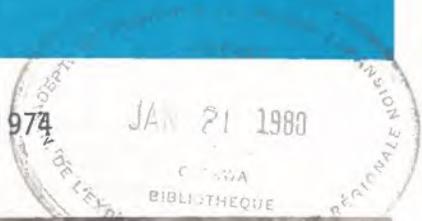




INTERLAKE FLYER

F.R.E.D. ADMINISTRATION, NORQUAY BUILDING, WINNIPEG

February, 1974



RECEIVED
MAR 24 1974
CANADA DEPARTMENT OF REGIONAL
ECONOMIC EXPANSION

Outlook

Forecasts from Agriculture Canada and the Manitoba Department of Agriculture indicate that beef prices will likely remain firm and the demand for dairy products should continue to increase in 1974. Feed grain prices will also remain at or near present levels, however, and it would appear that the profit margin for beef growers and dairymen can only be maintained by holding costs down.



The Canadian cattle herd increased in 1973 to a record high of over 14 million animals and the 1974 cattle numbers are expected to show a continued increase. This expansion reflects the rapid growth in breeding stock and the high number of calves now found on farms. On June 1, 1972 there were 60,500 breeding age beef cattle in the Interlake. A year later that number had increased to 67,920. This expansion can continue in spite of high feed grain prices because feeder cattle prices are still above earlier levels and the grain situation has only indirect influence on cow-calf operators. Calves born in the spring can be economically grazed until fall and then marketed.

The situation outlook from Agriculture Canada states, "Sales of fluid milk for fresh consumption are forecast to expand. Production and consumption of cheese is expected to increase in 1974 and exports may expand." The number of breeding age dairy cattle in the Interlake increased from 17,100 on June 1, 1972 to 20,940 on the same date a year later. Dairymen are also faced with the problem of how to produce enough to meet increased demand yet keep costs low enough to maintain a profit margin.

Interlake farmers are committed to livestock. The great amount of labor and capital that has been spent diversifying into livestock makes it unfeasible to suddenly jump out. Average per farm income from livestock in the Interlake has risen since 1971 from \$5,532 to \$7,996!

Although it's unlikely that many farmers are considering any major cattle expansion as long as the present situation continues, most beef men and dairymen are wondering how to maintain the herd that they have worked so hard to develop.

Staying in business--maintaining a profit margin and keeping production costs in line with market prices--means that the more expensive feed grain will have to be used to maximum efficiency. Grazing cattle on managed pastures may replace heavy grain feeding as farmers find that grassland weight gains are cheaper than gains from grain. Properly managed pastures will also allow dairymen to cut back on feed supplements for at least one third of the year.

Grassland Management — What It Means

If you remember the map coloring exercises from your school days, sit back for a moment and picture Manitoba in your mind. Color southern Manitoba--the part that is farmed--a combination of gold and green. Crop land is golden and pasture land, developed or undeveloped, is green. You'll find there is a surprising amount of green.

In fact, between 5½ and six million acres of land is rated as Class IV and Class V or most suited to growing grass for forage and pasture. If this land were cropped with grass and managed with as much zeal and tender loving care as grain land, it could feed at least three times as many cattle as are currently raised by Manitoba farmers and ranchers. That means good grazing for five months for 2,385,000 cows with calves and almost 700,000 heifers and steers.



The tripling of beef production is based on the following acreage allotment based on both summer and winter forage needs.

- one cow and a calf-- $3\frac{1}{2}$ acres
- beef heifer--2 acres per head
- beef steers--1 acre per head

Ridiculous? Not at all! Not if beef producers use sound and profitable grassland management techniques.

Grassland management may sound like a fancy term, and allowing only one acre per steer and $3\frac{1}{2}$ acres per cow with calf may seem unreal, but there is nothing fancy or unreal to the whole business. Farmers and ranchers who are members of grassland societies can vouch for that.

Grassland management anywhere in Manitoba simply means:

- Replacing low yielding, unreliable native grass with tame grass;
- Fertilizing both pasture and forage land to get top yields, just as a farmer fertilizes his grain to boost yields; (Don't waste your fertilizer dollar on native grass.)
- Rotationally grazing cattle from one field to another so the total pasture can be grazed from May to October.

Much as it might hurt a farmer's ego, grassland management is what the city resident who cares about his lawn, has been doing for years. He sows good tame grass varieties, and fertilizes the stand throughout the growing season. The only difference is that the city dweller never gets the chance to make money on his grass. He grazes it down with a power lawn mower, lets it recover, then grazes it again--right to freeze up.

Grassland management on the farm makes sense from a very practical point of view. Bill Henderson, livestock specialist with the Manitoba Department of Agriculture points out that:

- The longer summer grazing period cuts down the time the animals are in the feedlot. For those farmers with a breeder-feeder setup, the most expensive part of the routine is the feedlot phase. Shorten that period and a good deal of expense is saved.
- Grass is the cheapest source of energy and protein for cattle. Beef can be fattened and finished on grass so long as some grain is fed for a few weeks before marketing. Cows can be maintained in top condition while nursing a calf, with the result that March calves can weight in at 475 to 500 pounds at weaning in October.
- Grassland management means fewer acres of grazing or forage land per animal or, looked at from another angle, twice or three times the number of animals on the same acreage. Even though extra land is expensive and community pasture space is limited, beef men can still expand their herds without acquiring more land. Mixed farmers can grow more grain and still keep as many or more cattle.
- Dairy production can be maintained at stable levels throughout the summer with minimum, if any supplemental feeding. Dairy replacement heifers can be raised over two years rather than three years.

Grassland management techniques may differ in detail from region to region and from farm to farm so long as the basic principles are maintained. If you're in the beef or dairy business in Manitoba talk to farmers who have joined grassland societies or join a society by contacting the provincial department of agriculture's grassland or livestock specialist in your region.

Which Way To Go

Do you believe the old saying "The grass grows greener on the other side of the fence?" It may be true--especially if your neighbor has tame grass pasture and you still have plain old native grass.

If you don't believe the adage today, you might change your mind by mid-summer when your neighbor's cattle are grazing less acreage than yours and still gaining more weight. If you still don't believe it, reconsider again in September when you're feeding grain to your cattle and the other

guy is standing in his pasture with grass up to his rump and cattle grazing around him.

The fact that a managed pasture provides better grazing than a traditional native pasture has already been proven. The question now facing many farmers is "Just how far should I go with this management?"

There are three basic stages of pasture management. The Interlake Grassland Management System provides the most comprehensive and ideal grazing situation while sod-seeding and other variations of the Interlake System have been tried as alternatives. Upgrading and better management of existing native grass has also been tried as a secondary alternative to the recommended total management system.



The Interlake Grassland Management System, explained in greater detail on page 20, basically requires that the pasture be broken and prepared to seed bed standards, seeded to tame grass and fertilized, divided into smaller paddocks and then rotationally grazed. Tests conducted last summer on the Interlake Grassland Society pasture at Teulon have proven that cattle can be grazed for as many as five months out of the year and beef *gains* can be produced on grass for as little as 27 cents a pound! There is little doubt that this system, when properly followed, makes the most efficient use of pasture land and does the best job of "stretching the summer." A five-month grazing season means less grain feeding and lower costs to beef growers and dairymen.

A reasonable alternative to the total management system is the sod-seeding method which has also been developed in the Interlake. Farmers who are unwilling to invest the time and money required by the ideal system, or who are burdened with stony or saline land, have found it worthwhile to seed tame forage and alfalfa mixtures into native pasture. Although farmers in the past have attempted to introduce tame forage into such marginal native forage stands, it appears now that the key to success is in proper seed placement and fertilizing according to the soil test recommendations. The old method of tying a pail full of alfalfa seed to the mower seat just doesn't get the job done.

A trial carried out on Lundar-Clarkleigh type soil in the northwestern Interlake points out the relative merits of "breaking and seeding", sod-seeded and native forage stands. The trial consisted of three two-acre plots. The first plot was rotovated and seeded, the second plot was sod-seeded and the third plot was left in native grass. The mixture was seeded in mid-June and contained four pounds of alfalfa, three pounds of slender wheat, two pounds each of alsike, timothy and brome. One hundred pounds per acre of 11-48-0 was applied prior to seeding and fertilizer was broadcast each fall according to the soil test recommendations which called for 80 pounds the first year, 100 pounds the second year, 60 pounds the third year and 80 pounds the last year.

Yields, in hundredweight per acre, were:

<u>YEAR</u>	<u>ROTOVATED</u>	<u>SOD SEEDED</u>	<u>NATIVE</u>
First year	Preparation and seeding only.		
Second year	17.80	5.22	4.32
Third year	27.13	16.54	4.80
Fourth year	43.83	37.60	6.00
TOTALS	88.76	59.36	15.12

Two cuts were made in the final year of the trial.

The fully-prepared plot yielded 587 percent more forage than the native plot but only 150 percent more forage than the sod-seeded plot. The significant point is that the sod-seeded plot, which had received no special preparation or breaking, was able to yield 393 percent more forage than the native stand. In terms of getting the most for your money, this four-fold increase in yield would seem to represent the most economical gain. In terms of getting the highest production out of your land, however, rotovating and seeding is still the way to go about it.

In making a decision as to just how extensively he should manage his pasture and whether or not he should break the native sod, a farmer has to consider the ever-changing value of his land and then consider the continually increasing cost of properly preparing the pasture for seeding.



One acre of stony land like this can support a steer for five months if grassland management is employed

A farmer faced with stony or high salinity land, or who lacks adequate capital or machinery, may decide to forego the maximum production that can be obtained by "breaking and seeding" and sod-seed instead. If he can receive a four-fold increase in production by sod-seeding, the farmer is still better off than if he had left the native grass alone.

Time is another factor that may cause some farmers to opt for the sod-seeding method. To be fully effective, the Interlake Grassland Management System requires

that a great deal of work be done as soon as the machinery can get onto the field. Commitments to crops may prevent some mixed farmers from breaking their pastures and putting them into grass right away this spring. Wet conditions in many areas of the Interlake might also prevent farmers from breaking and preparing pasture for seeding. Sod-seeding provides a reasonable alternative to livestockmen in both situations. (Don't forget that even if you are pressed for time in the spring, much of the work can be done this summer for next year's totally-managed pasture.)

Remember, if you do graze your herd on heavy alfalfa pasture, an anti-bloat treatment should be used.

Although the long-term outlook for beef growers and dairymen may be good, producers are faced with the problem of how to maintain their herd and keep producing right now--despite escalating production costs. Cattlemen are looking for the most efficient means possible to raise beef and keep dairy cows producing.

The relatively high cost of wintering cattle now makes cow-calf operations seem more feasible.

March calves grazed on properly managed pasture can be brought up to 500 pounds by October. If it appears that beef prices will rise sufficiently or that feed prices will drop enough to maintain the profit margin, the farmer can then enlist in the MACC Stocker Program and winter the weaned calves himself.

The wintering procedures outlined by the Interlake System calls for a feed ration that will grow out the frame rather than actually fatten the animal. This system consumes less grain and allows the calf to develop a good healthy frame that is ready for grassland weight gain come spring. The success of such an operation depends upon stretching the summer and putting on as many cheap grazing pounds as possible.

Farmers should be aware of the new Crown Lands improvement policy which allows a farmer to lease government-owned land on a lifetime basis and make improvements on that land. Costs of clearing land, sod-breaking, reseeding and sod-seeding will be either assumed by the Manitoba Department of Agriculture, or credited to the lessee.

Improvement of native grass has been tried with a definite increase in production but it hasn't been determined yet that the results are economically worthwhile. The Oak Lake Grassland Society conducted an experiment last summer on a quarter section of weedy native pasture. After the weeds had been removed in the test area, at a cost of \$2.25 an acre, the pasture was fertilized according to soil test recommendations. This cost an additional \$7.70 an acre. The sprayed and fertilized portions of the pasture yielded 1640 pounds of dry matter. The pasture was intentionally undergrazed and the trial didn't get underway until mid-summer so it's difficult to interpret the results in terms of cents per pound of weight gain.

A five-year study of upland pasture, carried out by the Agriculture Canada Research Station at Brandon, points out that recovery of native grass is not dependable and 80 percent of the potential yield is used up before mid-July. The study also points out that even though fertilization increased the yields six to 14 percent, this was considered uneconomic.

By all present indications, management of tame forage, "breaking and seeding" or sod-seeding is the best way for beef growers and dairymen to make their industry economically viable.

The Robust Ones

At the University of Manitoba, plant scientists occasionally display a primitive wheat, known by its Latin name as *Triticum Dicoides*. One glance at the skinny, anemic spikes and the shrivelled seeds is enough to make most farmers wonder aloud why early man ever settled for wheat growing. Compared to our well-bred, heavy-headed, strong-strawed wheat varieties of today, poor old *Triticum Dicoides* is a second rate shadow.

But many of the same people who snort in disgust at this earliest wheat rely on primitive, unimproved native grasses to feed their cattle. The cultivation of the native grasses today is no more advanced than the production of the first cereals several thousand years ago. The early farmers and herders had an excuse, of course. There was nothing better. Today there are alternatives--well-bred, productive tame grasses and legumes suited to our climate and variety of soil conditions and highly responsive to good management practices.

Tame grasses and legumes have a great deal going for them. Without fertilizing, tame grasses yield twice as much as native pastures, while tame grass-alfalfa mixtures yield eight times more dry matter as native forage.



Now add fertilizer. Native grasses barely respond. At least the result is not worth the cost and time of fertilizing. Tame grasses don't behave that way at all. With routine spring fertilizing, yields can be tripled in the Interlake. With a little imagination and savvy about the behavior of grass and with applications of nitrogen about every two months during the grazing season, pasture yields can be boosted many fold beyond the normally accepted production.

Tame grasses and grass-legume mixtures last longer in the grazing period. By mid-August when native grasses have lost their punch, there's still good growth left in the tame species. Add the fertilizer to the tame grass stands again and you'll have good pasture until freeze-up.

Tame grass-legume mixtures are relatively high in protein and total digestible nutrients and are the best source of quality winter feed. Cattlemen who hope to stay in business without facing a winter feeding crisis, depend on tame forage.

In the Interlake, the eyes of many beef and dairy producers are on a once little known grass species which was previously considered unsuited to Manitoba. Orchard grass has demonstrated, at least over the past three winters, that it can take the chills and unseasonable thaws and still persist in producing fine, succulent leaves in profusion. Orchard grass has cracked the recommendation list for the first time. So far it's recommended only for the Interlake, but field scale, pasture tests are going on in other regions so its fame may very well grow.

There's quite a shopping list of tame forages for Manitoba farmers to choose among. For both hay and pasture, mixtures are the best bet. The latest agronomists' report makes these recommendations.

<u>MIXTURE</u>	<u>USES</u>	<u>SEEDING RATE</u> lbs/acre (kg/ha)	<u>TIME TO HARVEST</u>
<u>A. ALL SOILS EXCEPT WHERE DRAINAGE IS POOR</u>			
Bromegrass and Alfalfa	Hay, Pasture	6 (7) 3 (3)	Alfalfa in early bloom
Intermediate Wheatgrass and Alfalfa	Hay, Pasture	6 (7) 3 (3)	Alfalfa in early bloom
Russian Wild Ryegrass and Alfalfa	Pasture	5 (6) 3 (3)	
<u>B. SOILS WITH AMPLE MOISTURE, GOOD DRAINAGE</u>			
Orchard grass and Timothy*	Hay, Pasture	6 (7) 2 (2)	Early heading
Timothy and Alfalfa	Hay	2 (2) 3 (3)	Alfalfa in early bloom
<u>C. LIGHT SOILS AND AREAS DEFICIENT IN MOISTURE</u>			
Crested Wheat and Alfalfa		7 (8) 2 (2)	Alfalfa in early bloom

* Interlake area only. Fertilize as for pure grass stands.

There are few areas of the province where grasses and legumes are "road tested" on a field scale, but variety test plots of smaller sizes are scattered throughout Manitoba. Mainly on the basis of these come the recommendations for tame grass and legume varieties.

Recommended for 1974 are these grass varieties.

Bromegrass	Crested Wheatgrass
Carlton (Northern type)	Nordan
Lincoln (Southern type)	Parkway
Magna (Intermediate type)	

Intermediate Wheatgrass
Chief

Russian Wild Ryegrass
Sawki

Slender Wheatgrass
Prima
Revenue

Tall Wheatgrass
Orbit

Meadow Fescue
Ensign
Trader

Orchard Grass
Frode
Kay
Tardus II
Rideau

Timothy
Champ (Pasture type)
Climax (Hay type)

Legume varieties recommended are.

Birdsfoot Trefoil
Empire
Leo

Sweet Clover
Arctic (White blossom)
Polara (White blossom)
Yukon (Yellow blossom)

Alfalfa
Beaver (Hay type)
Rambler (Pasture type)
Roamer (Pasture type)
Saranac (hay type)

A part of the good management of forage crops is use of fertilizer. To date, most testing work has been on fertilizing forage mixtures used for hay production. Only in the Interlake have notable efforts been made over several seasons to fertilize pasture periodically over the summer. Thus the fertilizer recommendations made by the Manitoba agronomists are based on annual applications of fertilizer.

For legumes or mixtures containing over 25 percent legumes, the annual general recommendation is--

	ANNUAL RATE OF NUTRIENT TO ADD		
	Nitrogen	P ₂ O ₅ (Phosphate)	K ₂ O (Potash)
	lbs/acre	lbs/acre	lbs/acre kg/ha
New Stands	0	35-50	* *
Established stands	0	35-50	* *

* Sands and sandy loam soils are frequently low in available potassium. A soil test is recommended or apply 30-60 lbs/acre (34-67 kg/ha) of potash (K₂O).

Sulphur deficiency in legumes may occur when they are grown on greywood or well-drained, sandy soils. Under these conditions 10-25 lbs/acre (11-28 kg/ha) of sulphur is recommended.

For grasses or mixtures containing less than 25 percent legume, the annual general recommendation is--

	<u>ANNUAL RATE OF NUTRIENT TO ADD</u>					
	Nitrogen		P ₂ O ₅ (Phosphate)		K ₂ O (Potash)	
	<u>lbs/acre</u>	<u>kg/ha</u>	<u>lbs/acre</u>	<u>kg/ha</u>	<u>lbs/acre</u>	<u>kg/ha</u>
New stands						
Fallow	0-20	0-22	15-25	17-28	*	*
Stubble	40-60	45-67	15-25	17-28	*	*
Established stands	75-100	84-112	15-25	17-28	*	*

* Sands and sandy loam soils are frequently low in available potassium. A soil test is recommended or apply 30-60 lbs/acre (34-67 kg/ha) of potash (K₂O).

Grassland Societies Foraging Ahead

"What are these grassland societies, anyway, and what do they do?" As word of the Interlake Grassland Society gets around, more and more Manitoba farmers are asking this question.

Basically, a grassland society is a group of cattle producers who get together and form an organization because they want to learn more about pasture management. Through the society they are able to obtain information on the theories of grassland management and technology as it relates to raising livestock.

But grassland societies don't stop at theory, by any means. First hand demonstrations mean a lot more than words and numbers on paper. Actual trials are carried out using members' own cattle.

Precise records are kept which document each animal's progress, and *every* input that goes into the pasture or the cattle goes on record. In this way, members have a clear picture of *all* the costs that are involved in raising an animal and they can determine what procedures are economically worthwhile and what's a waste of time and money. Few farms in Canada keep such a complete account of their operation. The projects themselves might range from a ten-acre experimental plot on a member's farm to a five-year, totally comprehensive beef or dairy demonstration on a half section of leased land.

The societies and projects don't just spring up in April and go into hibernation in the fall. Some trials might call for careful management and checking of livestock over the winter months. The monitoring of grassland projects may mean regular weight gain checks, dairy production and quality tests or health and fertility checks all year round.

The important point to remember is that grassland societies are primarily concerned with livestock--pasture management is only the means to a better livestock operation. Grassland societies are not co-ops, marketing organizations or producer bargaining groups. Grassland societies are demonstration groups designed to show farmers how, by managing their grazing land, they can better their operation.

"Who runs grassland societies, how do they operate and who can join?" For five dollars, any farmer can join a grassland society, have a say in how the projects will be run and perhaps participate in a demonstration.

The societies are set up by the Manitoba Department of Agriculture in areas where farmers express such a desire or it's felt that a need for such an organization exists. The grassland society operates with an annual grant from the Department of Agriculture and a grassland specialist from the department will be assigned as project manager for each society.



The grassland specialist will help the society analyse the specific needs within the area and will recommend projects that might be of particular benefit to the members. He will manage any major projects undertaken by the society and will assist in the management of any smaller demonstrations on members' farms. The grassland specialist will also be responsible for the monitoring of the projects and coordination of business transactions of the society such as seed buying and marketing of demonstration cattle.

The executive of the society are farmers who are elected by the general membership. Periodical open house days, an annual meeting and a regular newsletter help keep members in touch with what's happening. The demonstration projects, of course, are open for public viewing.

By limiting the grassland societies to a regional organization, they will remain flexible enough to pattern their projects to meet the needs of their area. This also gives farmers from the different districts within a region an opportunity to get together and exchange information on how the various recommendations work out under different circumstances.

The Interlake Grassland Society was the first in Manitoba and succeeding societies are patterning themselves after the Interlake organization. The comprehensive reporting system worked out by the Interlake Grassland Society is also being standardized and adopted by the other societies. In this way the different organizations have a common means of exchanging information.

Interlake Grassland Society supervisor Peter Jones will soon be responsible for organizing and coordinating grassland societies in all regions of Manitoba. Although he will still be available to the Interlake society for consultation, his primary duty will be the coordination of all grassland societies in the province. Four societies have been formed since the Interlake society was initiated and it's possible that more will sprout up in Manitoba.

The Eastern Grassland Society was organized last May and already has more than 30 members. This organization has its headquarters in Beausejour and its first grassland project is located 14 miles south of St. Pierre on PTH #59. The objective of the society is to demonstrate how pasture management and rotational grazing can achieve cheaper beef gains than other methods. Regional agronomist Frank Pitura reports that the Eastern Grassland Society is following the basic Interlake system with variations in the rotational recommendations.

The Oak Lake Grassland Society was formed late last June and work on their demonstration project, located two miles north of Oak Lake Beach, got underway by mid-summer. Project technician Garth Graham says that the society set as its objective to demonstrate the practical management techniques required to provide maximum return in pounds of weaned calves and to provide a 365-day feed supply for the cow herd. Their initial experiment last summer was with improved native pasture but they will be working with a totally managed tame grass pasture this year.

The St. Claude Grassland Society, with head office at Portage la Prairie, has been going strong since last summer with a dairy heifer replacement project. Working with the Dairy Herd Improvement Association, the society is demonstrating how a heifer can be brought up to 800 pounds within 15 months so it can calve by two years. In this way, a dairyman can gain a whole year over the present system and at 10,000 pounds annual production from a milking cow, that means extra money. Although this demonstration is similar to the one the Interlake Society is carrying out, the St. Claude Grassland Society is incorporating corn into their program. Regional agronomist George Bonnefoy explains that silage is being fed as part of the winter ration and the heifers will actually be grazed on ten acres of corn next summer. The project site is located two miles south and two miles east of St. Claude.

The Midwest Livestock Improvement Association got together in late February and the 38 members decided to initiate a yearling calf grassland project. They have already leased a quarter section of land ten miles west of Binscarth, purchased their fence, seed and fertilizer and they expect to get the yearling calves out to the new pasture by mid-June.

Regional agronomist Jim Woods explains that the organization is concerned with pasture management as it relates to year-round herd maintenance and long-term herd development. They will be dividing the pasture into four equal paddocks but 25 percent of the available land will be used for oats and rye. The pasture areas have already been rotovated and seeding should begin as soon as machinery can get onto the land.

If you're interested in grassland societies and want to become a member, contact the grassland specialist or livestock specialist for your region or call your local Ag. Rep. office. In the Interlake see Herb Kernsted at Teulon.

The Dollar Story Of Grassland Management

Two related questions quickly come into a cattle producer's mind when anyone talks of changing his style of raising beef stockers, market beef or replacement dairy heifers. How much is it going to cost me per pound to get my animals to the point where I sell them? How much money am I going to make per acre of land tied to cattle raising?

The first question is the fundamental one of profits or losses from the livestock business. The second question is raised when farmers and ranchers discover the costs of inputs into good pasture. They then wonder if their returns might not be as high, and their costs less, if they used the land for crop production instead. The point is, that the land that produces outstanding pasture will not necessarily produce good crops year after year, so there may not be any real alternative.

Quite frankly, under the Interlake Grassland Management System as tested to date, no cost and income figures can be given on a cow-calf operation. So far the testing has been done on market beef--partly to demonstrate the value to regional farmers and ranchers of finishing their own cattle rather than selling them off as stocker and feeder calves. A dairy replacement heifer project was started last summer, but figures were not compiled.

On the market beef project, detailed and accurate figures are available, however. Based on feed prices in the 1972-73 winter (much lower than this year) and on pasture costs over the past summer, the Interlake Grassland Society can show that each pound of gain over the winter cost 35 cents, and 27 cents to 28 cents over the summer. Naturally, this does not tell the whole story since any producer must consider total costs of raising an animal and not just the costs of each pound of gain. Considering the total value of each animal and the total costs of all the inputs, including interest charges, the break-even point was 38 cents per pound.

Looking at the figures in more detail, here's what the cost and income picture looked like over the 1972-73 full cycle.

WINTER BUDGET 1972-73 FOR WEANED STEER CALVES

Winter period, November 1 - May 15 = 195 days.		
Average weight - 471 pounds @ 45¢/lb. (1972)		\$212.00
<u>RATION:</u> *8 lb. alfalfa hay @ 1½¢/lb.	\$23.40	
4 lb. grain @ 2¢/lb.	15.60	
5 lb. straw @ 1/3¢/lb.	3.24	
Salt and minerals	.95	
Vet care (supplies and visits)	1.95	
Death loss	-	
Yardage - 12¢/head/day (Labor and Depreciation)	23.40	
	<u>\$68.54</u>	<u>68.54</u>
		\$280.54
Interest on \$280.54 @ 8% for 195 days.	<u>11.99</u>	<u>11.99</u>
Total winter cost/head	\$80.53	
TOTAL COST TO DATE		\$292.53

Some points to emphasize in the figures are these:

- The figure of \$212 is the average value of each steer placed in the feedlot in November, 1972 based on market values at that time.
- It cost an average of \$68.54 to feed and house each steer for 195 days in the feedlot phase.
- On the average, the steers gained 231 pounds that winter on a growth ration (not a finishing ration). The average cost of each pound of winter gain was 231/\$80.53 = 35 cents per pound.

SUMMER PASTURE COSTS

	<u>Straight Grass</u>		<u>Grass Alfalfa</u>
3 acres Fall Rye @ \$19.10/acre	\$ 57.30	30 acres alfalfa @ \$81.80 =	\$ 57.30
30 acres grass @ \$59.27/acre	1778.10		<u>2454.00</u>
<u>33 acres of costs</u>	<u>\$1835.40</u>		<u>\$2511.30</u>
<u>OR</u>	\$55.62	. . . PER ACRE . .	\$76.10
Interest on cattle investment	13.13	. . PER ACRE . .	<u>14.57</u>
TOTAL VARIABLE COSTS	<u>\$68.75</u>		<u>\$90.67</u>

SUMMARY OF PASTURE COSTS PER ACRE

	<u>Grass Pasture</u>	<u>Grass/ Alfalfa Pasture</u>
Pasture establishment--costs (amortized over 5 years)	\$ 3.86	\$ 4.22
Interest on land investment (rent and taxes)	6.22	6.22
Depreciation on facilities (corral, fence and water) (amortized over 10 years)	1.70	1.70
Interest on fixed costs (corral, fence and water)	1.42	1.42
Total variable costs	<u>68.75</u>	<u>90.67</u>
	\$81.95	\$104.23

Points of note include:

- This is the second year of the pasture project at Teulon and while establishment costs were not paid out directly, it must be assumed that these costs must be acknowledged. They are calculated into the budget on the basis of a five-year life for the pasture stand and a 10-year life for the facilities.
- Every farmer pays a tax or fee for use of land, and this must be charged against the enterprise for which the land is used.
- Fertilizer costs on the straight grass pasture were \$21.05 per acre, while fertilizer on the grass/alfalfa pasture cost \$26.25 per acre.
- Grain fed in the early spring and from July to October cost \$14.78 per acre for cattle on the grass pasture and \$20.24 per acre for cattle on the grass/alfalfa pasture.
- Two animals of the 42 on the grass/alfalfa pasture died of bloat and must be charged against this pasture. One animal from the herd on the grass only pasture died of excessive grain intake and was charged against this pasture.

BEEF PRODUCED FROM BOTH PASTURES IN 1973

	<u>Grass Pasture</u>	<u>Grass/Alfalfa Pasture</u>
Total lb. of beef produced	10,105	12,430
Total lb. of beef produced per acre*	306	377
Total cost of production per acre	\$81.95	\$104.23
Cost per lb. of gain	.27	.28

*This figure will be somewhat lower because of the contribution from grain fed at pasture.

\$ RETURNS PER ACRE IN 1973

	<u>Grass Pasture</u>	<u>Grass/Alfalfa Pasture</u>
Average selling price/pound	46.64¢	46.64¢
Cost per pound of gain	26.78¢	27.65¢
Margin/pound	19.86	18.99
Total beef produced per acre	306 lb.	377 lb.
<u>Net</u> return to summer labor per acre	\$60.77	\$71.59

Points of Note:

● Net returns per acre from Class IV land generally unsuited to grain production, but capable of supporting an excellent pasture were \$60.77 per acre producing straight grass and \$71.59 per acre producing grass/alfalfa. It must be stressed that these are the returns after accounting for all costs.

Looking again at all costs that must be considered by a cattle producer, including the value of his animal, here's what it cost per pound and per head in the summer of 1973 to pasture an animal using the Interlake Grassland Management Method.

BEEF PRODUCTION IN 1972-73

(Costs per head)

GRASS PASTURE

Cost of yearling @ 702 lbs.	=	\$292.53	
Cost of pasture gain 241 lbs.	=	<u>64.53</u>	
Total cost of 943 lb.	=	\$357.06	<u>OR</u> 37.86¢ per lb.

GRASS/ALFALFA PASTURE

Cost of yearling @ 702 lbs.	=	\$292.53	
Cost of pasture gain 312 lbs.	=	<u>86.14</u>	
Total cost of 1014 lbs.	=	\$378.67	<u>OR</u> 37.34¢ per lb.

COSTS PER HEAD

Cost of production 943 lbs. x 37.86¢	=	\$357.02	<u>GRASS PASTURE</u>
Gross sales 943 x 46.64¢	=	<u>439.82</u>	
Return to labor	=	\$ 82.80	PER HEAD
Cost of production 1014 lbs. x 37.34¢	=	\$378.63	<u>GRASS/ALFALFA PASTURE</u>
Gross sales 1014 lbs. x 46.64¢	=	<u>472.93</u>	
Return to labor	=	\$ 94.30	PER HEAD

Peter Jones, regional forage specialist for the Interlake, points out that the cost picture is much different this year than last. Hay and feed grain prices have risen considerably along with an increase in the value of each animal in the feedlot. His estimate is that a winter feeding break-even price for feedlot operators simply feeding a growth ration has risen at least 20 cents per pound in one year.

Such a rise in feedlot costs makes it even more imperative that cattle producers use their grasslands as efficiently as possible so that the bulk of the gain can be made on the cheapest commodity--good grass. It is even more essential to pasture animals on good grass for as long as possible. Only sound grassland management makes this possible.

The Interlake System — Give It A Try

The Interlake grassland management system has focused mainly on fattening and finishing market beef, and growing replacement dairy heifers in as short a time as possible, using grass as much as possible and getting as much production from each acre of land as possible.

Ranchers and farmers, with the help of the provincial department of agriculture are together trying to find the least costly way to raise cattle using land once thought marginal at best. The system that has been developed over the last three years will work equally as well for the cow-calf operator with only a few winter ration changes. Since the testing being done at the Interlake Grassland Society Pasture at Teulon is kept on a practical level with on-farm situations in mind, any livestock producer can adopt the techniques on his own farm with his own herd.

The following step by step outline has been put together in cooperation with Peter Jones, the Interlake Region forage specialist. A publication outlining much the same thing has been printed and is being distributed across Manitoba.

Livestock producers who want to convert to grassland management could well fit into two broad categories:

- 1) those who already have cultivated land ready for grass;
- 2) those who will have to break native sod or sod-bound tame pasture.

Let's look at No. 1 first. That is those who have land ready to go and can order their grass seed at any time. These farmers should place orders for orchard grass on the basis of six pounds per acre and timothy at two pounds per acre.



Interlake Grassland Society pasture at Teulon. P.T.H. #3 runs through right of photo.

Step by step from this point the procedure is as follows.

APRIL-MAY

● Soil test as soon as the frost is out of the ground to the two-foot depth. Your extension agent or fertilizer dealer can tell you about sampling soil for a test or get a copy of the booklet, Soil Testing, The Key to More Efficient Fertilizer Use. Send samples to the Provincial Soil Testing Laboratory, University of Manitoba, Winnipeg, Manitoba--R3T 2N2. (A fertilizer test will cost \$6.00.)

● Prepare the land. Work up the soil with a disc, cultivator or whatever combination of tillage equipment you find gives you a fine, firm seedbed. Remember your aim is a fine, firm seedbed.

● Seeding. Seed the grass as early as possible using a press drill. Pack the seedbed first if necessary. Sow a nurse crop of oats first at a depth of 1½ inches. Next, cross-seed the grass no deeper than 1/2 inch. Use a logging chain behind the drill or very light harrows to finish.

● Fertilize. Drill in 100 pounds of 11-48-0 with the grass seed. A successfully proven recommendation on low phosphate soils in the Inter-lake is 100 pounds of 11-48-0 per acre.

Three weeks after seeding spread 50 pounds per acre of actual nitrogen.

JUNE

● Sub-divide the pasture into four to six paddocks using a two-strand electric fence.

If a perimeter fence is needed, consider building a four-strand "suspension" fence with posts every 100 feet with wire vertical connectors every 20 feet.

● Install central watering facilities and feed troughs and a handling corral in a shaded area. Put up posts for insect control dust bags containing Co-ral.

LATE JUNE-EARLY JULY

● Graze the oats and new grass rotationally, moving the cattle from paddock to paddock about every 6 days. Grazing rate this first season should be about two acres per animal. Don't be afraid to leave grass behind. This speeds up recovery.

● Apply 60 pounds of actual nitrogen per acre after the first or second grazing.

AUGUST

● Feed rolled oats to supplement grazing. The ration should start at two pounds per head per day and be increased over two to three weeks to six pounds per head per day.

● Sow fall rye.

SEPTEMBER-OCTOBER

● Market those steers and heifers that weigh between 950 to 1100 pounds, or when they are well finished.

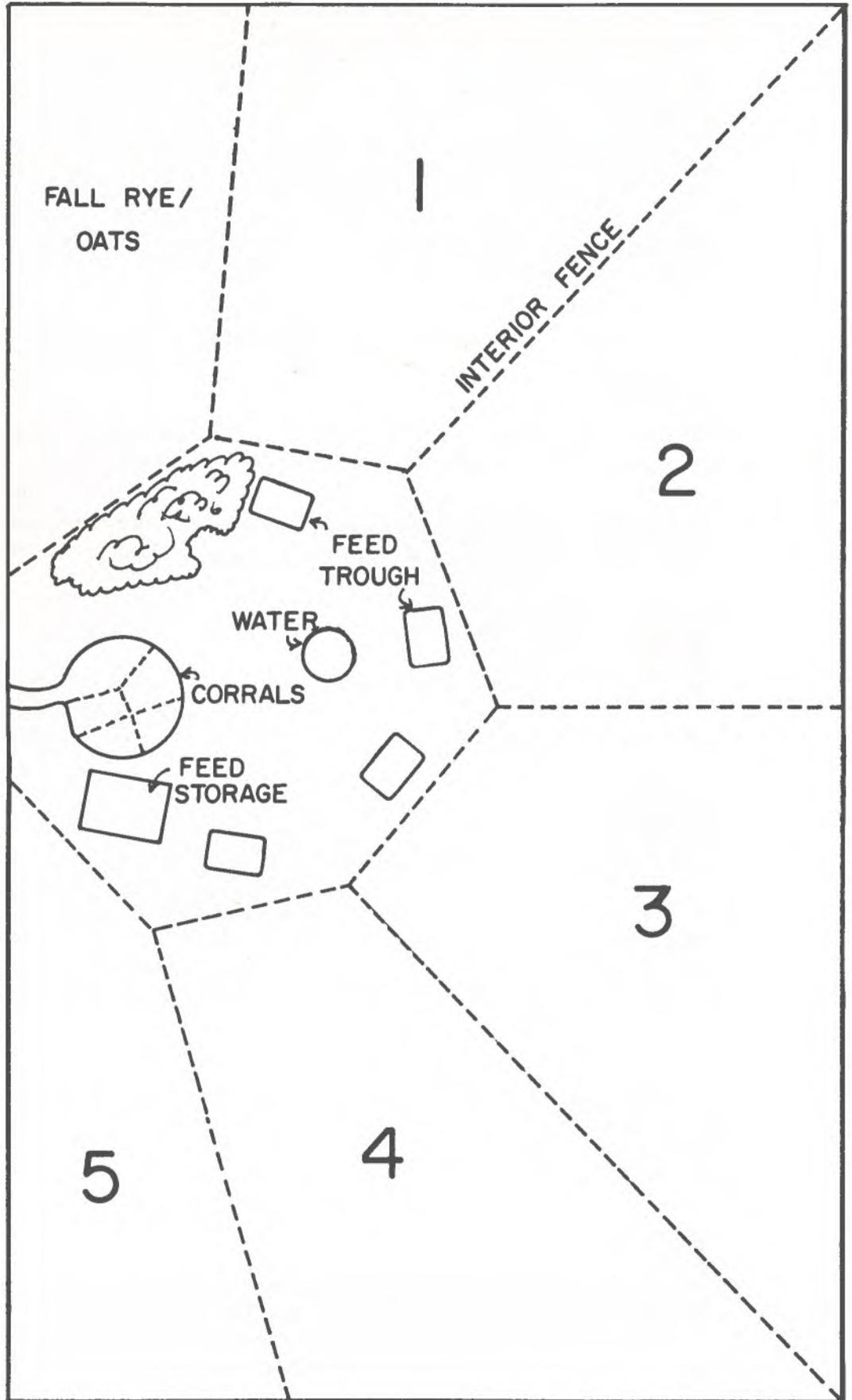
PERIMETER

FALL RYE/
OATS

5 PADDOCKS AND
FALL RYE

CENTRAL HANDLING
FACILITIES

WATER SUPPLY
FEED SUPPLY
FEED STORAGE
BUSH SHELTER



- Take the remaining cattle off the grass when it is about four inches in heights and growth has ceased.
- Fertilize the grass stand. Apply 50 to 100 pounds of 11-48-0 per acre.
- Pre-condition spring calves for the feedlot. Vaccinate for IBR, castrate, dehorn, apply systemic insecticide for warble control and inject Vitamins A, D and E and black leg serum. If at all possible pre-condition the calves before they are weaned. Time these treatments over a four-week period.

The Feedlot Phase

NOVEMBER

- Feed each animal a daily ration of: 8 pounds alfalfa hay;
2 pounds mixed grain;
1/10th pound minerals and salt.

Bed animals with about four pounds of straw per head per day.

The goal is a daily gain between 1¼ and 1½ pounds.

JANUARY

- Gradually increase the ration to: 12 pounds of alfalfa hay;
6 pounds of mixed grain;
1/10th pound minerals and salt.

FEBRUARY

- Inject vitamins A, D and E again.

MARCH-APRIL

- Increase the hay ration to 15 pounds per head per day.

APRIL

- Fertilize the pasture by spreading 60 pounds of nitrogen per acre.

The Pasture Phase--Year 2

MAY

- Prepare cattle for summer grazing by letting them graze headlands or sloughs during the day. Maintain the winter ration.

- Pasture cattle on fall rye.

JUNE

- Move cattle onto the grass pasture and graze rotationally--approximately one week per paddock. Work up the fall rye acreage and seed oats.
- Fertilize with 60 pounds of nitrogen per acre.

JULY-AUGUST

- Pasture the oats.

AUGUST

- Start feeding grain (rolled oats), increasing the ration to two pounds per head per day.
- Seed fall rye.
- Ship those cattle that are finished at 950 to 1100 pounds.

SEPTEMBER-OCTOBER

- Ship finished cattle.
- Prepare spring calves.

Now for No. 2. If you are breaking sod or new land this is how you get into the Interlake grassland management system

APRIL-MAY

- Break the sod with a discer, rotovator or cultivator. Work the land until you have a seedbed suitable for sowing oats.
- Seed the oats at 1½-2 bushels per acre.
- Fertilize. Apply 11-48-0 with the seed at a general recommended rate of 50 pounds per acre. Three weeks after seeding apply 50 pounds actual nitrogen per acre. The aim is to get a high forage yield from the oats.

JUNE

- Fence in the pasture. Consider a four-strand barb wire suspension fence with posts every 100 feet and vertical wire stays every 25 feet.

JULY

- Graze the oats or put the crop up for winter feed.

JULY-AUGUST

- Work up the oat stubble.

LATE AUGUST (last week)

- Sow about 10 percent of the pasture to fall rye if early grazing is required.

SEPTEMBER-OCTOBER

- Work up the rest of the oat stubble with a discer or cultivator.
- Pre-condition spring calves for the feedlot while weather is good. Vaccinate for IBR. Castrate, dehorn, apply systemic insecticide for warble control, inject Vitamins A, D and E and blackleg serum. Provide these treatments before weaning if possible. Time these treatments over a period of a month.

The Winter Feedlot Phase

NOVEMBER

- Feed a daily ration per head of: 8 pounds alfalfa hay;
2 pounds mixed grain;
1/10th pound minerals and salt.
- Bed with about four pounds of straw per head per day.
The aim is a daily gain of 1¼ to 1½ pounds per head per day.

JANUARY

- Gradually increase the ration to: 12 pounds alfalfa hay;
6 pounds mixed grain;
1/10th pound minerals and salt.
- Order grass seed from a reliable seed house or through your local elevator agent. Base the order on the seeding rates of 6 pounds per acre of orchard grass, and 2 pounds per acre of timothy.

MARCH-APRIL

- Increase the hay ration to 15 pounds per head per day.

The Second Grazing Season

APRIL-MAY

- Prepare cattle for summer grazing by allowing them onto headlands, stubble and sloughs during the day.

Continue to feed the winter ration.

- Pasture cattle on fall rye.
 - Work up the soil to give you a fine, firm seedbed. Remember your aim is a fine, firm seedbed.
 - Seeding. Seed the grass as early as possible using a press drill. Pack the seedbed first if necessary. Sow a nurse crop of oats first at a depth of 1½ inches. Next, cross-seed the grass no deeper than 1/2 inch. Use a logging chain behind the drill or very light harrows to finish.
 - Fertilize. Drill in 11-48-0 with the grass seed. A successfully-proven recommendation on low phosphate soils in the Interlake is 100 pounds of 11-48-0 per acre.
- Three weeks after seeding spread 50 pounds per acre of actual nitrogen.

JUNE

- Put up interior electric fences. Divide the field into four to six paddocks. (See diagram on page 23.)
- Install watering, feeding, handling and insect control facilities in a single shaded location.

LATE JUNE-EARLY JULY

- Pasture oats and new grass on a rotational basis. Move cattle every 10 days. Do not over-graze. The grazing rate should be approximately two acres per animal.
- Spread 60 pounds of actual nitrogen per acre after first or second grazing.

AUGUST

- Start feeding rolled oats at 2 pounds per head per day and gradually

increase to 6 pounds per head per day after two to three weeks.

- Sow fall rye.

SEPTEMBER-OCTOBER

- Market those cattle that are finished at 950 to 1100 pounds.
- Fertilize the grass at 50 pounds 11-48-0 per acre.
- Pre-condition spring calves before weaning and placing in the feedlot.

What Farmers Say

Patrick Duguid, Camp Morton, an Angus breeder who has a small grassland demonstration plot on his ranch tells us, "We started out by putting some orchard grass and timothy on recently cleared land. We just put in two plots of five acres each the first year. The seeding was done in August, 1972 and both plots came up very well...very productive.

"We were grazing the plots by September and continued to graze them until the snow was too deep in October. The grass was grazed right down and Peter Jones thought we'd killed it. We gave it lots of nitrogen the next spring though, and it came right back up. The cattle were grazing the two plots again by early July.

"This orchard grass was over in a corner of our brome-alfalfa pasture. We didn't notice it at first, but the cattle seemed to spend more time down on the orchard grass than they did on the rest of the pasture. We've put in another 20 acres since then and we'll be seeding 40 more acres this summer. I'm quite impressed by these orchard grass mixtures and I think we'll eventually put them in the rest of the pastures."

Lloyd Atchison, Pipestone, is a cow-calf operator who feels the grassland project is, "...very worthwhile. With our limited land base and the increase in livestock we'll have to do something different. This demonstration is good. They can demonstrate these techniques for everyone to observe and we don't have to take the gamble.

"I had two head in the trial at Oak Lake. They did a lot better than I expected and they were only on the pasture from mid-summer. The gains would have been a lot more, I think, if they'd been on the grass from springtime. I'm sure they did a lot better on the trial pasture than they would have at home. It's easy to see why, too, when they're out there with grass up to their knees. Back on some of that native pasture, they're eating the leaves off the trees by August and you know that's not good."

David Reykdal, Ashern, a cow-calf operator who took part in a grassland demonstration last summer tells us, "We rotationally grazed 53 acres of tame pasture last summer. We had 39 cows and 38 calves out there for 105 days and they gained a total of 12,584 pounds. There's just no way you could even come close to that with regular pasture. We'll be breaking 200 acres more land this summer and putting it into brome and timothy but that'll probably be used for winter feed."



Teulon dairyman Gordon Reed grazed his herd on 25 acres of orchard grass last summer. He tells us that his cream test remained above average and production was as high as if the herd was on straight grain, even though they only received three pounds of grain per day.

Mrs. Judy Dodds, St. Annes, secretary of the Eastern Grassland Society and involved in a cow-calf operation herself, tells us, "We had two steers on the demonstration project and we're really impressed. I saw a definite difference between the cattle that were on the tame grass and the ones we had at home. We're lucky because we have real good native pasture here, but those two steers on the demonstration pasture still did better."

"We have a new farmsite here and we're planning the whole setup for a grassland type of operation. We're building all new corrals and chutes and granaries from scratch. Even the pastures will be set up for rotational grazing.

"This grassland society idea is good because everyone gets to see the results. It's not just a private experiment or something on a small scale at an experimental farm. It's open to the public."

Stuart Cotton, Clandeboye, a dairyman who put in 18 acres of orchard grass last summer tells us, "I feel the experiment was pretty successful. Without that grass our financial situation wouldn't be very good today. I started grazing just about the time when the grain prices started to go up. Many of the dairy producers I know had to feed a lot of grain last summer.

"Our milk production was right up to quota all summer long. The butterfat stayed right between 36 and 38 and there was no problem with the bacteria count. We had 30 cows on the pasture all summer and we averaged 25 fresh cows.

"The paddocks were seeded in early May and the cows were out grazing by the first week in June. We got 130 days grazing and we could have gotten another three weeks if it hadn't rained so heavy in the fall. The herd produced about \$10,000 worth of milk on pasture last summer with only about 12 pounds of grain per day. We'd be in a lot different position right now if we didn't have that grass last summer."

George Gobin, St. Claude, a dairyman who regularly has at least 40 fresh cows tells us, "We had six Holstein heifers in that dairy replacement trial. They were smaller when they went in and now they're larger than the ones here at home. The calves are really coming along. They should be ready for breeding before they're a year and a half. The ones at home won't be ready until they're at least two years. I'm putting some of those alfalfa mixtures in this spring and I'll be putting my pastures into tame grass as soon as I can get the time to break up the land."

Interlake Projects — 1974

Thousands of Manitoba acres are going into tame forage this spring and the Interlake will likely be one of the most active regions in terms of seeding to the new varieties. Most of the Department of Agriculture projects will continue and dozens of farmers have already ordered their own seed and will be either breaking up their native pasture or sod-seeding come May.

The quarter-section management demonstration near Teulon that got the whole ball rolling will continue this year. The Teulon pasture will be supporting 100 beef steers and 32 heifers by mid-May. Len Jeffery,

pasture manager, tells us that the orchard grass paddocks will be getting 900 pounds per acre of 21-0-0 next summer. The first of the three applications will be in late April. This summer's demonstration will be the final stage of the three-year stocker program and it's possible that the site will be used for a cow-calf demonstration in 1975. The pasture on the east side of PTH #7 that supported the bred heifers last year will likely be used for hay this summer.

Ten more livestock producers throughout the region will each have a grassland demonstration project on their farm. They are providing the land while the Department of Agriculture provides the grass seed (orchard grass and timothy), the fertilizer, and the general management. This means there will be at least one large-scale demonstration plot in each agricultural representative area.

Regional Director Al Watkins informs us that most of the demonstrations will deal with cow-calf operations. "The problem facing the Interlake livestock industry right now is to keep the cattle at home on a minimum number of acres. We've got to maintain the breeding herd and these ten cow-calf projects can help demonstrate to farmers just how they can keep their herd and stay in the business. The dairy projects will be pretty significant too. We plan to prove that milk can be produced cheaper with tame grass than with the traditional method.

In the Selkirk area Fraser Stewart will be supervising two grassland demonstrations. Lawrence Macklin, a cow-calf operator at Clandeboye, will be grazing his Angus herd on 20 acres of orchard grass-timothy pasture. Ron Hill, a Libau dairyman, will be sod-seeding 20 acres of the same mixture. He had seeded the plot to orchard grass last year but ten inches of rain prevented the grass from taking hold.

In the Arborg area Dougie Barr will be working with cow-calf operator Louis Horvath. Louis expects to graze 25 cattle on the 25-acre pasture. Larry Malazdrewicz will be working with Alfred Gislason on a 16-acre dairy pasture demonstration.

In the Ashern area Gerry Breakey and John Sanders will be supervising three grassland demonstration projects. Lawrence Baker of Grahamdale already has his 40-acre pasture broken and he hopes to move his cows and calves onto the new pasture by June. Fred Rawluk, a cow-calf operator at Gypsumville, will be putting in 20 acres. This plot will be used to assess which, of six different species, thrives the best. The Dog Lake Community Pasture will also be receiving 40 acres of tame grass for their heifer replacement operation.

In Lundar, John Corbey will be working with cow-calf operator George Merinuk on a 20-acre grassland demonstration plot. At least one 20-acre demonstration plot will be sponsored in the Fisher Branch area also, with supervision from Ed Senko.

In Stonewall Harold Ross will be supervising two grassland projects. Although the cooperators haven't been selected yet, the projects will likely be carried out on the ridge where conditions are less than ideal.



FLYER AVAILABLE AT NO CHARGE

If you know of anyone who would be interested in receiving this publication, please give name and address:

.
.
.
.

POSTAL CODE

Library PRRA
D.R.E.F.
401 Motherwell Bldg.
REGINA SASK.
S4P 0R5

DO WE HAVE THE CORRECT ADDRESS?

If your address as shown is not correct, please indicate changes below and return this page to:

Interlake Flyer
FRED Administration
410 Norquay Building
401 York Avenue
WINNIPEG, Manitoba R3C 0P8

.
.
.
.

POSTAL CODE