control had normal yields on reed canarygrass of 3-3½ ton/acre, 1st cut and 1 ton/acre 2nd cut (134 Mile House) Harvest losses were extensive. Native wetland yields were 1-1½ ton/acre but were only partially harvested due to exceptionally wet soil conditions.

Range was maintained in excellent condition during the growing period. Extensive rustling was available in the fall.

Two seed production evaluation projects were initiated.
John Skaggs, TH Ranch, Hanceville
Frank Broughton - Alexandria (joint project with Richardson Seeds)

Yields on the TH Ranch were poor in the establishment year as cool, wet weather hampered pollination. (Yield 31 lb./acre)

A follow-up survey on Verticillium wilt by the Plant Pathology Branch in 1980 revealed the following:

Ross Gillespie, Beaver Valley - 2 sites negative
Walt Litchfield, Beavery Valley - 1 site negative
Bill Stafford, Chimney Creek - 2 sites negative

Higher than normal rainfall created problems in harvesting forage crops. Winter kill was very evident, reducing legume yield as much as 100% on some areas.

(4) Cont'd.

F. DISEASES AND PESTS OF CROPS

I SUMMARY STATEMENTS

A follow-up survey for Verticillium Wilt revealed little or no further spread of the disease.

II DETAILS

Places in Williams Lake District surveyed in 1980:

Ross Gillespie - Horsefly
Walt Litchfield - Likely
Bill Stafford - Chimney Creek

All three were proven negative. About 43% of fields tested in B. C. were positive. The disease is spreading and crop rotation and sanitation of equipment are essential for control.

G. MARKETING (CROPS)

I SUMMARY STATEMENT

Some Vegetables are marketed locally. Hay markets continue to be active.

II DETAILS (include tables if necessary - refer to production and crop value tables under cereals, forage crops and horticultural crops)

Alfalfa - grass hay - \$90.-\$120/ton F.O.B. Williams Lake
Feed Supplements -(F.O.B. Williams Lake)

- Rolled Barley - \$268/tonne bagged
- Rolled Oats - \$270/tonne bagged
- 32% Beef Supp. \$363./tonne bagged
- 14% Range Cubes - \$205/tonne bulk
- Extra Vim Liquid Feed - \$1.60/gal.

(5)

L I V E S T O C K

I SUMMARY STATEMENT (Production, marketing, - problems concerning all livestock)

Fewer cattle were marketed in 1980 through the B.C. Livestock Co-op Yards at Williams Lake. All classes of feeder cattle were down in price from 1979.

Choice steer calves were \$15.00/cwt less with prime prices reaching \$99.-\$101./cwt on large uniform lots. Quality calves continue to be in demand by Ontario buyers.

Number of yearling steers sold during the Panorama Sale was down from 1979. Yearling heifers traded steady under pressure from feeder cattle.

A large lot of bred cows from Tatla Lake Ranch ranged from \$800-\$850.

A. BEEF CATTLE PRODUCTION

I SUMMARY STATEMENT

Total receipts for 1980 were down with prices remaining somewhat lower than in 1979.

II DETAILS (append production and sales data)

	1980	1979	1978
Receipts	\$19,064,773	\$24,561,935	\$19,141,019
No. of cattle sold	40,184	46,481	44,373
Av. price/head	\$474.44	\$528.43	\$431.37

SLAUGHTER CATTLE

Good Steers	None on offer
Good Heifers	62.00-73.50
Medium Heifers	50.00-72.90
D1, D2 Cows	40.00-56.40
D3, D4, D5 Cows	34.00-50.50
Good Bulls	50.00-70.00
Com-Med Bulls	47.00-63.00

FEEDER CATTLE

Heavy Strs. over 800#	83.60-64.20
Heavy Strs. 700-800#	86-70-60.75
Light Strs. 600-700#	90.50-63.00
Strs. & Str. calves 450-600#	110.50-64.25
Choice Lt. Str. cvs. 250-450#	116.50-60.00
Choice Heifers 550-750#	97.75-58.00
Choice Heifer calves 250-450#	102.25-58.00

Cow/calf pairs	- 750.-900.
Bred cows	- 700.-855.
Bred Heifers	- 675.-790.

WILLIAMS LAKE BULL SALE

Caeser De Marni topped the sale at \$4,600. with one of their bulls at the 43rd Annual Williams Lake Bull Show and Sale. A total of 98 bulls were sold with an over-all average selling price of \$2,223.88. Total receipts were \$217,940. The 83 Hereford bulls sold for an average of \$2,218., up from last year by \$503. Only 5 Angus bulls were sold, averaging \$1,705. up \$375. over last year. Seven Charolais bulls averaged \$3,064., up \$774. in price. Three Shorthorns averaged \$1,291., down \$271. from last year. The Grand Champion bull, a Hereford of Alice and Caeser De Marni of Kamloops, selling for \$4,000. Jimmy Dick of Quesnel purchased the bull. The Reserve Grand Champion was owned by Karl & Margaret Freding of Princeton, selling for \$3,500.

CARIBOO-CHILCOTIN HEREFORD CLUB ANNUAL SHOW AND SALE

This was the club's 2nd Annual Show and Sale. Bob and Betty Ford of Lac La Hache won Grand Champion Heifer as well as best pair of heifers. The Reserve Champion Heifer went to Dick and Pat Shuttleworth of Chase. The Reserve Champion Bull was won by Bob and Betty Ford also. The sale average for bulls was \$1,124.50 and for heifers was \$1,255.

CARIBOO SHEEP BREEDERS ASSOCIATION SALE

The 1st Annual Sale of the Association was held Sat., Sept. 13th at the Williams Lake Stockyards. Between 3 and 4 hundred sheep were sold. The low prices were due to a sudden date change and as a result there were few buyers present.

(5) Cont'd.

B. DAIRYING

I SUMMARY STATEMENT

N/A

II DETAILS (append production and dairy production value table -
 acknowledge Dairy Branch report when information used.)

N/A

(5) Cont'd.

C. SHEEP

I. SUMMARY STATEMENT

Increased interest continues to be shown in sheep for meat and wool production.

II DETAILS (include production and sales table)

The Cariboo Sheep Breeders Association continues to be active with approximately 30 members. A workshop was held in Quesnel on March 1, 1980 dealing with topics on sheep management. The 1st Annual Cariboo Sheep Breeders Sale was held September 13, 1980 at the Williams Lake Stockyards.

D. SWINE

I SUMMARY STATEMENT

For various reasons a decline has occurred in the pig numbers for our area.

II DETAILS (include production and sales table)

Interest by a producer to build a finishing operation occurred early this year. Much detail and planning has gone into this proposal but to date no development has occurred. They planned to truck weiners up from the coast and have a feeding capacity for about 200 hogs. Further developments may surface this spring.

Two producers are no longer in production and the known operators are:

Roland Frenshet, Eagle Creek	- 45 sows
Ray Young, Forest Grove	- 25 sows
Edwardo Mendoza, Dog Creek Rd.	- 10 sows

(5) Cont'd.

E. POULTRY

I SUMMARY STATEMENT

N/A

II DETAILS (append production and sales data. Acknowledge Poultry Branch reports when applicable).

F DISEASES AND PESTS (LIVESTOCK)

I SUMMARY STATEMENT

No major outbreaks of disease occurred in 1980. Pinkeye was widespread throughout the region.

II DETAILS

Infectious Laryngo-Tracheitis (I.L.T.) - an outbreak was diagnosed in a small domestic laying flock in the Williams Lake area.

I.B.R. - In spite of the use of vaccines, this condition continues to cause abortions (4 cases)

Pinkeye - Widespread on range in the region - cows and calves.

Selenium - Deficiencies in feeds continue to be identified. Low levels seem to be prevalent throughout the region.

(5) Cont'd

G. MARKETING - LIVESTOCK AND POULTRY

I SUMMARY STATEMENT

See Beef Cattle - Section A

II DETAILS

(6) HONEY

I SUMMARY STATEMENT

The Beekeepers Association continued to be active this year. There were 3 commercial producers in the Williams Lake area.

II DETAILS

There were approximately 600 hives in the area with a total production of 54,000 lbs. Total production by Mr. Mahon was 19,375 lbs., 60% of which was marketed locally at an average price of \$1.00/lb.

(7)

EXTENSION ACTIVITIES

I SUMMARY STATEMENT

II LIST AND BRIEFLY DESCRIBE

PROGRAMS, EVENTS AND ACTIVITIES WITH WHICH THE DISTRICT AGRICULTURIST WAS INVOLVED DURING THE YEAR, Report Progress on Planned Programs, Significant Observations or Conclusions e.g. Farm Management, specialist services and programs, short courses, office calls - farm visits, etc., Department meetings and workshops, 4-H program (all phases), R.O.P. performance testing, A.I., Bull control areas, fairs, exhibitions, Farmers' and Women's Institutes - Complete statistical form with 12 months data.

4-H

The 4-H program continued to be active during the year with 188 members enrolled in 14 clubs. Council continues to meet monthly alternating between 100 Mile House and Williams Lake. Joanne Groot, 4-H Specialist for the area terminated in July and was replaced in October by Irene Borysowich. Members participated in local rallies and field days and also in the Open House Canada Exchange and Vermillion exchange with our members going to Vermillion this year.

Achievement days were held at various times during the year with the beef members achieving in September. Once again Clem Shannon was our Beef Judge and Leslie Phillips judged the showmanship class. Average prices for the 60 steers sold was up from last year.

REGIONAL MEETINGS

Regional Staff meeting was held Feb. 25th & 26th in Kamloops.

FARMER'S INSTITUTE

The Annual meeting of the District "H" Farmer's Institute and Women's Institute was held in Quesnel.

BULL CONTROL AREAS

Three Bull Control Areas, Clinton, Horsefly and Anahim Lake continued to be active throughout the year. Anahim Lake Bull Control area members voted at the Annual Livestock meeting to disband the Bull Control Area.

LIVESTOCK ASSOCIATION MEETINGS

There are 18 Livestock Associations in the Cariboo-Chilcotin. Meetings were attended whenever possible. also, Cariboo Cattlemen's Directors Meetings were attended when possible.

FALL FAIRS

Fall Fairs were attended at Horsefly, McLeese Lake, Bella Coola, Miocene and Williams Lake. The Williams Lake Fall Fair is growing each year.

FARM MANAGEMENT PROGRAM

12 members were renrolled under the Canfarm System and two under the Ajohn system.

(7) Extension Activities (Cont'd)

R.O.P. ✓

Only eight breeders were enrolled on the program for 1980. They include: Bill Freding, Bob Ford, Buckskin Ranch - Horned Herefords; Harriman - Polled Hereford; Cleveland, Fryatt - Simmental; Dennis - Charolais. Possible expansion for 1981.

SETTLEMENT PLANS

100 Mile House and Bella Coola Valley O.S.P.'s have been approved and adopted by Municipal Affairs. Williams Lake O.S.P. is in abeyance pending the Land Commission decision on Fox Mountain. The Interlakes O.S.P. is ready for Provincial approval. The Quesnel O.S.P. is in draft preparation.

LAND USE PLANS

The Ministry of Lands, Parks and Housing has initiated a number of land use plans over the last two years. To date the following plans have been undertaken: Miocene L.U.P., Jack Frost L.U.P. and Earle Lake L.U.P. recommendations have been implemented. Chimney-Felker Lake L.U.P. comments are being incorporated into plan document. Big and Hart Lakes L.U.P. and Upper Dean River L.U.P. have begun planning process. Existing plans under format review include: Fox Mountain L.U.P., Southside Williams Lake L.U.P., and Williams Lake River Valley L.U.P. The Horsefly L.U.P. has been deferred until clarification of Ministry positions regarding Provincial Forests.

A.R.D.S.A.

Three phase power proposals for Big Creek (Phase II) and Dog Creek were made in 1980. Big Creek proved unfeasible and no decision was made on Dog Creek, possibly due to lack of funding.

FINANCIAL MANAGEMENT TRAINING WORKSHOP

Two workshops were held in the Williams Lake District. Williams Lake - Jan. 8 - 11th, and Tatla Lake - Jan. 22 - 25th, 1980. Course I was presented at each location (enclosed). Attendance was excellent at Williams Lake (25 persons) and poor at Tatla Lake (7 persons).

GRASSHOPPER -BLUEBIRD STUDY

A summer student worked together with members of the Williams Lake Field Naturalists in monitoring the use of bluebird houses to increase populations. No major outbreaks of grasshoppers occurred to evaluate the effect of the bluebird population. Approximately 129 houses were occupied in 1980, a 50% increase over 1979 and a 258% increase over 1978. This was the third year the program has been evaluated.

SAN JOSE RIVER STUDY

A sub-committee of the Cariboo RMC was formed to follow up on the Waste Management Branch report on "The Trophic Status of Williams Lake, B.C. with Special Reference to Nutrient Loading Via San Jose River". The following were the recommendations of the Committee:

- 1) Since nutrient loading may arise from residential sources, careful examination of drainage fields should be made before future residential developments around the Lake and San Jose River system take place.
- 2) B.C. Cattlemen's "Environment Control Committee" continues to work with Beef producers along the San Jose River System with inspections during run-off periods to be viewed with Waste Management Branch personnel.
- 3) Further water quality testing and flow information is required. Chairman to contact Waste Management Branch and Water Management Branch.
- 4) Support the Regional District "Water Study" to investigate future water sources.

REGIONAL WATER STUDY

On a request from Cariboo Cattlemen, the Cariboo Regional District commissioned Urban Systems Ltd. to do a preliminary study into the feasibility of an alternate water supply for Williams Lake and to identify a source of irrigation water for the San Jose and Chimney-Springhouse areas. The feasibility indicated an irrigation proposal would be economical. Cariboo Regional District has approached A.R.D.S.A. for funding on more detailed studies.

GRASSHOPPER CONTROL

The South Riske Creek and Chimney Creek-Springhouse Grasshopper Control Areas continue to be active with no major outbreaks reported in 1980.

CARIBOO REGIONAL RESOURCE MANAGEMENT COMMITTEE

Meetings are held on a regular monthly basis with all resource ministries participating. 1980 activities include the establishment of Provincial Forests, Settlement Plans, McKenzie Grease Trail, Coordinated Resource Management Plans, West Coast Transmission Gas Line, B. C. Hydro Northern Transmission Studies, San Jose River Study.

COORDINATED RESOURCE MANAGEMENT PLANS

Since the spring of 1977, when A.R.D.A. construction first began in the Cariboo Region, 21 plans have been approved with a total budget allotment of \$3,626,844.89. Of this, approximately 52% (\$1,897,609.01) has been spent to date. A total increase of 40,743 aums has been projected from the plans, of which approximately 40% (16,446 aums) has been realized in 1980. Eleven new areas are presently being considered for coordinated planning in the near future. (Enclosed.)

WETLAND PUBLICATION

Publication 72-3 entitled "Management and Improvement of Organic Wetlands in the Interior of B. C." was updated and revised. Additional information on soil, water management, harvesting, machinery and economics were included. This publication has been extensively used for wetland management in the Cariboo

WETLAND MANAGERS MANUAL

Under the auspices of the Cariboo Regional Resource Management Committee a draft of a wetland managers manual was compiled to approach in a rational, practical management-oriented way the classifying, allocating, using and managing of wetlands. The manual is planned for completion in 1981.

POLICY CHANGES

Policies within the Ministry of Lands, Parks and Housing and the Ministry of Forests have presented a major concern to Agriculture in the Cariboo. Changes in the Grazing Lease tenure, expansion of Provincial Forests and a new Agricultural Lease Policy have put additional pressure on the use of Crown land.

GOALS OF THE COURSE

To develop an understanding of the financial management function so that:

- Investments may be wisely made.
- The business may be analyzed in relation to key factors affecting profits.
- Cash flow is managed effectively.
- After-tax income is maximized.
- Borrowed capital is effectively used.
- Business plans reflect future expectations of prices and costs.
- Business transfer arrangements will be orderly and meet personal objectives.

FINANCIAL MANAGEMENT

COURSE I 4 DAYS

First Three Days:

What is financial management about? e.g.:

- Investment for profit and continuous analysis and control of activities to obtain the profit,
- Proper handling of cash,
- Tax management,
- Estate planning.

What information, statements and budgets are required? e.g.:

- Cost of Production
- Income & Expense
- Cash Flow
- Balance Sheet
- Net Worth
- Partial Budget

The form and assembly of these statements is illustrated. Their use and interpretation is explained and discussed.

What should be considered when borrowing funds for your farm business? e.g.:

- Borrower's concerns
- Lender's concerns
- Factors affecting costs

What production factors will affect financial success?

Fourth Day:

What should you consider in your tax management?

- Tax planning strategies,
- Estate planning strategies,
- Alternative business arrangements.

FINANCIAL MANAGEMENT

COURSE II - 4 DAYS

First Three Days:

Factors to consider in setting up a paper handling and record keeping system.

What you should know about machinery costs.

What should you consider when making investments on your farm or ranch? e.g.:

- For a minor investment, e.g. "incremental gain and improved cash flow."
- For a major investment, e.g. "objectives, profits, alternatives."
- Timing, e.g. effect of hog and beef cycles.
- Specialization vs. a comprehensive program.
- Vertical vs. horizontal expansion.
- Diversity of investment.

Puttin' your knowledge to work - an investment and credit exercise, including:

- Analysis of case studies,
- Assessment of credit needs and action to take,
- Face to face discussion of cases with lender's representative.

Fourth Day:

More about tax management and estate planning.

- Case studies and explanations to show how tax management and estate planning are integral parts of financial management.

FINANCIAL MANAGEMENT TRAINING PROJECT

FOR B.C. AGRICULTURAL PRODUCERS

A project funded by A.R.D.S.A. and under the direction of a management committee having representatives from:

- A.R.D.S.A. (Agriculture & Rural Development Subsidiary Agreement),
- B.C. Ministry of Agriculture,
- University of British Columbia, Department of Agricultural Economics,
- B.C. Federation of Agriculture.

A progressive learning experience about financial management which recognizes that summary financial statements can be used to:-

- Improve production efficiencies,
- Reduce operational costs,
- Determine a feasible investment strategy,
- Assist in cash management,
- Plan the direction of the business.

Courses are offered as four-day workshops to locals of a particular commodity group.

For further information, see over, and contact

Mr. Harvey Scott, Project Director,
4607 - 25 Street,
Vernon, B.C. V1T 4K7.

TEL.: (604) 545-1387

CO-ORDINATED PLANNING - CARIBOO FOREST REGION

A.R.D.S.A. FUNDS SPENT (To November 30, 1980)

<u>Plan</u>	<u>Project Funds</u>	<u>Overhead*</u>	<u>Total Spent</u>	<u>Budget Allotment</u>	<u>Completed</u>
Alexandria	\$ 37,312.80	\$ 4,909.60	\$ 42,222.40	\$ 42,222.40	Complete
Beaverdam	294,066.83	51,790.50	345,857.33	485,830.00	--
Becher Prairie	83,585.33	17,076.09	100,661.42	136,466.84**	--
Bidwell	41,190.04	9,249.49	50,439.53	50,439.53	Complete
Big Bar - High Bar	37,632.17	1,469.64	39,101.81	207,600.00	--
Big Creek	129,603.71	6,736.03	136,339.74	353,320.00	--
Dog Creek	40,967.58	813.18	41,780.76	58,800.00	--
Edney	50,577.85	Ø	50,577.85	104,242.00	--
Eric	34,611.84	7,404.95	42,016.79	73,840.38**	--
French Bar	62,242.94	2,872.18	65,115.12	139,000.00	--
Gaspard & Gaspard Alpine	174,534.45	35,023.27	209,557.82	215,067.30**	--
Green Lake	Ø	Ø	Ø	288,974.00	--
Haines Creek	89,625.80	Ø	89,625.80	150,600.00	--
Meldrum Creek	47,917.41	6,111.29	54,028.70	180,345.00	--
Niquidet	46,521.57	10,171.16	56,692.73	62,995.44**	--
North Bonaparte	174,470.07	10,900.74	185,370.81	393,180.00	--
One Eye Lake	93,409.93	16,202.38	109,612.31	125,000.00	--
Parker Felker Onward	77,024.28	10,466.37	87,490.65	102,882.00	--
Tatla Lake	76,009.72	11,007.74	87,017.46	125,000.00	--
West Lac La Hache	100,657.57	3,442.41	104,099.98	330,990.00	--
<u>TOTALS</u> 21 Plans	<u>1,691,962.89</u>	<u>205,647.12</u>	<u>1,897,609.01</u>	<u>3,626,844.89</u>	<u>2 Complete</u>

* Overhead figures are as of December 31, 1979. Overhead for 1980 will be calculated at the end of December 1980.

** These plans were originally budgeted for under the A.R.D.A. program. However, when A.R.D.A. terminated on December 31, 1978, the remaining unspent funds were "lost" because they could not be carried over into the A.R.D.S.A. program. New budgets were applied for, giving the total amount for these plans as the sum of the monies spent under A.R.D.A. plus the new budget allotment for A.R.D.S.A.

PROPOSED PLANS - Cariboo Forest Region

1. Loon Lake - Bonaparte, Fly Creek and Upper Loon Range Units
2. Sapeye - Sapeye, Deer Creek and northern Crazy Creek Range Units
3. Squawk Lake - Summit, Twin, Spokin, McIntosh, Knife, Murphy and Moffat Range Units

POSSIBLE FUTURE PLANS - Cariboo Forest Region

1. Bridge Lake - Judson, Wavcy, Montana and Brown Range Units
2. Castlerock - Castlerock Range Unit
3. Gustafsen - Gustafsen Range Unit
4. Nemaia - Tatlo, Konni and Klokon Range Units
5. Peavine - Peavine and McDonald Mountain Range Units
6. Stone - Tsh and Kliyul Range Units
7. Stum - Anaham, Stum and Tautri Range Units
8. Woodjam - Woodjam Range Unit

PROJECTED AND ACTUAL RESULTS OF CO-ORDINATED PLANS

Plan	Date of Plan	Approval Date	Termination Date	Projected Increase in AUMs	Projected Decrease without plan	Actual AUMs in 1980	Total Increase in AUMs
Alexandria	Jan. /78	Feb. 24/78	Completed	2,080 - 2,903 (-1,28 aums)	-	/80 - 2,285** /81 - 2,484	205 aums
Beverdam	Sept. /77	Dec. /77	Dec. 31/82	4,057 - 6,945* (2,089 aums)	-	/80 - 5,371	514 aums
Becher Prairie	Sept. 19/77	Jan. /78	Dec. 31/81	13,275 - 13,275 (0 aums)	to 10,620 by /80 (2,655 aums)	/80 - 14,308	1,533 aums
Bidwell	Feb. /76	May /77	Completed	/75 - 1,332	-	/80 - 1,578	246 aums
Big Bar - High Bar	Apr. 2/79	July 27/79	Mar. 31/82	3,041 - 5,013* (-1,072 aums)	-	/80 - 4,478	131 aums
Big Creek	Nov. 6/78	Mar. 21/79	Dec. 31/82	13,067 - 16,000 (-2,933 aums)	-	/80 - 13,067	0 aums
Dog Creek	Apr. /79	July 27/79	Dec. 31/81	1,25 - 1,200 (-675 aums)	-	/80 - 722**	197 aums
Edney	Apr. 9/79	Sept. 25/79	Dec. 31/81	1,972 - 2,750 (-778 aums)	to 1,400 by /81 (572 aums)	/80 - 800** /81 - 2,250	-
Eric	May 31/76	July 19/77	Dec. 31/81	1,584 - 1,580 (0 aums)	to 790 by /81 (794 aums)	/80 - 1,068**	-
French Bar	Sept. 11/78	Jan. 22/79	Mar. 31/82	2,334 - 3,864* (-1,530 aums)	to 2,034 aums (300 aums)	/80 - 2,377	43 aums
Gaspard - Gaspard Alpine	Apr. 12/77	May /77	Dec. 31/80	14,138 - 34,600 (-19,662 aums)	to 12,938 by /78 (2,000 aums)	/80 - 25,000	10,062 aums
Green Lake	Dec. 5/79	Sept. 15/80	Dec. 31/83	8,156 - 9,600 (-1,444 aums)	to 5,165 by /86 (3,000 aums)	/80 - 8,156	0 aums

... 4 ..

Haines Creek	Oct. 1/79	Apr. 1/80	Dec. 31/81	5,950 - 7,400 (1,440 aums)	to 5,364 by /84 (596 aums)	/80 - 5,950 /81 - Increase	0 aums
Keldrum Creek	Dec. 4/78	Mar. 29/79	Dec. 31/82	4,823 - 5,923 (1,100 aums)	to 3,858 by /89 (1,035 aums)	/80 - 5,922	859 aums
Riquidet	Dec. 6/76	July /77	Dec. 31/81	860 - 2,000 (1,140 aums)	to 645 by /83 (215 aums)	/80 - 321** /81 - 766	-
North Bonaparte	Dec. 11/78	Mar. 29/79	Dec. 31/82	11,000 - 13,400 (2,400 aums)	-	/80 - 11,678	678 aums
One Eye Lake	Sept. 21/78	Jan. 22/79	Mar. 31/81	5,100 - 7,360 (1,900 aums)	-	/80 - 5,450	4 aums
Parker Felker Onward	Sept. /78	Oct. 16/78	Mar. 31/81	6,260 - 7,100 (340 aums)	-	/80 - 6,986 /81 - 5% Increase	626 aums
Talia Lake	Apr. 17/78	Aug. 4/78	Dec. 31/80	/77 - 2,322	-	/80 - 3,278	950 aums
West Lac La Hache	Mar. 27/79	June 20/79	Mar. 31/83	6,098 - 7,000 (912 aums)	to 4,566 by /84 (1,522 aums)	/80 - 6,484	396 aums
TOTALS:				40,743 aums projected increases	12,689 aums projected decreases		16,446 aums actual increases

SUMMARY: Since the spring of 1977, when A.R.D.A. construction first began in the Cariboo Forest Region, 21 plans have been approved with a total budget allotment of \$3,626,344.89. Of this allotment approximately 52% (\$1,897,609.01) has been spent to date. A total increase of 40,743 aums has been projected from the plans, of which approximately 40% (16,446 aums) has been realized in 1980. Eleven new areas are presently being considered for co-ordinated planning in the near future.

. . . 5 .

* Please note the aum figures for these plans differ from those stated in the original plan document. The aum figures in the plans were obtained by multiplying the number of cattle by the average number of months grazed by the permittees (also deductions for aums on unfenced private land were not taken into account). The aum figures listed on this chart reflect the actual number of aums permitted on the ranch the year previous to initiation of the plan.

** Alexandria - In 1980 there presently exists a non-use permit for 199 aums which will be refilled in 1981. The construction of the fence has resulted in a dramatic improvement in spring range. Potential exists for summer range increases (approx. 30%).

Dog Creek - Although 722 aums are available on the range, some permits are being held in abeyance until receipt of delinquent grazing fees.

Edney - Permittees in the Edney Unit have decreased permitted aums substantially in 1980 to allow newly seeded clearings to become well established. The unit will be restocked to capacity (with an increase) in 1981.

Eric - One of the main objectives of the Eric Plan was to convert 1,525 acres of Crown range to grazing and/or agricultural lease tenure, thus creating 1,500+ aums. There are approximately 400 acres remaining of the original 1,525 to be put into production.

Niquidet - By 1981 Jack Gardner will have increased to his projected level from the plan. However, two permittees have dropped off the range (Melvin Gibbons and St. George's Ranch), creating the decrease in permitted aums on the unit. The plan is considered successful because it has a well managed grazing system and there is great potential for increase.

CO-ORDINATED PLANNING - POSITIVE POINTS

1. Helps to preserve existing range where a decreased carrying capacity would have occurred.
2. Improves range through fencing, seeding, etc. to generate increased aums.
3. Promotes more effective livestock management systems.
4. Benefits the ranchers by allowing increases in their herds.
5. Improves communication between government agencies and ranching community.
6. Benefits wildlife with increased forage and improved habitat.
7. Creates work through project contracts.

CO-ORDINATED PLANNING - NEGATIVE POINTS

1. High bid prices on contracts in relation to current rates paid by ranchers.
2. Lack of contractors, so compounding problem # 1.
3. Confusion regarding collection of 10%. Who collects it? When will it be collected?
4. Lack of involvement after plan is initiated - eg. poor turnout at reviews both permittees and government agencies.
5. High turnover of ranches during duration of plan works (not necessarily problem if new owners are cooperative).
6. In the past there has been a lack of communication between Victoria regional offices - eg. poor cost benefit system resulting in a long delay for approval. This problem is improving greatly as the cost benefit is done in the region first before sending the plan to Victoria for approval.
7. In the past there was some confusion as to what a C.R.M.P. contract resulted in agency conflicts - eg. land trades.
8. On several of the plans the potential for increases in per acre carrying capacity but the permittees do not have sufficient hay base to support the herd.

(7)

III COMMENTS AND RECOMMENDATIONS

Forage Crop production continues to be a priority in the Williams Lake District for 1981. Applied research and demonstration projects particularly on wetlands need to be expanded in order to meet the needs of a growing beef cattle industry. It is imperative one summer student is available in 1981 to carry out field work.

Inadequate salaries for summer students has been a concern for many years. At the present time, the Ministry of Labour salary scale is very low compared to similar positions in other government Ministries. The result is a lack of job attractiveness and attitude. In addition, the University of British Columbia Agriculture Faculty must identify agriculture related projects in the field where an undergraduate thesis may be of much more practical use than the present on campus approach.

The Williams Lake office is presently without the services of an adequate photocopy machine. This situation continues to demonstrate the inefficient use of clerical staff. In order to meet the present needs of a staff of eight, an appropriate photocopy machine must be immediately placed in the Williams Lake District Office.

As of December 31, 1980, Mr. Garth Elgie, has terminated his position as Assistant District Agriculturist at Williams Lake. It is important an appropriate replacement be placed as soon as possible so as not to impare the level of services of the B.C. Ministry of Agriculture and Food in the Williams Lake district.

(8)

P E R S O N N E L

(Transfers - resignations - summer assistance,
secretary appointments, etc.)

Mrs. Violet Gorkoff, office Assistant, terminated with the Ministry in August and was replaced by Shelley Hewett. R.W. Burn, Supervising Brand Inspector, transferred to Kamloops in March and a new Brand Inspector, Fred Long was hired in July. Garth Elgie, Assistant Dist. Agriculturist will leave the Williams Lake office Dec. 29th to take over the position of District Agriculturist in Prince George.

We had two summer student from May - August. DeDe DeRose - Field Crops and Kathryn Mitchell - Extension.

(9)

C O N C L U S I O N S

I. S U M M A R Y S T A T E M E N T

II D E T A I L S

STATISTICAL SUMMARY

This summary is a record of your year's extension activities. Aggregate statistics from all staff members will reflect the combined efforts of our entire branch. Your summary should be taken directly from monthly report Form B and must cover a 12 month period.

	Farm Visits	Office Con- sultation	Circular Letters	Press Releases	T.V. & Radio
Professional and Technical Consulting	10	166	20		
General Farm Economics	2	27			
Farm Business Management Programs	3	48	1	1	2
Entomology and Pathology	11	74	4		
4-H	5	113	25	3	5
Soils and Fertilizers	40	100	10		
Cereals and Seed Crops	10	24	3		1
Forage Crops	50	125	10	4	7
Range Mgt.	14	35	8		
Weeds	26	45	3	3	
Horticulture	4	75	1		
Farm Forestry		3			
Other Field Crops					
Dairy		1	1		
Beef	76	96	34		3
Sheep	3	22	1		
Swine	1	8	1		
Poultry	3	11	2		
Other Livestock		3			
Irrigation and Drainage	5	103	2		
Land Clearing	3	110	4		
Waste Disposal		4	1		
Farm Machinery		25			
Farm Buildings		10			
Miscellaneous	2	30	18		
TOTALS	268	1248	149	11	18

MEETINGS	Class A meetings (active involvement)	No. <u>123</u>	Attendance <u>8,334</u>
	Class B meetings (technical co-ordination & self-improvement)	<u>18</u>	<u>1,890</u>
	Class C meetings (courtesy, interest)	<u>4</u>	<u>275</u>
FIELD DAYS AND WORKSHOPS		<u>10</u>	<u>150</u>

Demonstration Work

Title of Demonstration

Round Bale Silage

Location

Harold Starr - Miocene

Ron Wiwchar - 134 Mile

Treatments

Two types of round bale silage were evaluated. Harold Starr had timothy-clover hay and Ron Wiwchar had reedcanary grass. The bales were stacked in fall of 1979 and opened in February of 1980. Feed tests were taken for quality evaluation.

Results and Observations

The Timothy-clover round bales were fairly moldy upon unrolling. We felt not a good enough seal was obtained when bales were covered.

The reed canarygrass looked very good and the feed analysis bore this out. The cattle seemed to take to it with enthusiasm.

Further observations will be carried on this spring when stacks put up by producers due to the wet summer are opened.

For feeding, the bales were rolled out behind a tractor. There was very little difficulty incurred with the actual unrolling.

Demonstration Work

Title of Demonstration

Musk Thistle - Biological Control

Location

Anaham Reserve, Alexis Creek

Treatments

Weevils were released in 1979 (See 1979 Annual Report)

Results and Observations

Visual inspection resulted in no sign of damage to thistle population. No evidence of damage or sign of weevil inhabitation was observed. To follow up in 1981.

Demonstration Work

Title of Demonstration

Bull Thistle - Urophora releases

Location

3 sites - 2 north of Military Training Area
1 at Jones Lake Ranch

Treatments

Flies released in 1978 in heavily infested areas of Bull Thistle.

Results and Observations

Insect populations continue to increase on all sites with some effect on thistle density now apparent. A fourth site in Horsefly will be selected in 1981.

Demonstration Work

Title of Demonstration

Alfalfa - Grass Variety Trials

Location

Chilancoh Ranch - Tim Bayliff

Treatments

A variety of alfalfa grass mixtures on sandy loam to clay loam soils was established in 1978.

Results and Observations

Due to winter kill in winter of 1978/79 the Sterling Orchard grass section of plot was discontinued in 1979. This has now been continued as an alfalfa variety trial only. See Demonstration entitled "Alfalfa Variety Trial".

Note: The C 1 Ranch trial was discontinued in 1979 because 3 years data had been collected.

Demonstration Work

Title of Demonstration

Alfalfa Variety Trial

Location

Chilancoh Ranch - Tim Bayliff

Treatments

A continuation of the Alfalfa Grass Variety Trial established in 1978.

No yields were taken for 2nd cut in 1980.

Results and Observations

Notes were made in spring of 1980 on present stand. Clipped 1st cut but not 2nd cut.

There was some alfalfa winter kill on neighboring ranches but very little damage on Tim's new seedings.

BRAYLIF - ALFALFA - ~~STERLING~~ VARIETY TRIAL

Pivot Base
X

200'

200'

200'

50'	50'	50'	50'	50'	50'	50'	50'	50'	50'	50'	50'
101	102	103	104	105	106	107	108	109	110	111	112
ANGUS	BANNER	PIONEER 520	VISTA	APOLLO	ALBONQUIN	CERES	ANCHOR	TREX	ANIK	CITATION	THOR
113	114	115	116	117	118	119	120	121	122	123	124
CLIMAX 4 lb./ACRE											
115	116	118	119	120	121	122	123	124	125	126	127
125	126	127	128	129	130	131	132	133	134	135	136
PIONEER 520		STERLING 4 lb./ACRE									
PIONEER 520		ALSIKE 4 lb./ACRE									

ALFALFA . 8 lb. / ACRE

Demonstration Work

Title of Demonstration

Aspen Encroachment Trial

Location

Mirage Lake

Treatments

3 rates of Tordon 10K (pellets) applied in spring of 1979.

Results and Observations

Observations in spring of 1980 showed very good control on all three rates of application.

This area was seeded with rangeland disc in 1980.

Demonstration Work

Title of Demonstration

Lodgepole Pine Encroachment Trial

Location

Alkali Lake Ranch - Doug Mervyn

Treatments

Three rates of Tordon 10K (pellets) applied in fall of 1978.

Results and Observations

To date no conclusions can be drawn and will be monitored in 1981.

Demonstration Work

Title of Demonstration

Wetland Plant Variety Trials

Location

134 Mile Ranch - Ron Wiwchar
Bell Lake - Bill Dean
Morrison Meadow Ranch - Andy Lendvoy
Nimpo Lake - Bob Smith
Watch Lake - Shorty Horn

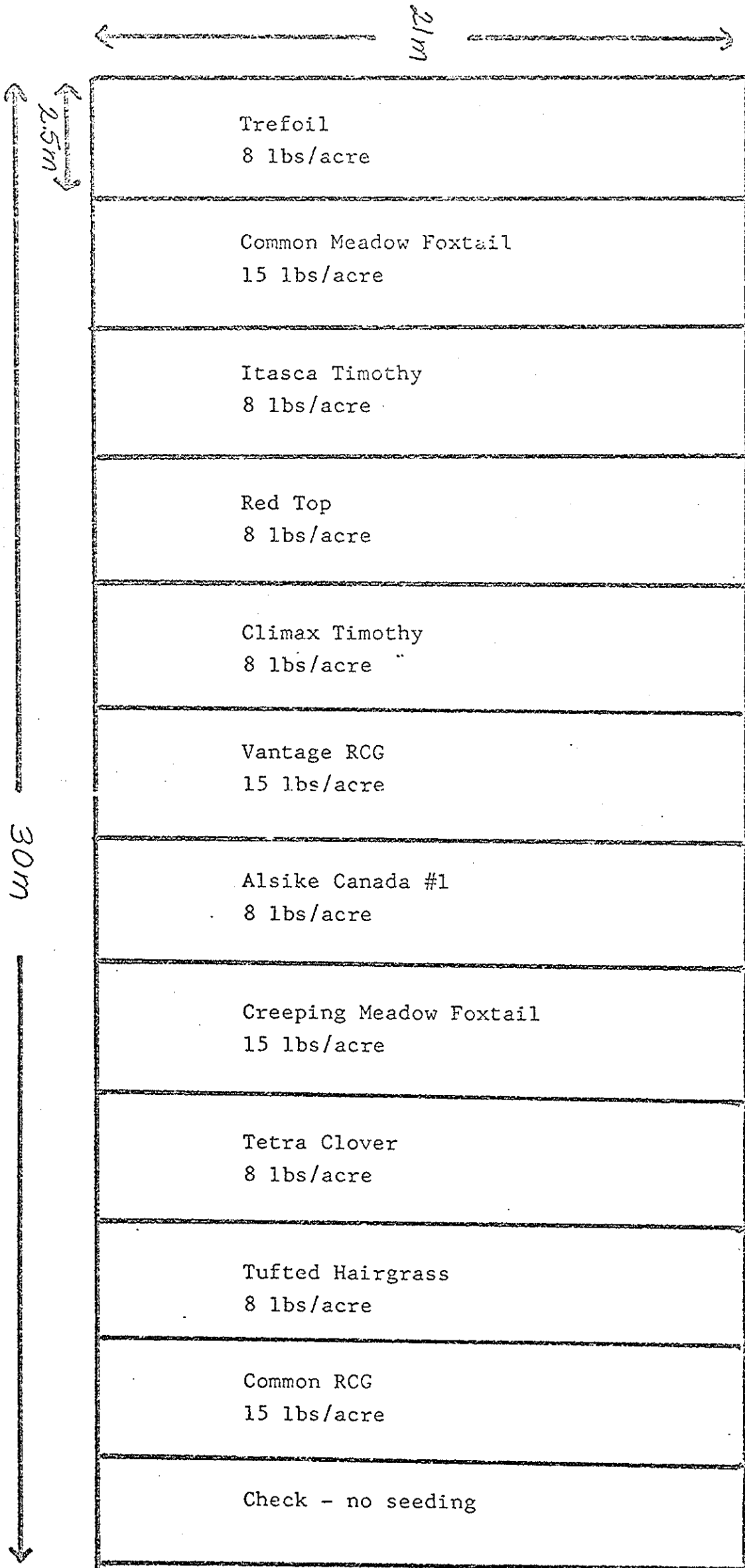
Treatments

134 Mile - refertilized with 46-0-0 @ 150 lbs./acre
Bell Lake - refertilized with 14-7-14-7S at 400 lbs./acre
- Both of the above trials clipped in 1980
but no yields have been calculated.
Morrison Meadow - Seeded Nov. 4, 1980 to 10 varieties. See
plot plan.
Nimpo Lake - Seeded Nov. 4, 1980 to Garrison Creeping Foxtail.
See plot plan.
Watch Lake - Seeded Oct. 3, 1980 to 11 varieties. See plot plan.

Results and Observations

Plots are being designed and monitored in conjunction with
Agriculture Canada.

Clippings and yield data to be taken in 1981.

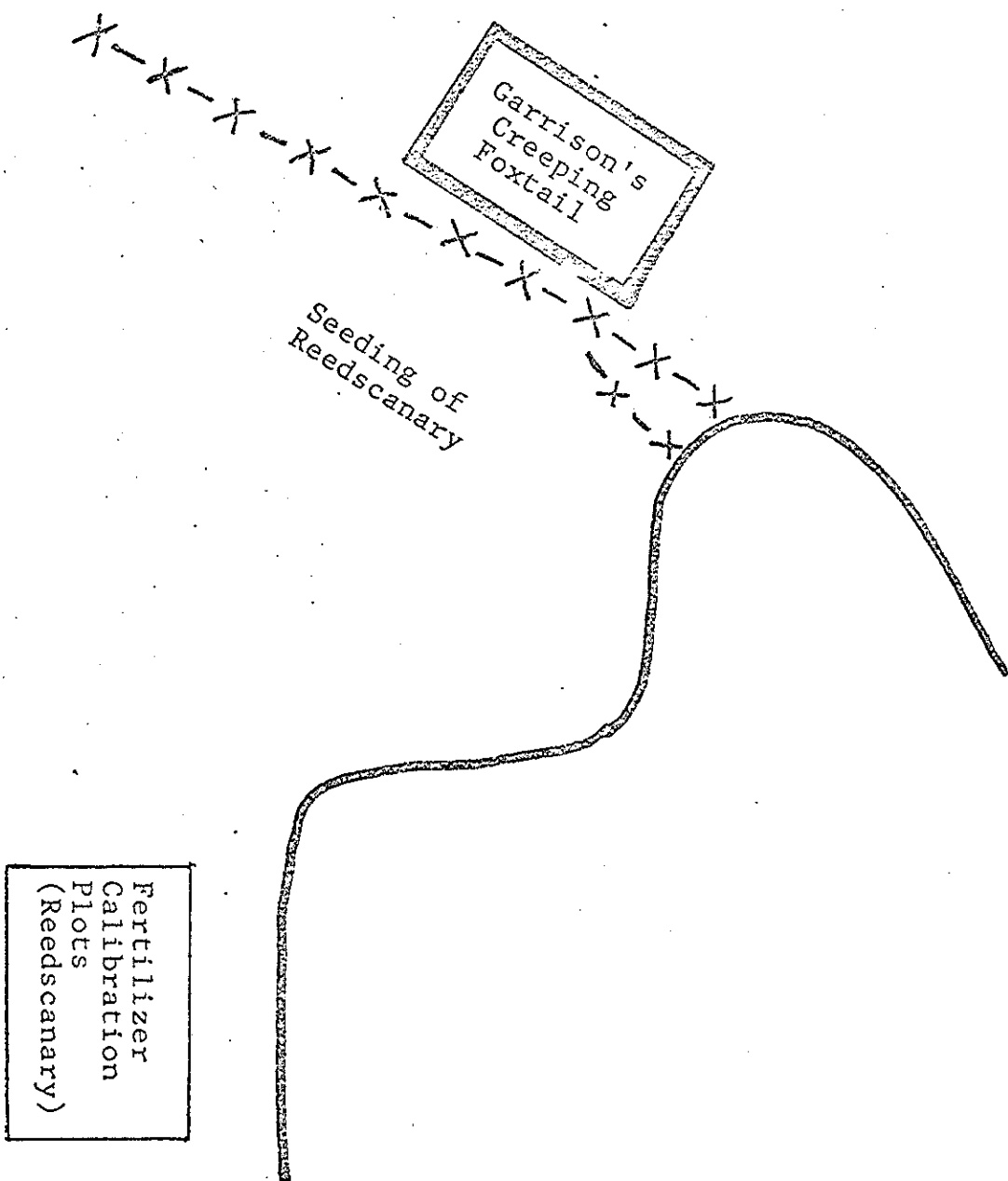


Watch Lake
WETLAND VARIETY TRIAL

Seeded : Oct. 3, 1980

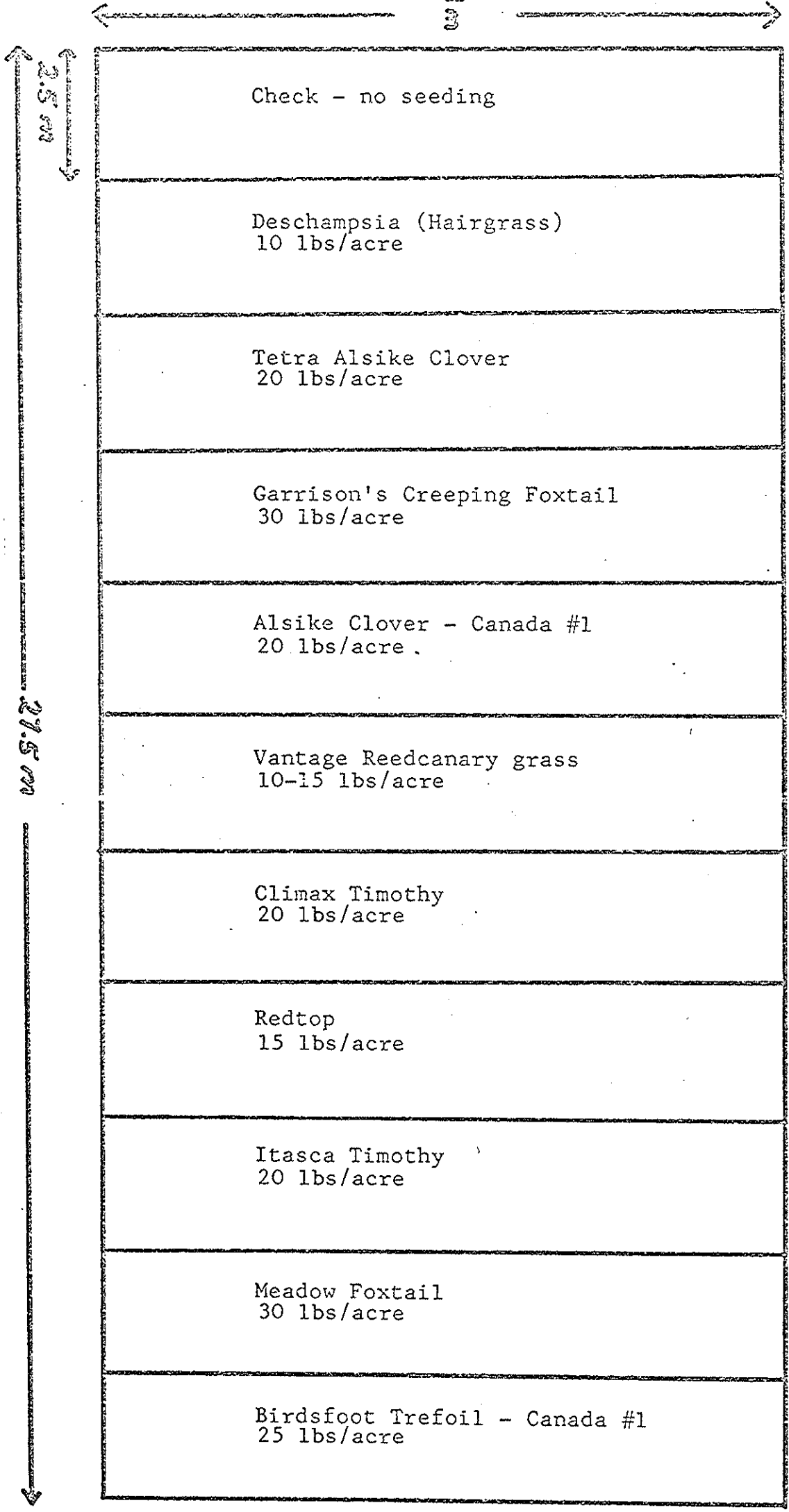
B. Smith
WETLAND VARIETY TRIAL

Seeded: Nov. 4, 1980



T R E E S

21m



27.5m

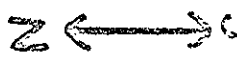
27.5m

SUGARCANE

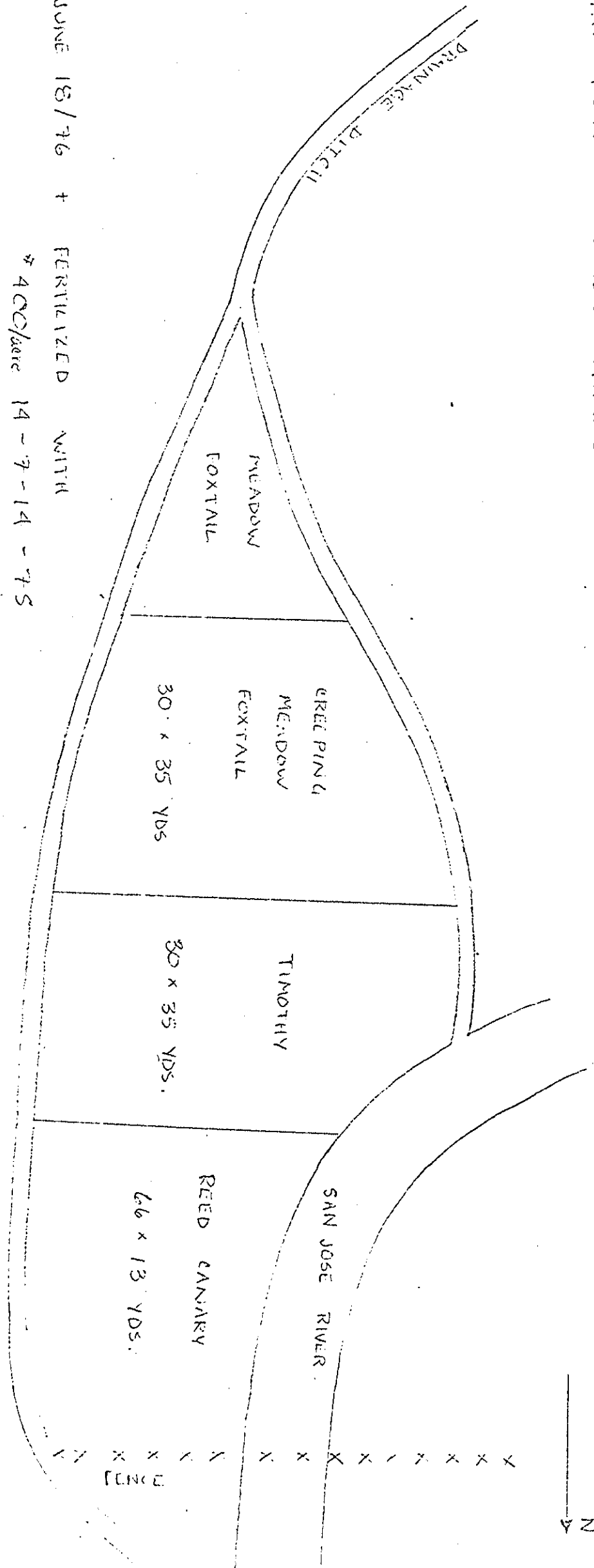
Andy Lendvov - Morrison Meadow
WETLAND VARIETY TRIAL

SUGARCANE MOUNTAIN

Seeded: Nov. 4, 1980



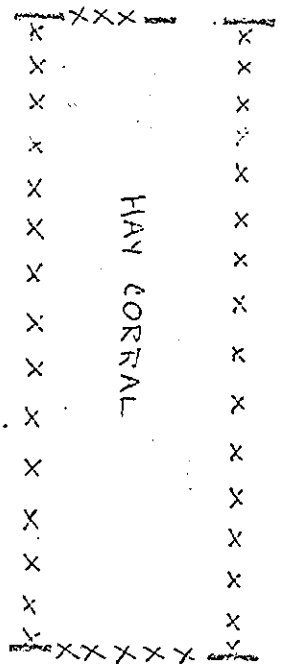
MAP FOR SPECIES TRIALS AT 134 MILE



ALSO JUNE 18/76 + FERTILIZED WITH # 400/acre 14-7-14-75

SPECIES

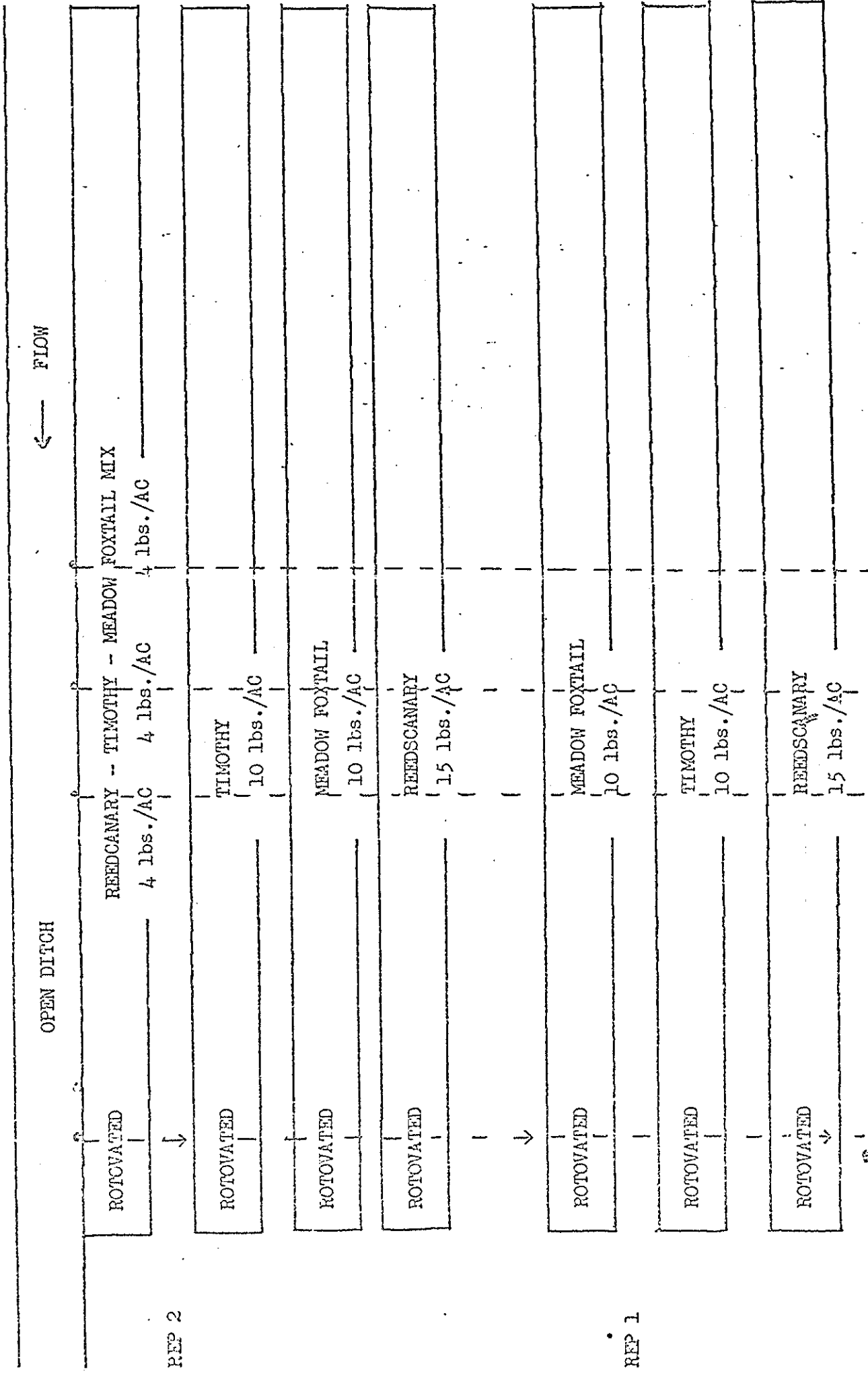
1. Reed Canary Grass (Canada #1) #12/acre
2. Timothy - climax #10/acre
3. Creeping Meadow Fox tail #12/acre
4. Meadow Fox tail #12/acre



W. DEAN - FLORENCE

OCTOBER 25, 1977

GRASS-VARIETY TRIAL



Demonstration Work

Title of Demonstration

Range Plant Variety Trails

Location

1. Dog Creek - Freding Ranch
2. Alkali Lake - Alkali Lake Ranch - 42 lbs or more 10 acre plot.
3. O K Ranch - Clinton *not reseeded, did poorly*
4. Janzens - Clinton *reseeded*
5. Macdonald's Ranch - Becher Prairie
6. Deer Park Ranch - Riske Creek

Treatments

A variety of grasses and legumes were seeded under dryland range conditions.

Site 1 and 2 seeded April, 1978.

Site 3 seeded July 10, 1980, Site 4 on June 26, 1980, Site 5 on July 21 and Site 6 on May 8, 1980.

Site 6 was established in co-operation with Dr. M. Pitt, U.B.C. Faculty of Agriculture.

Results and Observations

Sites 1 and 2 - excellent establishment of crested wheat, sainfoin, rangelander alfalfa, altai and swift wild rye. Productivity and nutritional analysis will begin in 1981.

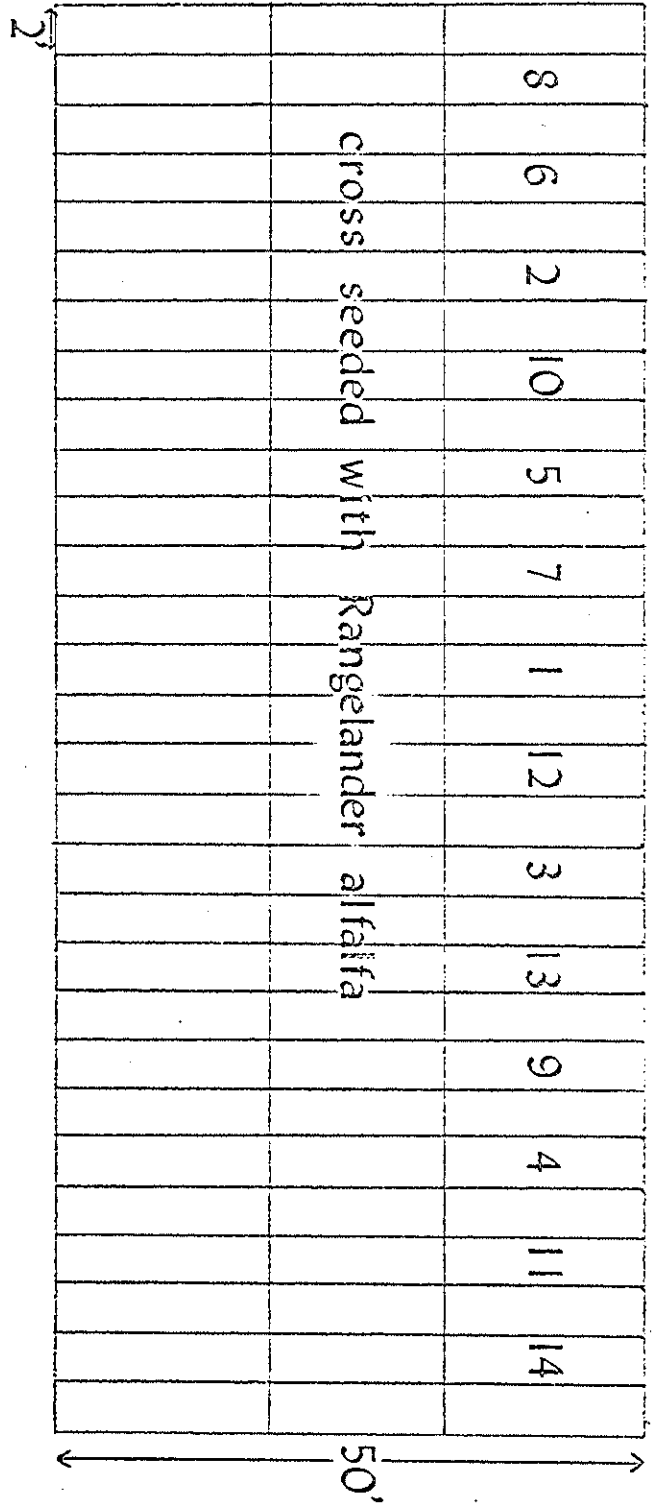
Sites 3 and 4 establishment has been poor, largely due to inadequate seed bed preparation and resulting severe competition from native plant species. Both sites to be disced and reseeded in 1981.

Sites 5 and 6 are slowly establishing.

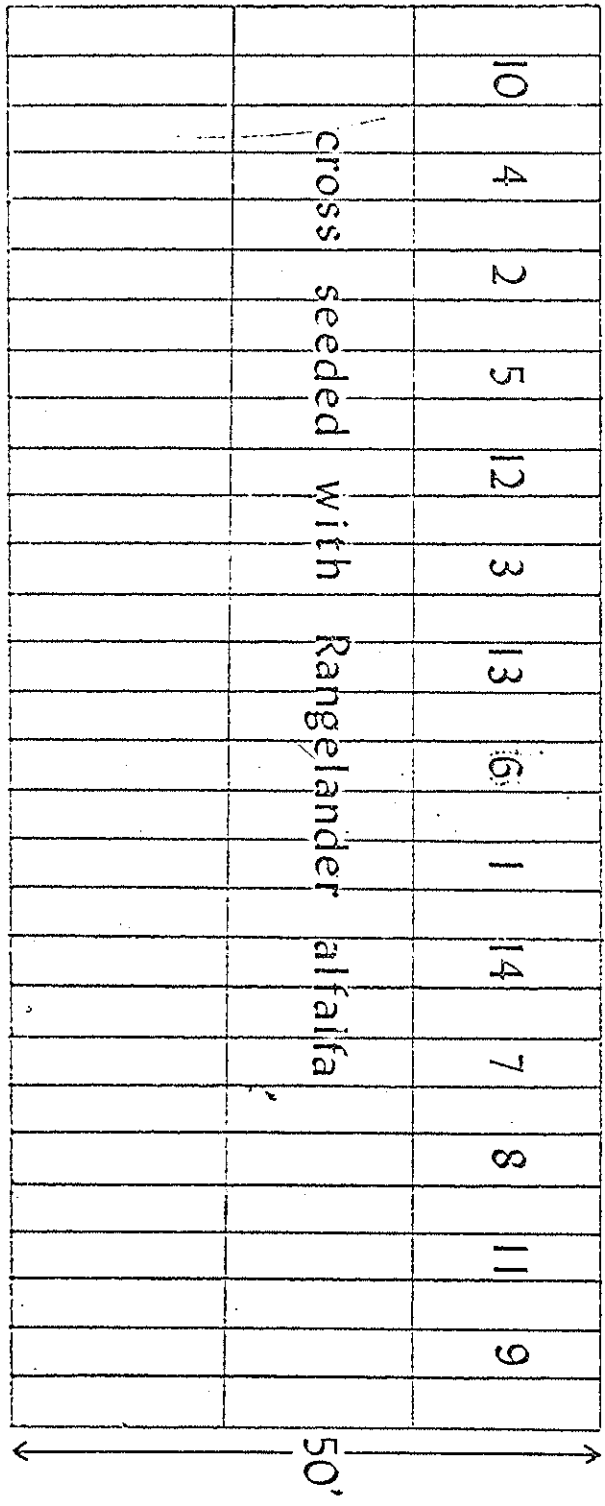
seeded - April 17, 1979

SPECIES

- 1 - Swift Russian Wild Rye
- 2 - Rough Fescue
- 3 - Nordan Crested Wheatgrass
- 4 - Sherman Big Blue
- 5 - Rangelander Alfalfa
- 6 - Whitmar Blue Bunch Wheatgrass
- 7 - Orchard Grass Stirling
- 8 - Altai Russian Wild Rye
- 9 - Drylander Alfalfa
- 10 - Cabree Russian Wild Rye
- 11 - Hard Fescue
- 12 - Intermediate Wheatgrass
- 13 - Sanfoin
- 14 - Pubescent Wheatgrass



Replicate 2



Replicate 1

Variety Trial Plot - Freding Ranch - Dog Creek
- Alkali Lake

DEER PARK RANCH MAY 6/80

seeded at 10 lbs/acre

UNFERTILIZED PLOT (FENCE LINE)

SHERMAN BIG GRASS	PRAIRIELAND ALTAI WILDRYE	LEMON'S ALKALI GRASS	NORDAN CRESTED WHEATGRASS	ROSNINA WESTERN WHEATGRASS	SHERMAN BIG BLUEGRASS	PRAIRIELAND ALTAI WHEATGRASS	ROSNINA WESTERN WHEATGRASS
ROSNINA ALTAI WILDRYE	LEMON'S ALKALI GRASS	NORDAN CRESTED WHEATGRASS	ROSNINA WESTERN WHEATGRASS	SHERMAN BIG BLUEGRASS	PRAIRIELAND ALTAI WHEATGRASS	ROSNINA WESTERN WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS
LEMON'S ALTAI GRASS	SHERMAN BIG BLUEGRASS	NORDAN CRESTED WHEATGRASS	ROSNINA WESTERN WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS	ROSNINA WESTERN WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS
LEMON'S ALTAI GRASS	SHERMAN BIG BLUEGRASS	NORDAN CRESTED WHEATGRASS	ROSNINA WESTERN WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS	ROSNINA WESTERN WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS

NORTH
↓

FERTILIZED PLOT

SHERMAN BIG BLUEGRASS	PRAIRIELAND ALTAI WILDRYE	LEMON'S ALKALI GRASS	NORDAN CRESTED WHEATGRASS	ROSNINA WESTERN WHEATGRASS	SHERMAN BIG BLUEGRASS	PRAIRIELAND ALTAI WHEATGRASS	ROSNINA WESTERN WHEATGRASS
PRAIRIELAND ALTAI WILDRYE	LEMON'S ALKALI GRASS	NORDAN CRESTED WHEATGRASS	ROSNINA WESTERN WHEATGRASS	SHERMAN BIG BLUEGRASS	PRAIRIELAND ALTAI WHEATGRASS	ROSNINA WESTERN WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS
LEMON'S ALTAI GRASS	SHERMAN BIG BLUEGRASS	NORDAN CRESTED WHEATGRASS	ROSNINA WESTERN WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS	ROSNINA WESTERN WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS
LEMON'S ALTAI GRASS	SHERMAN BIG BLUEGRASS	NORDAN CRESTED WHEATGRASS	ROSNINA WESTERN WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS	ROSNINA WESTERN WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS	PRAIRIELAND ALTAI WHEATGRASS

100'

50'

RANGEHANDLER ALTURA

SUIET WILDRYE

O.K. RANCH
 CLINTON, B.C.
 Alkaline Meadow
 seeded on July 10, 1980

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

← 30 feet		→ 40 feet ←	← 30 feet →	
Lemmon's	Rep 1	Sherman Big Blue	Rep 2	
Lemmon's		Sherman Big Blue		
Altai Wild Rye		Altai Wild Rye		
Altai Wild Rye		Altai Wild Rye		
Sherman Big Blue		Nordan CWG		
Sherman Big Blue		Nordan CWG		
Nordan CWG		Lemmon's		
Nordan CWG		Lemmon's		
Cabree Russian WR		Cabree Russian WR		
Cabree Russian WR	Cabree Russian WR			

JANZEN'S
CLINTON, B.C.

Grassland

seeded on June 26, 1980

← 30 feet →	← 10 ft →	← 30 feet →
Altai Russian Wild Rye	Rep 1	Whitmar Blue Bunch W.G.
Altai Russian Wild Rye		Whitmar Blue Bunch W.G.
Rangelander Alfalfa		Cabree Russian W.R.
Rangelander Alfalfa		Cabree Russian W.R.
Nordan Crested W.G.		Sanfoin
Nordan Crested W.G.		Sanfoin
Whitmar Blue Bunch W.G.		Sherman Big Blue
Whitmar Blue Bunch W.G.		Sherman Big Blue
Sanfoin		Swift Wild Rye
Sanfoin		Swift Wild Rye
Cabree Russian W.R.		Rangelander Alfalfa
Cabree Russian W.R.		Rangelander Alfalfa
Rangelander Alfalfa		Altai Russian W.R.
Rangelander Alfalfa		Altai Russian W.R.
Swift Wild Rye		Nordan Crested W.G.
Swift Wild Rye		Nordan Crested W.G.

← Road

Rep 2

M^CDonald's Ranch

Riske Creek

Grassland Range

seeded on July 21, 1980

← 50 feet → ← 10 ft → ← 50 feet →			
Nordan Crested WG	REP TWO	Altai WR	REP ONE
Nordan Crested WG		Altai WR	
Rangelander Alfalfa		Rangelander Alfalfa	
Rangelander Alfalfa		Rangelander Alfalfa	
Pubescent WG		Nordan Crested WG	
Pubescent WG		Nordan Crested WG	
Altai WR		Sherman Big Blue	
Altai WR		Sherman Big Blue	
Sherman Big Blue		Sanfoin	
Sherman Big Blue		Sanfoin	
Cabree		Swift WR	
Cabree		Swift WR	
Sanfoin		Pubescent WG	
Sanfoin		Pubescent WG	
Swift WR		Cabree	
Swift WR	Cabree		

Demonstration Work

Title of Demonstration

Wetland Fertilizer Calibration Trials

Location

Anahim Lake - Morrison Meadow Ranch - A. Lendvoy
- Nimpo Lake - B. Smith
134 Mile - both native and reed canary
Watch Lake

Treatments

At Anahim Lake both plots were seeded to reed canarygrass, allowed to establish, then treated with 7 fertilizer treatments on four replicas.

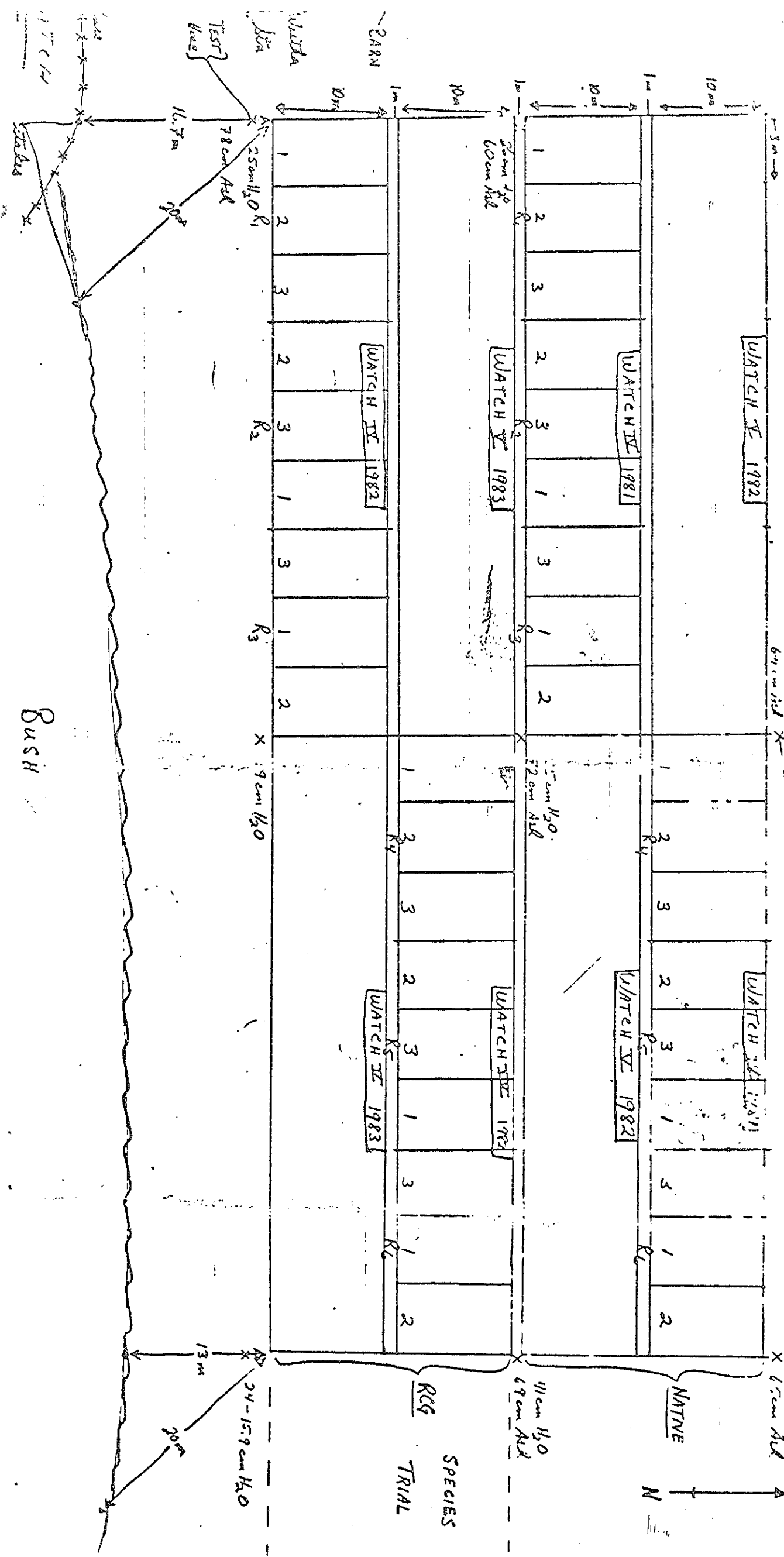
At 134 Mile and Watch Lake fertilizer like above was added to established stands and assessment of growth response of the reed canarygrass was monitored. In 1980 both air and soil temperatures were taken, as well as precipitation measurements. A weather station was also set up at Morrison Meadow Ranch.

Results and Observations

At both 134 Mile and Watch Lake the plot design was simplified for clippings to be taken bi-weekly on reed canary plots.

Anahim Lake plots were cut for yield data.

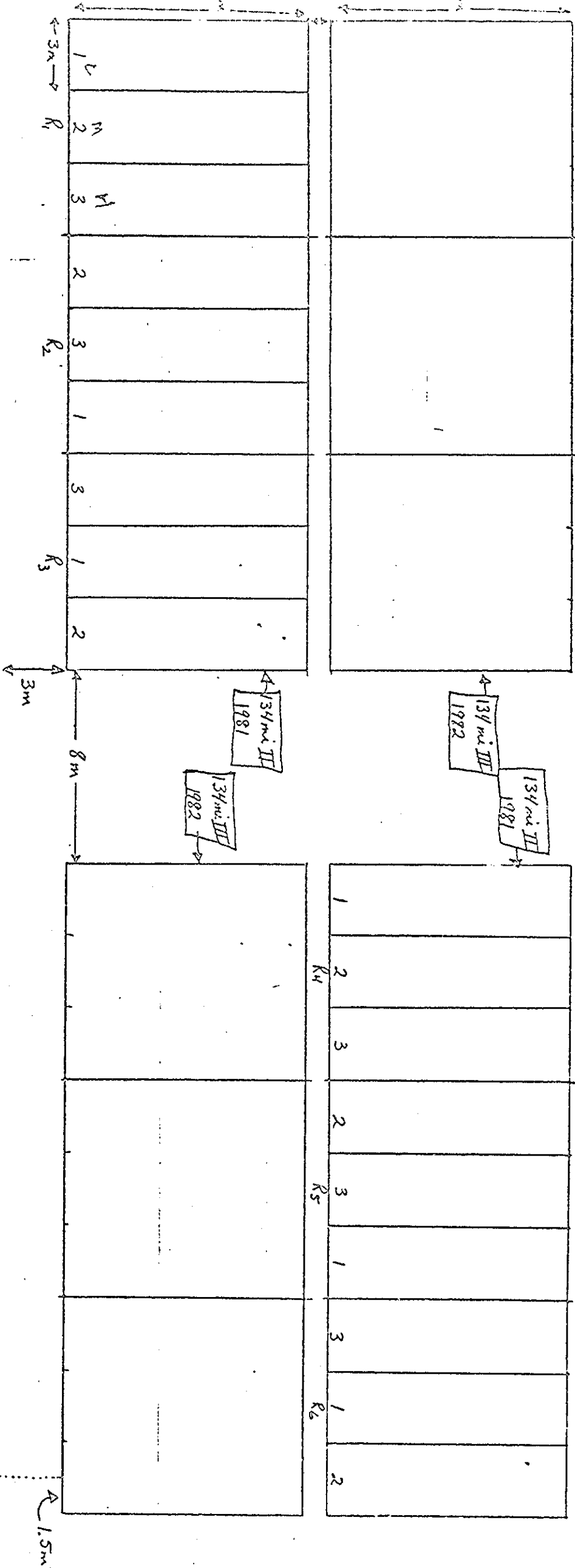
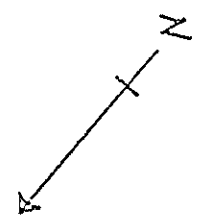
W0 (NOT TO SCALE) WATCH LAKE (III-IV) 56m



BUSH

N

134 FILE II & III (RCG only)



3 X 3 X 3

1974

FERT. RCG

TRIA

110'

3m

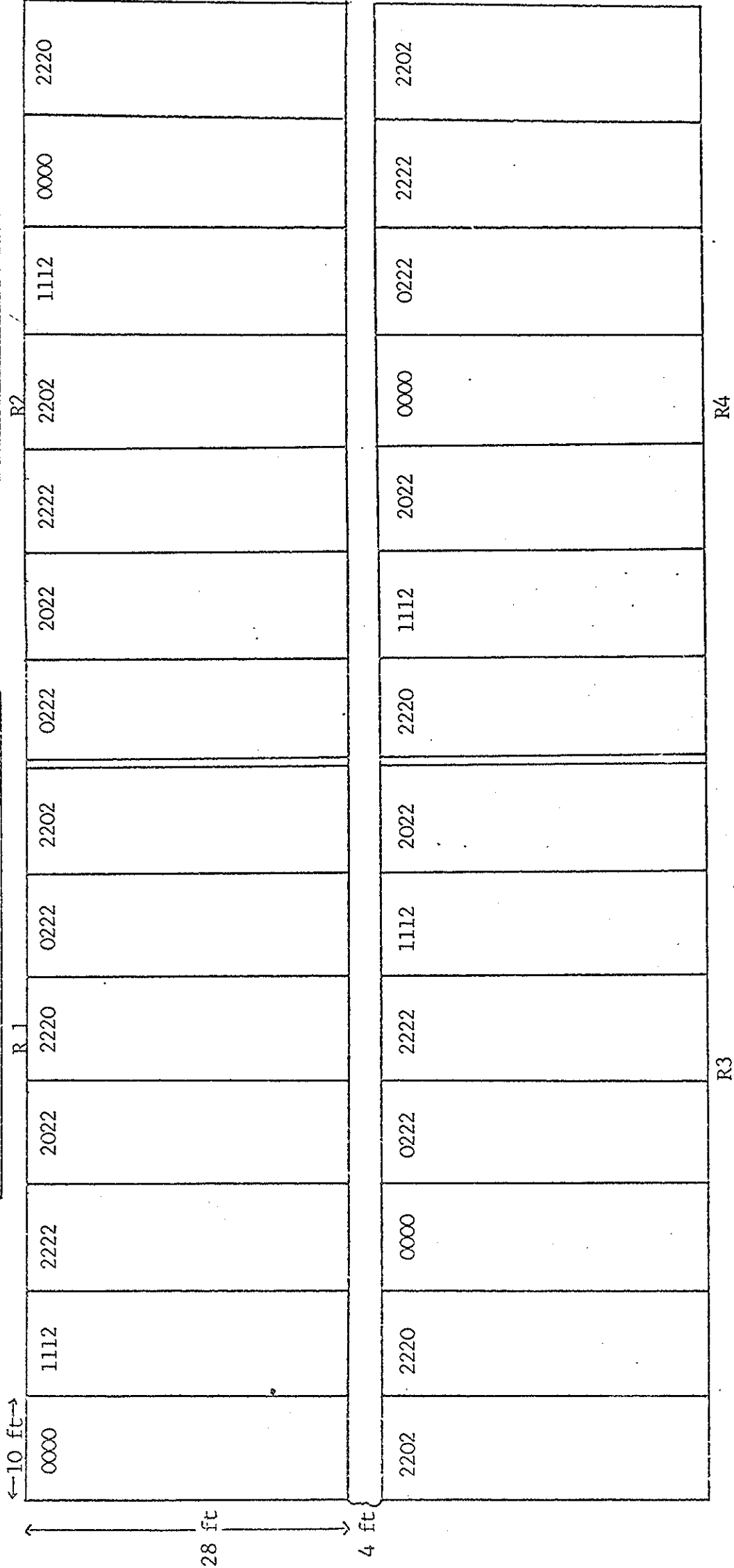
8m

1.5m

AGRICULTURE CANADA - B.C.M.A. (WILLIAMS LAKE) WETLAND FORAGE FERTILIZATION PLOT PLAN 2 SITES - ANAHIM LAKE

1) B. Smith Ranch - Est. Nov. 3, 1977
Reed Canary Grass

2) A. Lendvoy, Morrison Meadow Ranch - Est. Oct. 24, 1978
Reed Canary Grass



lbs./acre RATES OF ELEMENT OR OXIDE AS FOLLOWS

DESIGNATION	N	P ₂ O ₅ or P	K ₂ O or K	S
0	0	0	0	0
1	100	57	60	50
2	300	278	100	240
			200	68

Demonstration Work

Title of Demonstration

Fertilizer Crop Response Correlation

Location

Deer Park Ranch - Riske Creek

Al Bittner - Kleena Kleene

Treatments

Four replicas of 23 combinations of fertilizer on established stands of alfalfa and alfalfa grass (See Plot Plan).

Began in summer of 1980 and to continue til 1982.

Results and Observations

First years data not available.

DEER PARK RANCH
 A. BITTNER
 ALFALFA

1	23	22	2	8	5	7	6	3	4	14	13	9	11	15	10	12	18	20	17	19	21	16
401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423
22	23	1	7	3	2	5	4	8	6	11	15	10	12	13	9	14	19	16	21	20	17	18
301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	316	318	319	320	321	322	323
23	1	22	6	7	4	2	8	3	5	12	9	15	14	10	13	11	21	20	17	18	16	19
201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
1	22	23	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123

115'
 PLOT SIZE
 5' X 20'

Correlation Fertilizer Mixtures-Perennial Forage.
Weight (grams) per plot (5'x20')

Plot	N.P.K.S.B	N 34-0-0	P ₂ O ₅ 0-45-0	K ₂ O	S 0-45-0	Agrisul Required	Rate 68
1	0-0-0-30-3	0	0	0	0	34.78	14.65
2	0-120-120-30-3	0	278.45	208.8	3.9	30.9	14.65
3	30-120-120-30-3	92.2	278.45	208.8	3.9	30.9	14.65
4	60-120-120-30-3	184.3	278.45	208.8	3.9	30.9	14.65
5	90-120-120-30-3	276.6	278.45	208.8	3.9	30.9	14.65
6	120-120-120-30-3	368.7	278.45	208.8	3.9	30.9	14.65
7	150-120-120-30-3	460.7	278.45	208.8	3.9	30.9	14.65
8	300-120-120-30-3	921.5	278.45	208.8	3.9	30.9	14.65
9	60-0-120-30-3	184.3	0	208.8	0	34.78	14.65
0	60-15-120-30-3	184.3	34.8	208.8	0.49	34.29	14.65
1	60-30-120-30-3	184.3	69.6	208.8	0.97	33.81	14.65
2	60-60-120-30-3	184.3	139.2	208.8	1.95	32.83	14.65
3	60-90-120-30-3	184.3	208.8	208.8	2.92	31.86	14.65
4	60-150-120-30-3	184.3	348.0	208.8	4.87	29.91	14.65
5	300-300-120-30-3	921.5	696.0	208.8	9.74	25.04	14.65
6	60-120-0-30-3	184.3	278.45	0	3.9	30.9	14.65
7	60-120-15-30-3	184.3	278.45	26.1	3.9	30.9	14.65
8	60-120-30-30-3	184.3	278.45	52.2	3.9	30.9	14.65
9	60-120-60-30-3	184.3	278.45	104.4	3.9	30.9	14.65
0	60-120-90-30-3	184.3	278.45	156.6	3.9	30.9	14.65
1	60-120-150-30-3	184.3	278.45	261.0	3.9	30.9	14.65
2	300-300-300-30-3	921.5	696.0	522.0	9.74	25.04	14.65
3	300-300-300-0-0	921.5	696.0	522.0	9.74	0	14.65

Demonstration Work

Title of Demonstration

Goatsbeard Control Trial

Location

Becher Prairie

Treatments

100 lbs./acre of actual N (applied as 46-0-0) was applied November 1980 to both grazed and ungrazed plots.

Results and Observations

Both plots will be monitored in 1981 and 1982 to assess whether stimulation of the native grass species by nitrogen will detrimentally affect the goatsbeard.

Demonstration Work

Title of Demonstration

Crested Wheatgrass Fertilizer Trial

Location

Alkali Lake Ranch - Doug Mervyn

Treatments

Three rates of 46-0-0 (50-100-200 lbs./acre) have been applied to crested wheat grass seeded in October, 1980 with the rangeland disc and seeding equipment.

Results and Observations

Fertilized area to be monitored and compared to unfertilized control areas for productivity, effect on spring growth, fall regrowth and nutritional quality.

Demonstration Work

Title of Demonstration

Corn Variety Trial

Location

Deer Park Ranch - Riske Creek

Treatments

Five varieties were seeded June 10th and yields taken Oct. 12th.

Results and Observations

	<u>DM</u>	<u>Relative yield (index)</u>
P.A.G. 501	17.2%	112
Bx 110	18.3	105
Dekalb 24	14.8	91
NKPX 414	15.8	95
Pickseed 2111	18.7	97

Average yield was 10.6 tonnes/ha (4.67 tons/acre) P.A.G. 501 yielded the best and shows promise for this area. With better weed control, good fertilizing and earlier planting this variety and Bx 110 could yield very well.

Demonstration Work

Title of Demonstration

Yellow Rattlebox Control

Location

Ed Plummer - Big Lake

Treatments

On April 23, 1980 3 strip plots in heavily infested areas were applied, 250 lbs./acre of 16-20-0-15.

Results and Observations

Fertilizing supplies competition with rattlebox but does not provide a substantial control - results indicate that a combination of chemical, cultured and good forage crop management is needed for adequate control.