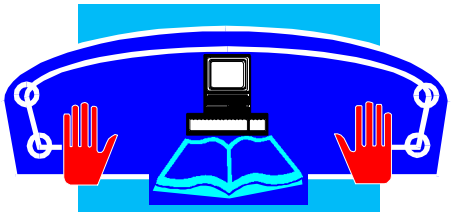

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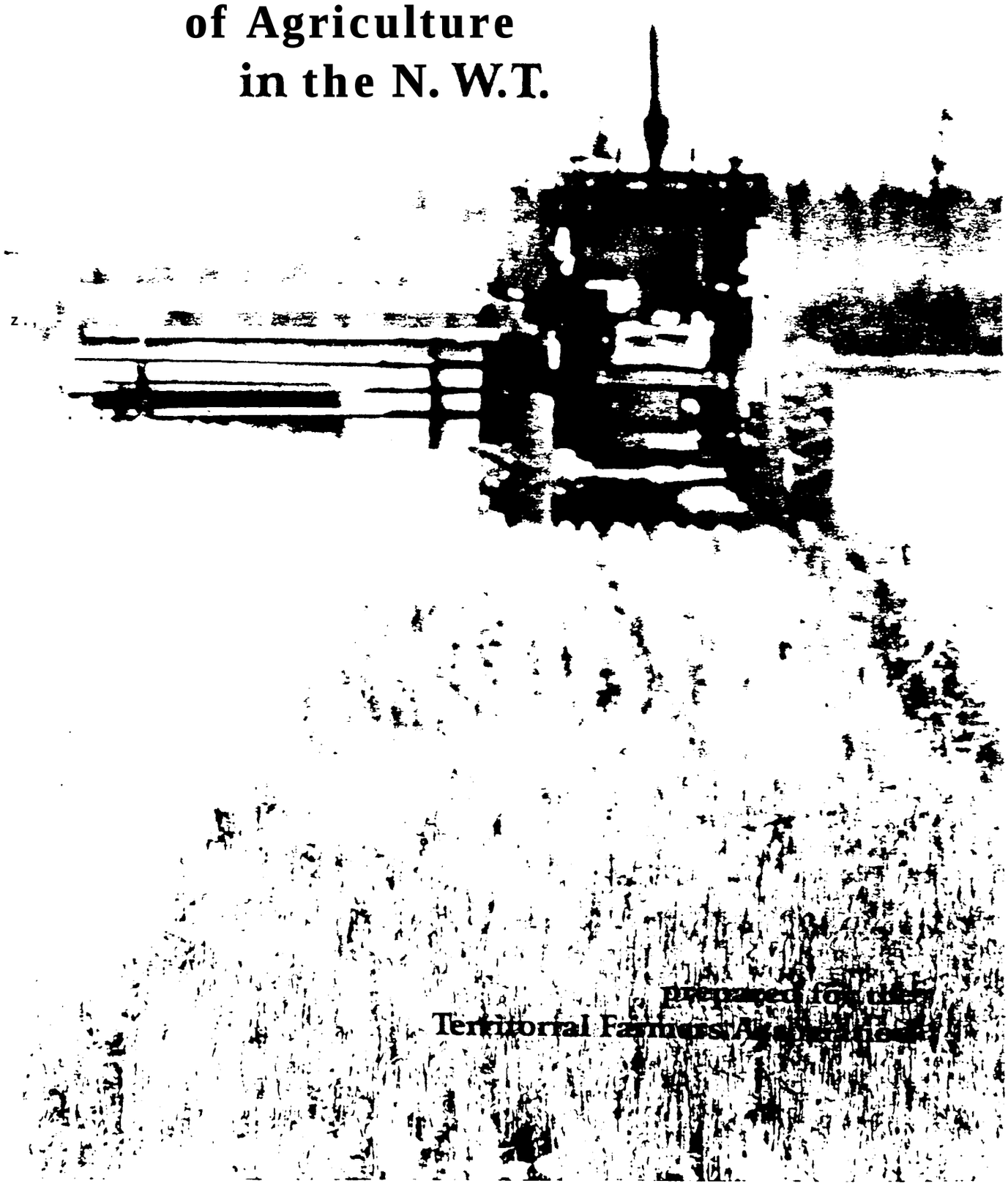

Prepared for the
Territorial Farmers Association

A HISTORY OF THE DEVELOPMENT OF AGRICULTURE IN THE NORTHWEST TERRITORIES

Prepared for the Territorial Farmers Association
By **Cardinham Text & Creations, Hay River, N.W.T.**

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Foreword

In the 1990s, the term 'agriculture industry has many connotations. As an industry, it encompasses all the primary steps of food production, whether of grains, vegetables, fruit, livestock, dairy products, poultry raising or egg production.

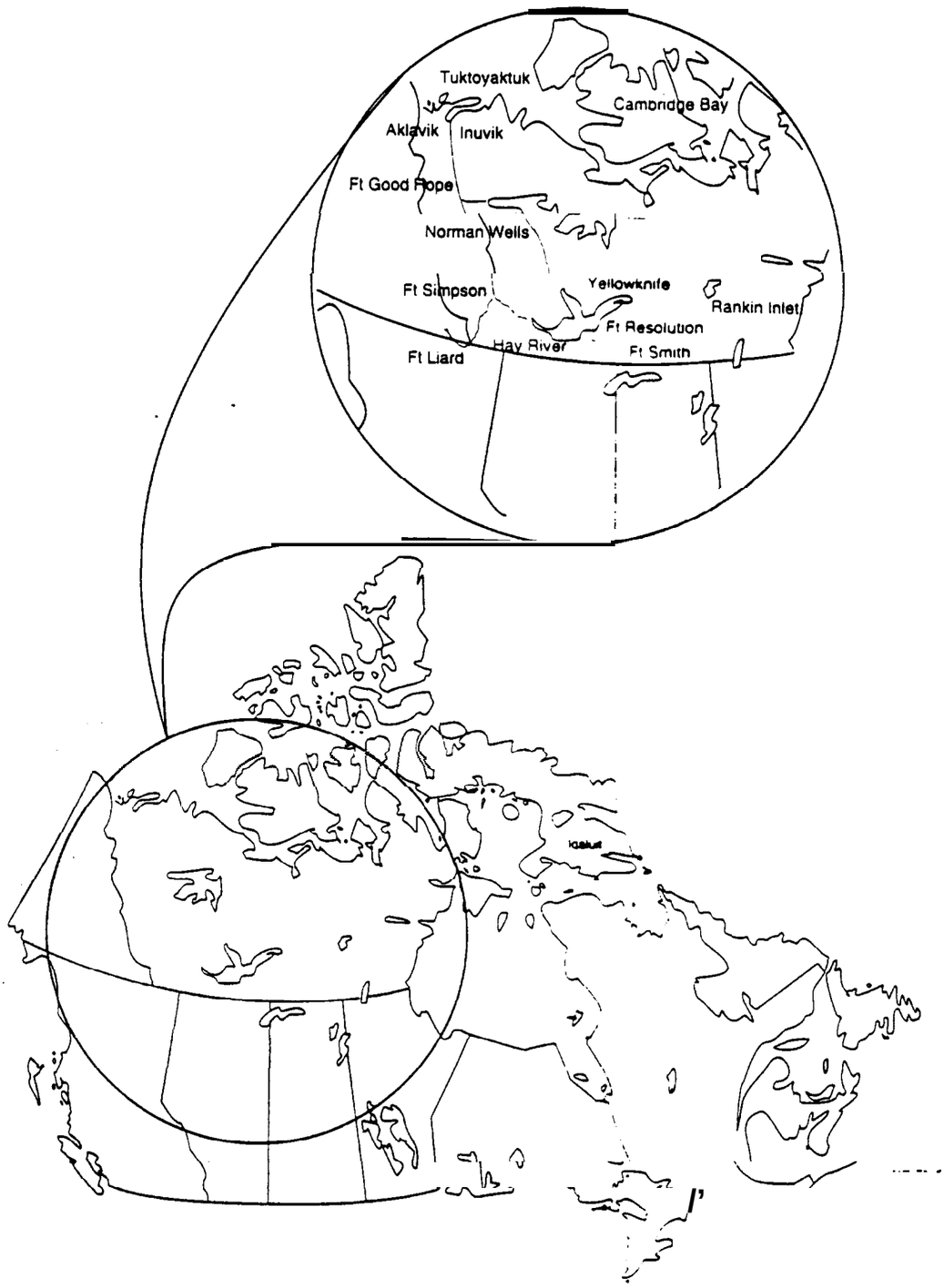
It can go further to include secondary or processed production, i.e.: a meat processing plant can take a live animal from a farmer, kill, process, package, market and distribute a final product. Likewise, a market gardener or soft-fruit grower can raise the product from seed or tansplant to a sack of potatoes or a basket of strawberries, sell the product directly to a customer or 'package' and sell it to retail food outlets.

In the Northwest Territories all facets of the agriculture industry exist at this time.

It may be of value to the reader to have an understanding of several common terms found in this report

- agriculture: cultivation of the soil; the raising or crops and livestock; farming; agronomy.

Areas and Communities involved in Agricultural Development in the N.W.T.



History of the Development of Agriculture in the N. W. T..-

Summary

This report examines at some depth the development of agriculture in the Northwest Territories from a historical perspective. Its intent is to trace the human effort to gain from this land, often perceived as, and often, in fact, harsh, sustenance of both plants and animals. Therefore, it moves from consideration of how the first peoples here may have used the natural resources while living in a nomadic style, to the necessary endeavors of the first traders and missionaries who made settlement in the land, to the work of modern residents to fully establish an agriculture industry in the NWT.

It was of paramount importance to the first 'settlers' to become as self-sufficient as possible in providing their own food within the immediate areas of their settlements. It was with these people, who brought seeds and a few tools, eventually a few domesticated animals, that the agriculture industry had its real beginning in the NWT.

A more detailed examination is made of a number of ventures undertaken over the past hundred years, in order to provide better understanding of just where this industry sits today in the final years of the 20th century, and of what has been accomplish and proven possible. Some of these ventures were success stories; others were not; yet all bespeak determination; all help to establish not only the limitations the industry faces in these climes, but also the exciting possibilities that do exist.

These many and versatile endeavors in the agricultural field further indicate what may be attained in the future with the employ of modern methods, breeds, strains and technologies.

Although it is not the intent of this report to deal with the sciences of soils and climate, some discussion of these is involved as they pertain to the development of agriculture through its brief modem history North of 60.

Fr. Alphonse Mansox of the Church of St. Isadore at Fort Smith teaching Jammie Mercredi the art of tending the soil.

A short but intense growing season obviously has practical and economic influences, as does a paucity of good soils in very large, concentrated areas. Similarly, a long discussion on tools and equipment, strains or breeds is not intended; but insofar as tools, breeds or strains, equipment and methods change practice *and* history, some mention is made of these.

History is ever paralleled by politics, and this is no less true in the matter of agriculture in the Northwest Territories than it is of the development of mining and oil exploration, for instance. Politics, over the last fifty years in particular, have wieided a very definite influence on the agriculture industry here. The outcome of political considerations in the next few years could well determine whether this industry proceeds to a fair future or simply shrivels like a crop in early frost.

Vegetables can be raised in the NWT; they

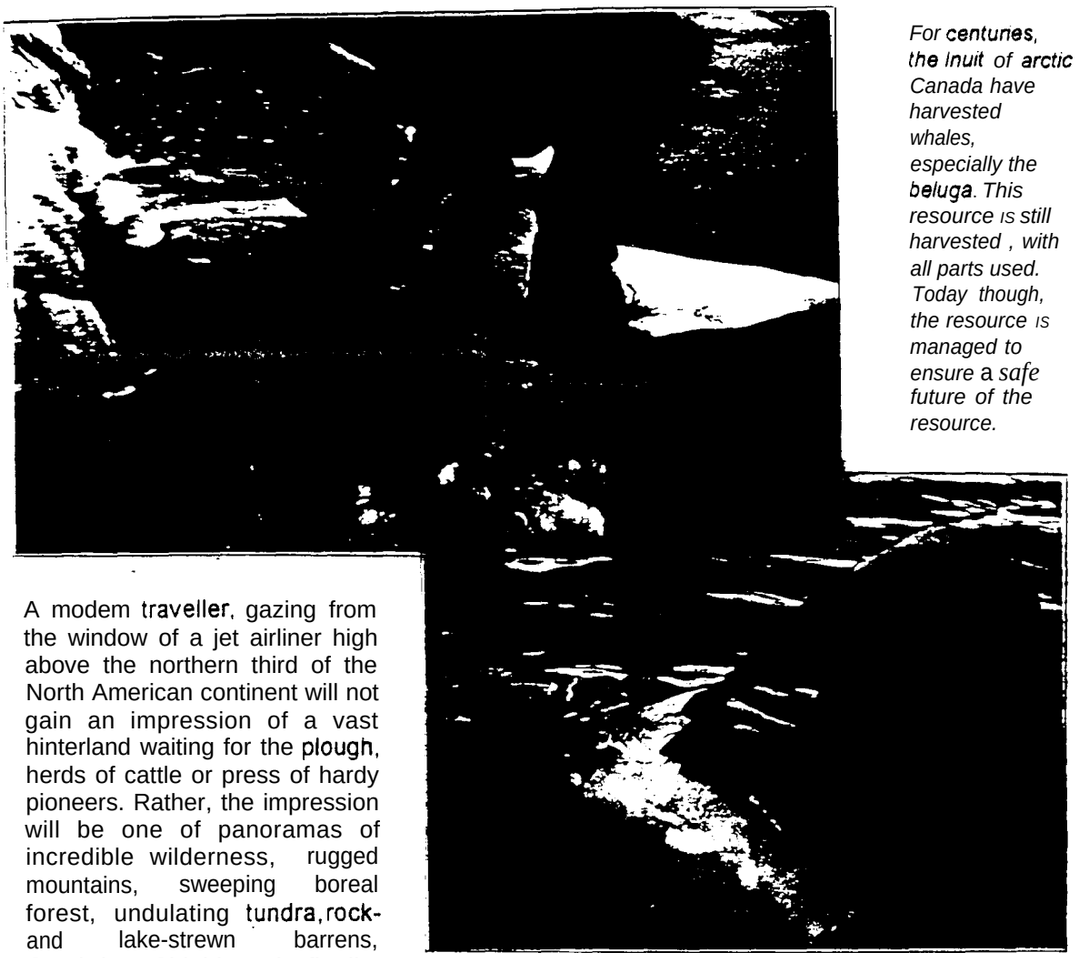
can be raised not only in the more verdant Western Arctic, but, with equipment and technology now available, in the less hospitable areas of the Coastal and Eastern Arctic. Grains can be grown, providing good yields and good quality. Forage also can be cultivated and wild hay, when harvested, also provides winter feed. Both beef and dairy cattle operations are possible; so are hog raising operations and egg layer barns. Reindeer have been successfully raised and herded for years, originally as a good supply, now for their antlers in velvet. It has been demonstrated that wood bison can be ranched. Both caribou and musk ox, at present numbers, offer yet another source of marketable meat from the north, though this aspect of market harvest may always remain under the auspices and direction of Renewable Resources, rather than becoming a direct part of an agriculture industry.

Fur farming, too, -can be done well here; however, the economics of a still-depressed world fur market may see this particular aspect of resource harvesting remaining solely with the trapper.

History and historic documentation, up to and including modern data-storing systems, proves the above statements. There are scores of records which indicate that agricultural efforts from a earliest days of Euro-Canadian settlement to present times have been and are successful. Modern data systems including the use of computers make documentation of new strains, methods of culitvation and breeding easily accessible for those engaged in or contemplating entering the industry, adding a further dimension of knowledge for them before ever a seed is dropped or a single head of cattle is brought North of 60.

While it is fairly safe to project (at least, within the foreseeable future) that the Northwest Territories is unlikely to become quite another 'breadbasket of the world', it would not be un-safe to predict that, in another fifty to one hundred years, a traveller in a jet aircraft passing through our skies will get a very different view of the land than one does now. He or she should see an evenmore verdant, diverse and fruitful landscape below, a land where individual effort and political will have teamed to make the land bear even richer fruits than it does today.

Nature's bounty - a great cabbage holds a great drink! The TFA ran a number of cole crop field trials over several years, which provided much useful data on strains, growth times and irrigation methods. This data is available to those interested, providing additional knowledge of what will grow well here with what methods and under what conditions.



For centuries, the Inuit of arctic Canada have harvested whales, especially the beluga. This resource IS still harvested , with all parts used. Today though, the resource IS managed to ensure a safe future of the resource.

A modem traveller, gazing from the window of a jet airliner high above the northern third of the North American continent will not gain an impression of a vast hinterland waiting for the plough, herds of cattle or press of hardy pioneers. Rather, the impression will be one of panoramas of incredible wilderness, rugged mountains, sweeping boreal forest, undulating tundra, rock- and lake-strewn barrens, Cambrian Shield and, finally, endless vistas of snow and ice.

However, as is often the case, this first impression would be wrong.

If that modern, airline traveller could slow his or her passage, magnify his or her view, a quite different impression would be gained.

Viewing the land with an enhanced vision as suggested above, today's traveller would become aware of pockets of agriculture, certainly obvious in the broad river valleys of the Western Arctic: even in the apparently less welcoming areas there would be pockets of testimony to current agricultural efforts.

Though these pockets and testimony would be modest, they would be unmistakable.

This is where the Northwest Territories stands on the agricultural scene, now, at the close of the 20th century: modestly - some would say very modestly.

But - could that airline traveller descend. walk and talk with the people involved here in the agriculture industry (which, in the rest of the country, is and has been so much the building block of Canada's advancement), he or she would meet a group detrrnined and dedicated to bring from this land other

harvests than those traditionally gained by gathering, hunting, trapping and fishing - even as the ancestors of many of them were determined to do on the prairies of Western Canada.

As long as there have been humans - people - moving in this North land, there have been the inevitable efforts to obtain sustenance, food. Archaeological evidence, to date, puts humankind in the NWT as dwelling, not just passing through, back 7,000 to 9,000 years. Some of those most ancient peoples hunted, perhaps, the wooly mammoth, among other huge herbivores and carnivores, now long gone from the Earth. The descendants of these Palaeoindians, some 2,000 to 3,000 years later, were hunting barren ground caribou, black bear, beaver and hares, even eagles, animals which had arrived and were found both within and without the treeline, a line which underwent many changes as it progressed north or receded south with each climatic change. -

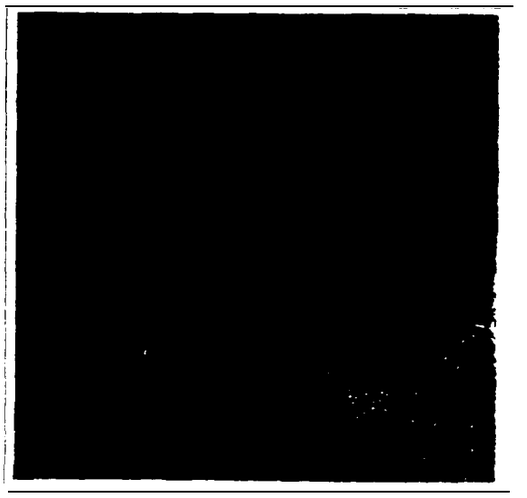
As the ice sheet of the Wisconsin glaciation (a glaciation which spanned a period between 18,000 to 70,000 years ago) lumped and dipped, most of the animals now common in our modem north arrived via the land bridge in the now-Bering Sea. The vagaries of the ice sheet over these thousands of years were responsible for the variable climatic conditions which, in turn, not only moved that treeline around, but brought, in warmer periods, a greater and greater variety of plants. Some of these migrants survived the next cooling period to rise again, modify and adapt, and eventually become a part of the modem vegetation we know today, in all its rich variety.

The cooling periods and advances of the ice sheet saw the Palaeoindians leaving the country for warmer climes. The went south and east, away from the treeline edge that had seen them in the Acasta River area' and along what is now the Thelon River course. As this group moved south, Palaeoeskimos, who first arrived in *our* north about 4,000 years ago, moved south away from the worsening cold of the coastal regions. The move meant changes and adaptations for these people as they came away from their normal prey, marine mammals. Evidence-of their migration has been found as far south as Lake Athabasca; their time in the 'south', away from the arctic seas, lasted about a thousand years.[1]

It was about 2,600 years ago that Athapaskans (the ancestors of whom were likely the last groups to come across the land bridge from Siberia/Asia), who are blood relatives of present-day Dene, came into the Shield area of the NWT.

Dene people of the Fort Liard area and nearby Fishermen Lake (which offers .-archaeological record to roughly 9,000 years back) may trace back to a migration from Alaska of these Athapaskan people along a more westerly course and at an earlier date than the migration which took them eastwards of the Deh Cho (Mackenzie).

Whatever the distinct and exact migration patters of the first peoples of the now-NWT. all needed to hunt their food or to take it from the waterways where lake trout, whitefish and northern pike were now established. Birds, too, were part of the diet: waterfowl and the up-land game birds - grouse, ptarmigan. But all these birds had to be



Verdant river **valleys** *in the Western Arctic, such as the Liard,* above *at its confluence with the Petitot. provided game and good dwelling places for ancient peoples in the land.*

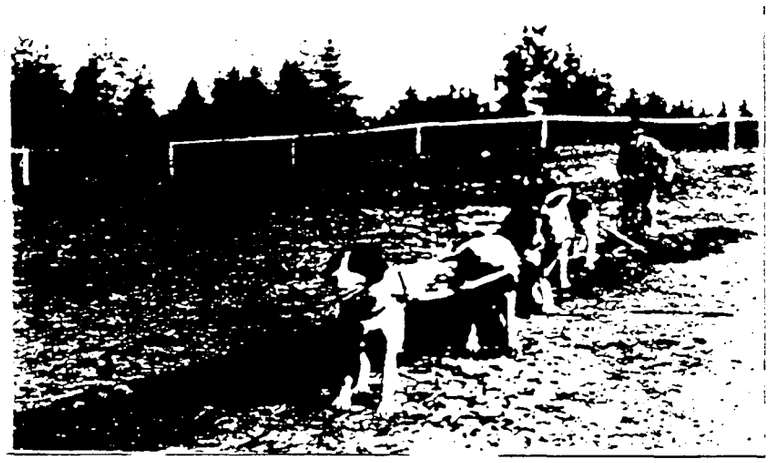
caught with what we would class now as the simplest of tools, though right for the 'age' their users were in. The fruits of the country's plants were theirs, too, for the gathering: berries were plentiful, in season - if you knew where they grew best!

The seasons, more or less as we know them today, dictated the circles of nomadic life. Open waters in the warm seasons allowed the people to catch fresh food supplies from the chilly depths. Undoubtedly, though no concrete evidence of watercraft exists, vessels of natural products must have been made and used on the watery paths which provided both foraging and exploring passages. Exploration, investigation of plant life along their routes would not only have provided additional nutrients for the diet, but bountiful spots would surely have been marked arid remembered as good harvesting areas for the next season. As the cold season approached again, movement would be towards the routes of migrating herds, or into the forests more deeply for better sheltered camping sites. The smaller animals which made their homes in the more thickly forested places would have also become a staple food supply for winter.

Inasmuch as nomadic peoples harvest according to season and the patterns of animal and bird movements, of access to open water, of plants in their various stages of new growth to ripened, matured state_ by returning regularly to certain routes and places at specific times, it can be said that a form of agriculture is practised by such peoples. The difference, of course, between the nomadic style of life and the settled, arises when decision is made, by a people or even one person, to remain in one spot or reasonable abundance and to begin husbandry of the resource(s).

The somewhat bleak climate of the north, with its long and often extremely severe winters, was not particularly conducive to effecting this kind of change by the indigenous peoples, who, despite repetitive use over hundreds of years of the same sites and routes, 'travelled light and travelled far'. It was not, therefore, until the advent of white traders and missionaries that land was tilled, seeds planted for the precise purpose of growing food in a precise place, nor was there any confining of animals or birds as a continuous, nearby souce of stock for the larder

It should always be remembered, though, and recognized, that had it not been for the remarkable skills and knowledge Of the indigenous peoples of the land who met the first white traders and missionaries and their guides. those same early venturers would



There was no lack of ingenuity on the part of the earty farmers in NWT! Dog-teams doubled as plough horses, as this Fort Smith scene shows.
NWT Archives Collection

have been hard put to it to survive at all in what must have struck them as an incredible and endless wilderness as they arrived in fragile canoes or wooden ships or on often ill-clad feet, even as it must strike the airline traveller today.

For the most part, the terrain would not have impressed them as land for traditional agricultural uses, even those of two hundred years ago!

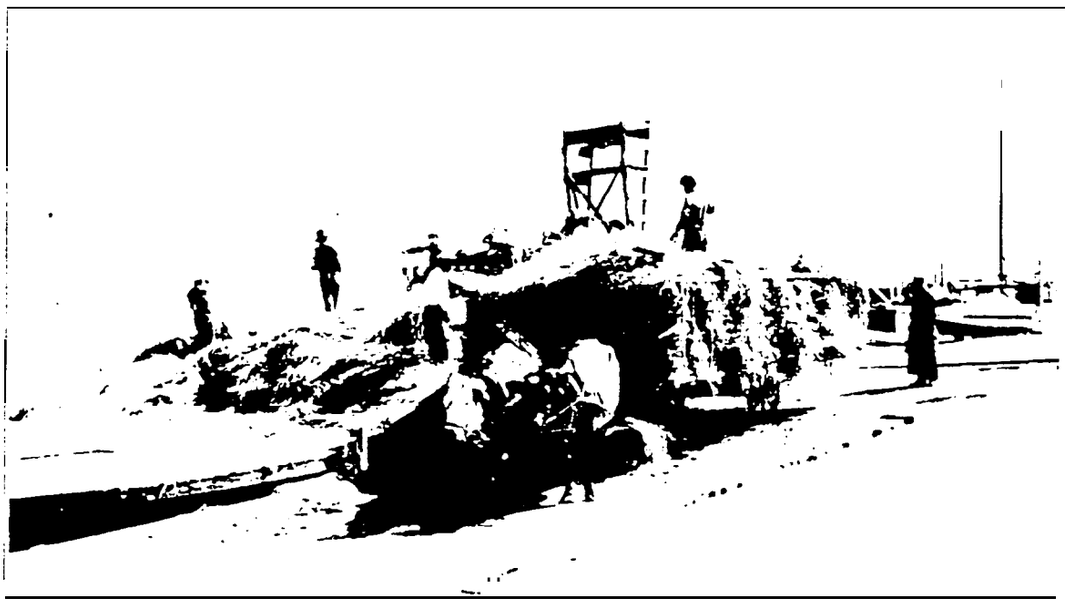
Most of them learned quickly, fortunately. With the knowledge of what climate was like in the west of Canada and of the distances involved and the crucial need to be self-sufficient, as soon as there were traders who were coming to establish posts for gathering furs, there were spades and seeds in the new areas.

The introduction of "agriculture" to the land North of 60, then, happened swiftly and with little fanfare, forethought or deliberate planning. It was driven by the simple need of the newcomers to survive on something that bore a closer resemblance to what they were accustomed to as diet than by supplementing their wild meat and fish with only what greens, roots, bark or berries the indigenous peoples advised them of.

Those early efforts of the fur traders who stayed at the posts year-round and of the first missionaries who arrived either with them or shortly after represent a very considerable amount of labour - and not a little faith. With each tree felled, each stump pulled out, roots cleared and soil spaded over then broken with a hoe, each small bit of wilderness to come "under cultivation", the "introduction" was simply accomplished; when the scanty but sustaining harvest was gathered. the labour and faith demonstrated were rewarded.

Modern-day marketgardener Fran Green field has fine river-flat soil to work in at Paradise gardens, soil that was broken and tilled by machines But she still rinds an old-fashioned hoe mighty useful, for the fine work of cultivating betwen plants

Chapter II - Modern Beginnings



The Roman Catholic Church missionaries were among the first farmers in the NWT - and they farmed just about everything. Above, hay is being unloaded at the Fort Resolution wharf, 1928. The mission farm at Fort Resolution boasted a dairy herd and several teams of oxen.
NWT Archives, Robert Porritt Collection

The image of a northland covered almost constantly with snow which some Canadians harbour even today was likely the one held by the early fur traders and explorers as they moved west and north two hundred years ago. Because the Indian peoples of the plains were not an agrarian society as such, it was not until those earty venturers observed the verdant growth of grasses and plants that the potential of the western plains as a vast agricultural land base was realized. But, for all that, common sense and that survival imperative dictated that even those first traders, who knew they would be staying in the new ('new' to them) area longer than a few months brought with them a few seeds and, perhaps, some cuttings. While their priority would be establishing trading relationships with the indigenous peoples of the area, and the erection of shelter for the coming winter, food supply was obviously of equal importance. It is not hard to imagine that the breaking of a small plot of ground to be sown with potatoes, maybe turnips, carrots, fairly stable and sturdy root crops, would be an activity fairly high on their list of 'things to do'.

As Alexander Mackenzie made his way into the 'true' north in 1789, he paused to visit Peter Pond at Lake Athabasca. Pond had a fruitful garden, located about 30 miles south of the lake on the lower Athabasca River. (At this time, of course, the Athabasca area as we know it today was in the Northwest Territories, the final boundaries of Alberta and Saskatchewan not being made until 1905. Climatic conditions and the southern extension of the boreal forest in this area would produce growing conditions similar to those a couple of hundred miles north and, to some extent, down the Mackenzie Valley and in the Liard Valley.)

The traders of the Northwest Company were growing their own vegetables; with the merger . . . .

Hudson's Bay Company, the practise simply continued: as much self-sufficiency as possible was ever a prod as much as a goal. By this time, cereal grains were included in the annual crops that were being planted, tended and harvested. Records show that in 1828, what must still be considered prodigious efforts netted a harvest of 18 kegs of barley: 42 kegs of potatoes, turnips, carrots, cabbage, onions; as well, a few quarts of peas were also produced.

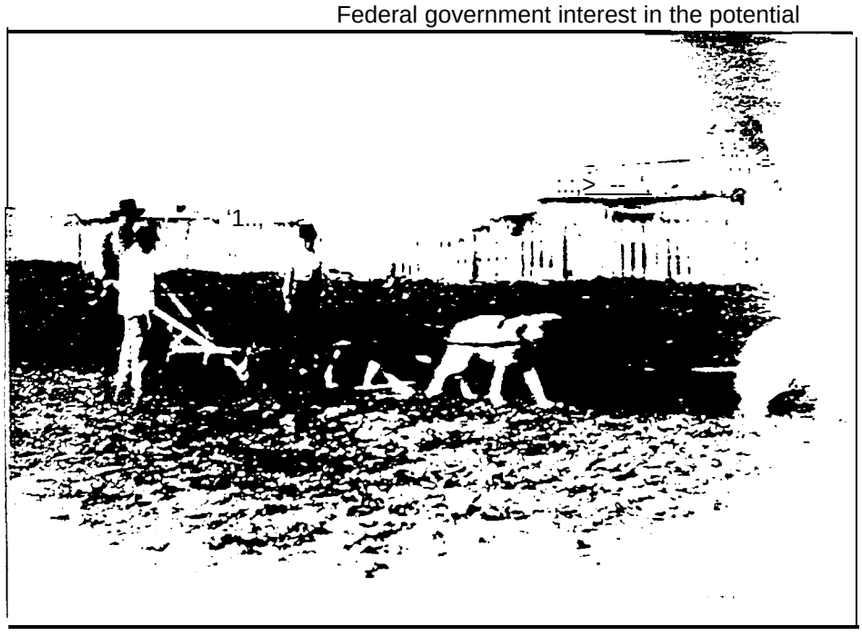
That livestock were included in these early farming or agricultural venturers is noted in the recorded harvest of 1888, when, records tell us, 1000 bundles of hay were taken for livestock.

The gardening/farming endeavors at almost all the Hudson's Bay Company posts went on throughout the 19th century; at the same time, missions of both the Roman Catholic and Anglican Churches were display ing the same good sense and growing food for the missionaries, the patients they were now beginning to nurse in early hospitals and the children being taught in the first established schools in NWT. That land lying north of the 60th parallel could be successfully broken to cultivation for production of vegetables, grains and hay(s), as well as for the use of livestock, seemed proven. In 1889, total acreage under cultivation was -134 acres, broken out by region as the following table illustrates:

Region	Acreage
Fort Simpson	40
Ramparts	5
La Pierre House	3
Fort Liard	40
Fort Providence	25
Rae	4
Peel's River	5
Fort Good Hope	8
Fort Norman	4

These are low figures, of course, low even in 1889 compared perhaps to the acreages that were being cultivated on the prairies. However, given the locations and the fact that farming was not the primary function always of the cultivators, the figures stand up pretty well, The ingenuity and-determination of those early 'farmers' should not be overbooked, either: the dogs which drew sleds loaded with furs and supplies in winter turned plough horse in the spring, as they were hitched to pull ploughshares through the rough soil their masters had stumped-out.

Federal government interest in the potential



The Anglican Church also sent missionaries north and *they, too, gardened and farmed. A mission and school were established at Hay River, beginning in 1893, Extensive cultivation for food for the students and staff* was *undertaken and a small herd* of dairy cows was *also built up. At right, dogs are seen pulling a plough; note the rough fencing in background.*

NWT Archives, Henry L. Day *Collection; 1907-1908*

The Experimental Farm or Research Station at *Fort Simpson* operated *for more than 20 years. Above, a helper at the Station works in one of the garden plots, Note the tall growth of the plants due to the long hours of sunlight during the summer months. Picture is dated June, 1961.*
NWT Archives, Peter L. Gordon Collection

of the Northwest Territories for agricultural purposes early in this century is evident, as in 1911, Roman Catholic missions in the South Slave and along the Mackenzie River Valley undertook garden trials for the Department of Agriculture. Settlements included in these trials were, among others, Forts Resolution, Providence and Smith; later Fort Good Hope also participated. By the mid-1 920s, Anglican missionaries were in Aklavik in the Mackenzie Delta. In the decades which followed up until 1960 when the hospitals and residential schools run by both churches were closed as the new hospital and residences came on-line in Inuvik, substantial gardens were grown for the purpose of supplying a good portion of the annual food needs of these institutions. In Aklavik, as well, the Royal Canadian Mounted Police detachment members also gardened each year, supplementing their food requirements. Large hay-meadows throughout the Delta were harvested for a time in the 1940s when a small dairy herd of Jerseys was established in Aklavik by Doctor Livingstone.

In 1930, the Department of the Interior reported on the crops grown in the Mackenzie District. The list included cereals, grasses, vegetable, root and cole varieties. The crops were: oats, wheat barley, western ryegrass, timothy, bromegrass, red top, fodder corn (occasionally); carrots, turnip, potatoes, cabbage, Swiss chard, parsnips, cauliflower, beets, beans, celery, lettuce, radishes, cucumbers (occasionally), and tomatoes.

In 1943, the results of a questionnaire posed by the Dominion Experimental Farm Services revealed that the total amount of land under cultivation in the NWT had reached 252 acres (103 hectares). At that time, this cultivated land represented 148 gardens and 10 farms,

Following the start of co-operative agricultural experiments in Fort Simpson, an inter-departmental committee was formed to assist with the improvement and promotion of agriculture (in the NWT). As a result of this committee's recommendations, soil and horticultural surveys were carried out in the Mackenzie District between 1944 and 1945.

While livestock husbandry did not flourish as much as did the production of grains and vegetables, Fort Good Hope had had a cow, a heifer, a bull calf and a work ox as far back as 1892. At the Anglican Mission in Hay River, cows were introduced (believed from stock at the R.C. Mission at Fort Providence), and a small dairy herd was kept, supplying milk and butter for the mission in the early years of this century. Dairy cows were kept again in the Hay River area briefly in the early 1960s; Yellowknife, too, has been the site of dairy ventures - it is anticipated that another such enterprise will be started again shortly. Nor has the dairy variety been the only bovine breed to be raised in the NWT. Herefords, Highlands, Black and Red Angus (all beef breeds) have grazed NWT pastures with varying degrees of success: some beef-raising operations continue at present. Most, if not all, winter feed requirements for these cattle has been raised locally by cultivation or reaped from

the plentiful stands of wild hay and grasses.

In more recent years, in the Western Arctic (old Mackenzie District in part), a commercial hog raising operation has also been established. At a site along the east bank of the Slave River, just north of Fort Smith, a wood bison ranching endeavour was undertaken. An earlier and quite success endeavour, as far as the survival and breeding of the animal in question, was the introduction in 1934-35 of reindeer to the Mackenzie Delta/Tuktoyaktuk Peninsula. Descendants of the original animals brought from Alaska overland (and to Alaska previously from Russia) still form a viable herd of about 5,000 animals, though the product harvested today rather than the very tasty meat is velvet antlers.

The barnyard fowl has not been ignored through all these northern farming instances: chickens, domestic ducks and geese have all added their cackles and crowings to numerous small farms over the years. But commercial operations for layers were not tried until the late 1980s. Two operations were established in Hay River, and while one is presently looking at starting up again after a two-year shut-down, the other has continued in steady production. After a lengthy battle with CEMA (Canadian Egg Marketing Agency) which went finally to the Supreme Court of the Northwest Territories, the ability to ship eggs out of the NWT was finally attained; however, the battle is not yet concluded. In the meantime, Northern Poultry supplies many points within the NWT and Yukon with fresh eggs, 'NWT Grown'.

Another recent enterprise was that of fur farming. Silver fox were raised in the Hay River Valley, successfully as far as the mechanics of breeding, raising and pelting good quality fur. Depressed fur prices coupled with high costs for feed, however, proved this not a viable venture at this time.

The people interested in developing an agricultural industry in the Northwest Territories leave few stones unturned in their bids to explore all possible avenues. Beekeeping has been practised by several persons and, again, these enterprises have demonstrated that indigenous plants can-be harvested in this 'secondary' manner. Honey from wild flowers, shrubs and trees of the NWT is delicious and local bees have 'made good' on crops of sweet clover and strawberry blossom.

This willingness to try new avenues can also be seen in the move by some South Slave market-gardeners in the last few years towards producing soft fruit crops, most notably strawberries and Saskatoons. Both fruits do very well, with high production yield. Although the growing season may be shorter than points south, long hours of daylight in our spring/summer season and a good span of frost-free days allow for good ripening and harvesting.

Market gardening on a commercial scale is perhaps the most promising and practical of agricultural enterprises for the NWT. Certainly it may be seen as the most 'natural', a follow-through from those early traders and missionaries who knew they had to grow at least some of their food to help their survival on a balanced diet, if they were stationary and not nomadic. Market gardens have existed in the Hay River Valley for close to 40 years as commercial operations; the Fort Smith area has also had producers for many years. Greenhousing is inevitably a part of market gardening. Greenhouses on a commercial scale, however, are more a development of the last 15 years; experiments have been conducted in Fort Providence (waste heat, heating by gasification of wood chips), and Norman Wells. The latter project functions to a commercial end, though sales are confined to the community and a few others nearby. The Fort Providence project has been reduced to home production only. But an operation in the Fort Smith area, with propane-heated, vault-roofed, all sides clear prefabbed building system is underway with excellent results in bedding plants and transplant veggies.

Through all the past two hundred years, most of the agricultural efforts, undertakings and experiments have been in the Western Arctic, an area more adaptable to such activities than the Central or Eastern Arctic

regions. But man is ever hopeful and it is hard, apparently, to take the 'agriculturist' out of him, no matter what his surroundings. Records show that vegetables have been successfully grown in Coppermine and Bernard Harbour; the Roman Catholic priest at Paulatuk, Fr. Dehautevahn, OMI, was growing lettuce and greens on the roof of his house in the 1960s! Vegetables and greenfeed have been grown in the Thelon Sanctuary. A chicken-raising venture in the early 1970s was carried on in Rankin Inlet, where the birds were first fed left-over fish: laying mash was added later, to provide more nutrition. Pigs, too, were raised in Rankin, also fed on fish. This project did not work out so well, as the meat from these swine had a distinctly fishy odour.

Though the early agriculture efforts in the NWT stemmed from a need for self-sufficiency and were undertaken rather as a matter of course than as some special project with all the attendant fuss, the continuation, future and what would seem *natural* development of this industry, here, simply has not happened. A number of factors are responsible for this, some economic, some other developments on other fronts, some political.

In the latter fifty years of this century, the trend to import almost all food supplies into the NWT has gown. The building of an all-weather highway into Hay River in 1948/49, the coming of rail to Hay River and Pine Point in 1964, refrigerated truck-transport, improved shipping facilities on NTCL (Northern Transportation Company Limited) barges, the opening of the Dempster and Liard Highways in the earty 1980s have all contributed to the ease with which food can be imported, as have improved runways and more scheduled flights to smaller communities all across the territories.

Caribou of the Porcupine herd are harvested annually at fall migration by the G with 'in people of Old Crow in Yukon

Our population in the past fifty years has been growing steadily; it soon became obvious that should an agriculture industry develop that would viably sustain even part of this population, more land would be needed. Land, suitable land for agriculture, was not an easy commodity to come by, the majority of it being generally classed as 'crown land': the federal government was not about to hand it out willy-nilly, and by the late 1960s, the fledgling NWT government did not have control over that much land that it could afford to hand it out, either. There was concern expressed that too many gung-ho would-be homesteaders would come into NWT without sufficient experience or knowledge of what conditions could be in the north and that there would be haphazard development, perhaps severe losses, financial and of equipment, stock, maybe life.

The real death knell to further agricultural industry development has been the land freeze of 1975, and the lack of a developed, adopted and implemented policy for agriculture by the GNWT (Government of the Northwest Territories).

Land Claim settlements in the Western Arctic are still on-going, with the Deh Cho, North and South Slave Region agreements still to be concluded. As the majority of the tracts of arable land in NWT lie in the South Slave and Deh Cho Regions, farming, on any scale is out of the question, on any lands but those presently titled and privately owned, or on existing leased lands within municipalities. This state of affairs, coupled with the lack of an adopted agriculture policy leaves the infant industry stuck at the crawling stage. ....

/n the 1950s a *dairy operation was underway m Yellowknife - who would have expected to see Ho/stems grazing by the billboards on Shield rock?'*
Photo courtesy Joe Kronstal.

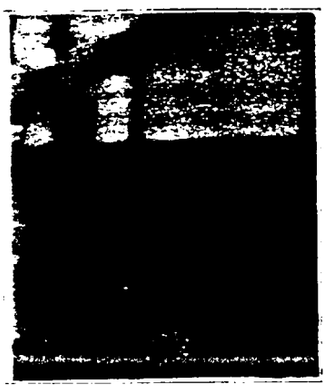
The Territorial Farmers Association was formed in the early 1970s. In 1978 it requested the territorial government to develop an agriculture policy. The GNWT to date has not complied with this request. In February 1994 after numerous discussions, the TFA drafted a proposed agriculture policy which was presented to the GNWT. This draft policy has been reviewed by a government-determined committee (representing several government departments), which following the initial review proposed several recommendations to the government.

It should be noted that in the lifespan of the Dominion Experimental Station at Fort Simpson, valuable work was accomplished. In 1966, the Advisory Commission on Development of Government in the Northwest Territories made a recommendation which they hoped would help ensure the future of agriculture development in the NWT, based in part, on the results of the Fort Simpson station's work. However, their recommendation that there be formed . . . . .a department of lands and resources, with jurisdiction over game, forestry, agriculture and surface rights to land in and adjacent to the settlements" was not acted upon, and in 1970, the Department of Agriculture (or Ag Canada as it is now more popularly known) closed the Fort Simpson station on the grounds that there was a lack of agricultural activities (in the NWT). This was probably one of the 'sad' days for the industry North of 60, as it left members here of that industry with no 'official' presence and a new government to which agriculture was not a priority, other than that it occasionally tended to be a thorn-in-the-flesh.

From beginnings with a few seeds, an axe, shovel, hoe and dog-drawn ploughshares, the agriculture industry in the NWT has grown to one that, while small and facing pretty heavy odds, employs modern cultivating and husbandry methods of production, and continues to disprove soothsayers who would have it that "you can't grow stuff 'up there'. "

The truth is, we can grow 'stuf up here - all sorts of stuff. And there is a long list of ventures, past, present and on-going to prove just that.

Chapter III - A Century of Ventures



Fish is harvested and dried for the winter, today as centuries ago. Above, dog-salmon is 'put up' in Old Crow.

In the past one hundred years, just about every branch of agriculture has been tried in the Northwest Territories. Some of these endeavours have attained a marked degree of success; some have produced only mediocre results; some have failed completely-or just dwindled away; others just continue, quietly, steadily.

Both cultivation of crops and husbandry of livestock have been practised: indeed, the NWT has seen its share of 'exotic' animals, and gardeners have grown some plants one would not expect to find above the 60th parallel. Yaks lived in Fort Simpson for a while; llamas can be found at the Steed farm outside Fort Smith, and peacocks entranced children at Greenfield's Paradise Gardens, while goats grazed along the shores of the Liard at Lindbergh'. Melons have reached maturity and peppers are not at all uncommon in both small and large greenhouses. The biggest pumpkin recorded in NWT turned up in a Hay River garden in the fall of 1995.

For simpler presentation and to allow a more detailed examination of them, the various agriculture operations are grouped according to operation type.

Livestock, Fowl Operations

Dairy; Beef; Bison; Reindeer; Native Stocks; Hogs; Fowl; Feed Mill; Bees. Cattle, mostly dairy, were brought into the NWT in the latter part of the 19th century, largely by the Roman Catholic missions. The priests, brothers and mission workers tended the animals and worked to establish the first large scale farming operations in the territories. Their Anglican counterparts did the same at Hay River, where the Anglican Church first established a mission and school. Anglicans also gardened/farmed extensively at Fort Simpson, as did the Husdon's Bay Company. At Forts Smith, Resolution, Providence and Simpson all the mission (R. C.) farms included cattle. For years, these small herds provided milk, butter and meat, as necessary. Horses, too, were to be found, though in far smaller numbers, in the South Slave areas. The Roman Catholic missions' St. Bruno's Farm, located south of Hook -Lake between Fort Smith and Salt River, began in 1907-10: as many as 170 head of cattle at a time were to be found on this farm during its years of operation. When the farm closed in 1938, 140 head were in the herd. Dairy cattle were still kept in Fort Smith right up to the mid-

Another kind of harvest; cereal grain at *McBryan's farm,* ....

1940s, when it was discovered the herd was infected with brucellosis.

Dairy Operation, Aklavik

Dairy operations occurred not only in the southern Mackenzie areas, the Delta had one. too.

In 1938, Doctor Leslie Livingstone, who was working in Aklavik, had shipped from Edmonton a threequarter Jersey cow and a dozen hens. Once the cow arrived in her new far-north home, she did" her stuff and produced a healthy five quarts of milk at the first milking; from then on, she gave a few quarts each day. Livingstone expanded the operation the next year with the purchase of an old Shorthorn bull. In 1940, Aklavik welcomed the first calf born in the community. Livingstone now made preparation to produce hay and three heifers were purchased from Doctor Truesdell's herd in Fort Simpson and one more from Edmonton. By 1941, 60 acres of land were fenced for the cattle and a dairy barn had been built. Total cost of the operation was $12,480. ! The herd by 1943 consisted of nine native-born cows, fourteen calves, three Jersey heifers and one bull from the original cow, plus four imported animals. The barn was extended to house eleven cows and ten young cattle and to store 15 tons of hay. Livingstone now had about 30 acres cleared on which he was growing barley, oats, peas and about 20 tons of hay; he imported only two tons of oats and barley from Edmonton. Cattle stayed in the fields from mid-May to mid-September and were housed through the winter. The Canadian Jersey Cattle Club took an interest in the project and in 1944, a pure-bred Jersey bull calf arrived in Aklavik. The Club also offered to supply semen and older cattle for breeding livestock. Doctor Livingstone left Aklavik in 1944 for Ontario, intending to return. Shortly after he left, a Jersey cow died and severe snowfalls damaged the hay and greenfeed crops. There was no local interest in managing the farm and no government support. Doctor Livingstone signed the rights to the property over to Jack Douglas, and, in 1945, the farm was dissolved.

Haying *was an Important part of the livestock operations that went on in the NWT earlier this century. Above, workers gather the harvest that will help feed stock through the long winter at Yellowknife, about 1940.* NWT Archives, Robert Porritt Collection.

Dairy Operation, Hay River

In 1963, Eugene and Betty Patterson commenced a dairy operation at Mile 16 (south of the town on Highway 2), on river flat property. They brought in a herd of about fifteen registered Brown Swiss

The Livingstone barn was still standing in Aklavik in the 1960s, reminder of an early farming venture.

milk cows and a bull.

The Patterson, who had dairy farmed a large herd of the Brown Swiss in California, intended to supply Hay River residents with fresh milk. The Pattersons, with son and daughter Daniel and Sandra, set up a pole shelter and corral for the animals, and themselves settled into a tent for the first little while. That summer saw the herd browsing on the cleared land and the twin calves, which had been born on the journey north, were growing well. Cows were milked by both hand and machine; at the start, before their generator was going, Pattersons used a '47 Chev motor to provide the vacuum power for the milker! They sold the milk on a private basis, delivering to between thirty and thirty-five customers, daily, about 75 to 100 gallons of milk each day. The milk was not pasteurized.

While the animals did fairly well with summer browsing, both hay and feed was hauled in from High Level and Fort Vermilion, Alberta. Betty Patterson says the animals withstood the climate well; they were kept in a barn during the winter. The herd endured no losses from predators, though, she says, "the bears and wolves did hang around a bit."

Pattersons operated their dairy for two to three years, then moved the cattle south. "The operation proved not to be viable," Mrs. Patterson says, adding it was under-capitalized: "There was only one bank in town; I don't think the guy had ever even seen a cow!" The cattle were sold into the High Level area where they were crossed with Herefords, producing an animal with "phenomenal growth."

Dairy Operation, Yellowknife

As a busy, growing community, Yellowknife in the 1950s and '60s had a strong market for fresh products - and milk was one of them. Dairy cows were kept within what are now City limits, near Kam Lake, and fresh milk was produced for local sales over a number of years. In part, the herd pastured on grassy lowlands in the area. Unfortunately, in those days, there were no scrubbers at the various gold mines and arsenic emissions eventually affected (some of) the cows, through the 'food chain'. Some sickened and died: the operation disappeared. Changing circumstances and developments (all-weather roads, for one) also meant a better and wider supply of food stuffs was available from the south, and, with all the other growth and development going on, agriculture generally, and most certainly dairy farming, got rather lost in the shuffle.

By the 1980s, however, some businessmen and 'lookers-to-the-future' were examining the possibilities of making the north and Yellowknife more self-sufficient in food production. In 1985, Agriborealis, a local company, decided it was time to get milk production going again and a 70-cow dairy production and processing operation was established. By 1987, this plant was capable of producing enough milk for about one third of the Yellowknife market.

Milk and milk-plant regulations were not something the Government of the Northwest Territories had at its fingertips - or even at arms' reach - at the time, and it elected to use Alberta standards and inspectors. Sadly, Agriborealis had purchased its processing equipment from a British Columbia supplier: there proved to be a difference in the standards for milk production between the two provinces. The territorial company paid the price, at one point having to dump 300,000 gallons of milk. Eventually, they ceased operation.

The herd, which had been kept 'in-house' with a free-stall system with hay available at all times and computer-controlled feed programs so that each animal got her exact mix of feed each time she indulged in the palletized feed, returned south.

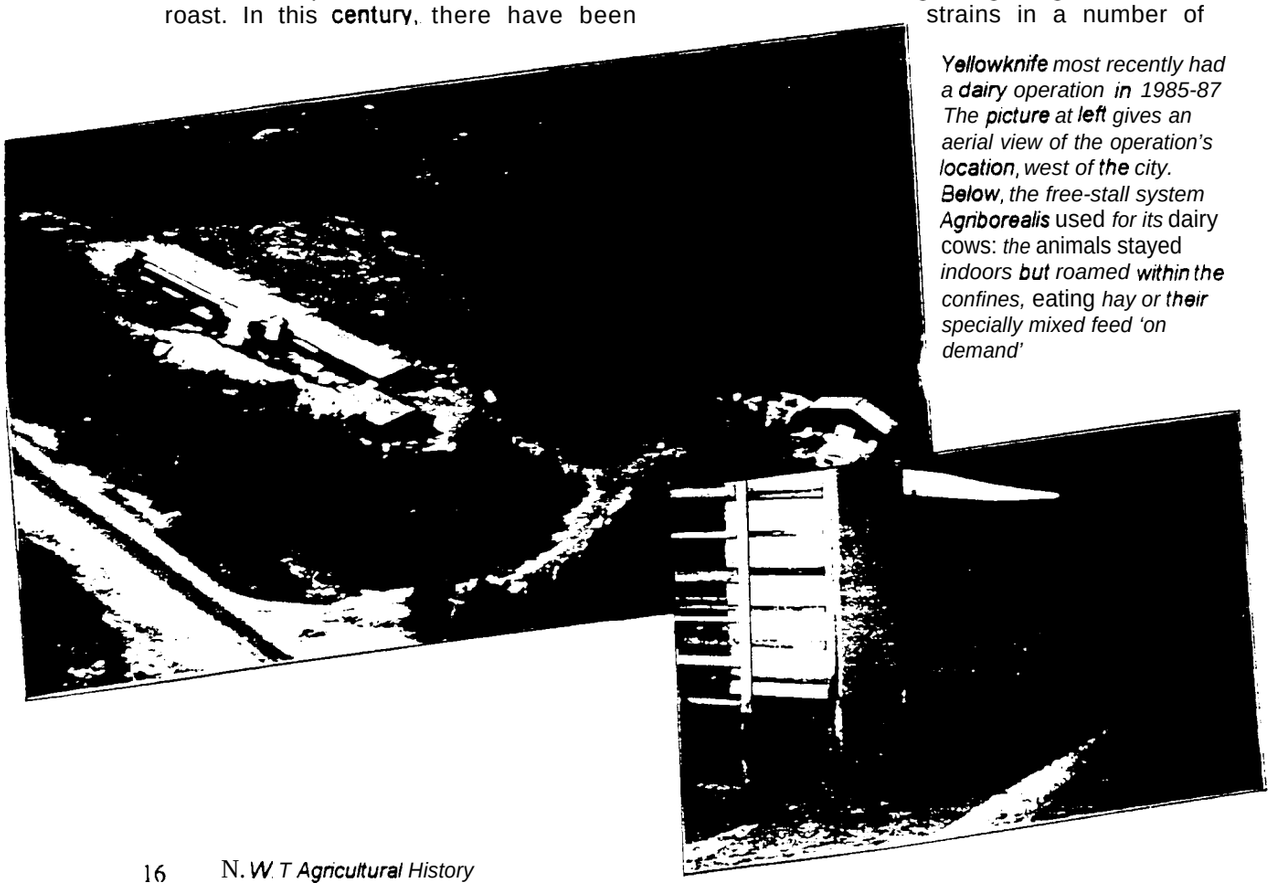
Joe Kronstal, who was president of Agriborealis, is ready now with new partners and a new company. He plans to get right back into milk, milk product and fruit juice production. Tuaro Dairy Corporation Ltd. intends to process, package and market fluid milks, creams and pure juices from concentrates, in Yellowknife. It expects to be supplying a number of retail outlets in the city, and anticipates sales to restaurants and institutions as well. Kronstal says their plant

will be equipped with fully modern and Alberta-inspected. machinery; laboratory equipment will assure standards and control: new processing and packaging equipment is part of the plant. Raw milk will at first be purchased from suppliers in northern Alberta. The company anticipates that, as markets develop, a herd will be introduced to Yellowknife again, so that some milk can be produced locally. If Kronstal's experience with his first dairy operation is anything to go by, he believes this should be good - the Holsteins in the Yellowknife barn then produced 15% more than when they were in the south.

Tuaro plans to produce sour cream, yogurts, soft cheese, ice cream once the operation is well established and their markets are firm.

Cattle have been multi-purpose over the years of their introduction to the NWT. Cows brought in to provide milk in the early days often ended up on the table in a stew or as a roast. In this century, there have been distinct efforts to raise cattle for meat only - and several beef breeds have been at 'home' on northern ranges. Herefords or white-face breeds have not done as well as might have been hoped: these animals have been particularly susceptible to black flies, mosquitoes and other flying pests. Highland Cattle and Red and Black Angus breeds, however, have done very well as far as sustaining climate and our notorious bugs. Highlands, unfortunately, did not ship well, losing a considerable amount of their weight en route and not making it up quickly enough before auction to bring a profitable price. Angus seem to do much better with travel - and at market.

Winter survival rate for beef cattle appears to be good if they are provided with some protection . It is possible to grow feed (grains) and to harvest wild hay in sufficient quantities to provide feed from local sources. In 1994, the Territorial Farmers Association did field trials on growing forage of different strains in a number of



Yellowknife most recently had a dairy operation in 1985-87 The picture at left gives an aerial view of the operation's location, west of the city. Below, the free-stall system Agriborealis used *for its* dairy cows: *the* animals stayed *indoors but roamed within the confines,* eating *hay or their specially mixed feed 'on demand'*

locations - Forts Smith and Providence and Hay River and at the McBryan farm near the border (NWT/Alberta). Not all results were really conclusive as some seeding did not occur until or not at all, and it was a very dry year. Alfalfa, at least from these trails, appears to have potential for a forage crop.

One of Red McBryan's Highland 'girls' at his farm along the banks of the Hay River. McBryan also raised Red and Black Angus cattle with good success, growing all their food *requirements within NWT.*

Cow/calf operations work. Weather conditions at spring calving are not much different to those in the prairies, and farmers here must take the same precautions as they must in Alberta - or Montana for that matter. It is reassuring, surely, to know that in the 1940s, in Aklavik, with far, far fewer aids or technology and methods that are available today, calves were born and raised successfully. If breeding could be done successfully above the Arctic Circle fifty years ago, it stands to reason that the same should be accomplished today with advanced husbandry, better-built facilities and feed.

Beef Operation, Red McBryan Farm

W.R. "Red" McBryan farms on 200 acres of titled land about 10 to 12 km north of the NWT/Alberta border, on the west bank flats of the Hay River. He started clearing land in 1970; currently, he has approximately 120 acres cleared and cultivated for crops, with 40 acres for pasture and corrals for livestock, Red first started with cattle in 1981 when he brought in registered Highland Cattle. For a couple of years he kept his original three animals on Ryan Island, south of Fort Smith. In 1983 he brought the animals to his farm on the Hay and the herd began to grow. The Highlands did very well, and Red was duly proud of his shaggy, long-haired, resilient 'girls': a good calf crop was realized in most years. He was growing ample grains for the herd on his cultivated acres and with leases and/or permits to cut hay in natural meadows to the north and south of his farm along the highway. The native hay, under analysis, proves to be good for beef cattle as over-winter feed. Red did not find a need to import food.

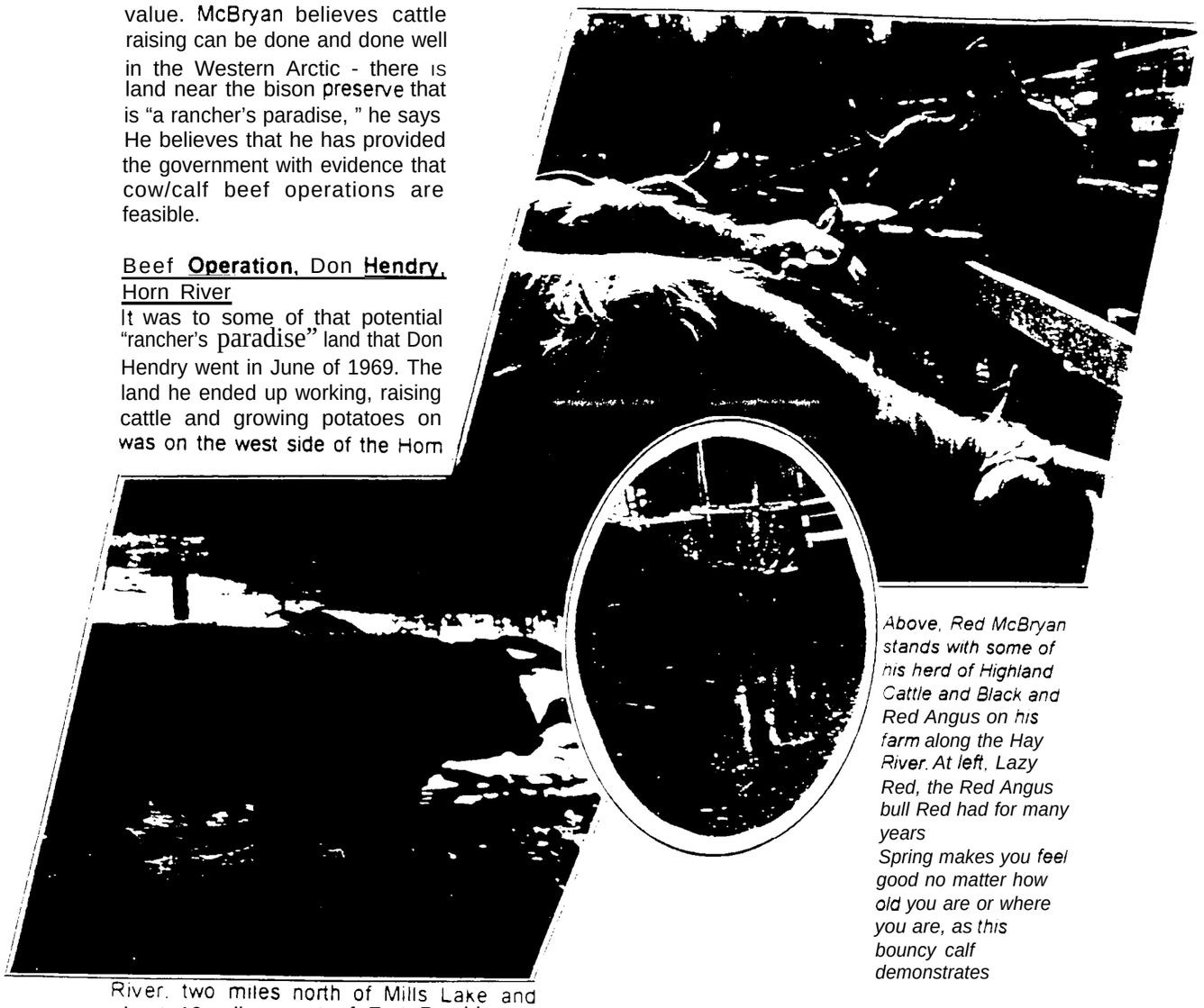
Well as the Highlands did, a problem arose at market time. The animals lost weight in shipping and did not gain it back *in* sufficient amounts to show a profit at market. With real regret, McBryan says, he let his Highland Cattle go and switched to Angus, both Red and Black, with a Red Angus bull (named 'Lazy Red") in charge of the herd. These animals also did very well on natural pasture and the hay and grains grown and harvested on the farm. Good calf crops again were realized most springs; Red says he never lost either a cow or calf to a predator, though he admits to keeping an eye out for black bears.

In March 1993, back problems made it extremely difficult for him to continue the cow/calf operation and McBryan sold his herd. He maintains that to raise livestock, at least in the South Slave and Deh Cho, it is not necessary to import food: it can be grown here, As well, McBryan says, the natural hay and grasses should never be ignored , as these are of good quality and nutritional

value. McBryan believes cattle raising can be done and done well in the Western Arctic - there is land near the bison preserve that is "a rancher's paradise, " he says He believes that he has provided the government with evidence that cow/calf beef operations are feasible.

Beef **Operation**, Don **Hendry**, Horn River

It was to some of that potential "rancher's paradise" land that Don Hendry went in June of 1969. The land he ended up working, raising cattle and growing potatoes on was on the west side of the Horn River. two miles north of Mills Lake and about 19 miles west of Fort Providence There were seismic trails but no roads when Hendry went in, everything had to be brought in over ice and winter roads until he built a little barge to make things a bit easier. In the spring of 1970, Don brought in his cattle, mostly Herefords, some Shorthorn crossbred. He started with 40 cows and a bull, and lost three of this herd. Both Hendry and his neighbour (there were very few people in the area, so his neighbour was not exactly 'next door'), Leonard Ireland found their white-faced animals were severely attacked by blackflies, obvious especially in animals with a black 'patch' on one eye and a white face otherwise. Ireland had mostly Black Angus; Hendry decided to go to the same breed and purchased a Black Angus bull right away. He also had a couple of horses on the range and found that for them and the cattle shade shelter helped alleviate some of the fly problem, so a number of shade shelters were built.



Above, Red McBryan stands with some of his herd of Highland Cattle and Black and Red Angus on his farm along the Hay River. At left, Lazy Red, the Red Angus bull Red had for many years
Spring makes you feel good no matter how old you are or where you are, as this bouncy calf demonstrates

"My objective at the Horn was to have a balanced operation - cattle and potato-growing. and in 1971 with more land broken,

we planted about one acre of potatoes, " Hendry recalls. He built a rootcellar and found potatoes did well at this site.

About 1971 or 72, the territorial government hired the University of Alberta to do tests on feed and grazing possibilities in this area of the Horn for the purpose of establishing a musk ox ranch. The idea was to bring the musk ox down from Banks Island, raise them at the Horn, harvest their wool, the quivet, and then ship this back to the arctic for spinning. In 1973 the government decided the ranch should go to the private sector; three bids were submitted and finally, in 1974, Hendry was told they could "go ahead. " "We sold our 95 head (from the original 37 cattle brought in); the government brought down the fencing and the seed for planting - and then, the Prime Minister, Pierre Trudeau, made a deal to give the Russians musk ox, and those that were then captured did not come to the Horn River. They were going to-do it (the Horn ranch-for-WOOl project) in 1975. Then, at the election in 1974, Commissioner (Stewart) Hodgson said everyone who had applications should 'hit the land!' Sig Phillip from Fort Providence fixed the road - and then, after the election, we heard nothing. Until January 10, 1975 and Judd Buchanan made the land freeze announcement. "

That was the end of the ranching dreams of Hendry and the others who had started to work in the area. Hendry went through arbitration and although it was ruled that he had valid lease agreements and was, in fact, out there farming and complying with the terms of the agreements, after a year, the minister, Buchanan, said he didn't agree with the arbitrator and would not accept the ruling. It took until 1978 for Hendry to get some cost settlement on the nixed musk ox deal and until 1980 to get a settlement with the federal government so that he actually had some land which he could sell to try to recover something for his six years of endeavour. By this time, Hendry had moved his family to Pine Point. He sold the Horn River property to an American who was ranching at Vanderhoof, British Columbia. (As it happened, Harvey DeMoss died before he could attempt ranching on the Horn; the land is now owned by Clarence Sapp, who resides in Fort Providence.)

"Our work and experience there proved beyond a doubt that ranching can be done up here," Hendry says, adding he also believes the musk ox quivet project would have been very successful, had it ever come to fruition. "1 think the real money in musk ox is not in slaughtering them, but in harvesting that quivet, year after year; the meat is secondary."

Hendry was not the only one to lose land and be 'turned off' in 1975; at least three others were in much the same predicament and most of them have never gone back, either. The land freeze of twenty years ago, still in effect today, dashed all hopes for establishing at least the beginning of serious development of this branch of agriculture in the southwestern NWT.

Beef Operations, Fort Smith Area

When St. Bruno's Farm at Fort Smith closed in the late 1930s, it was only one of several operations that were active on both sides of

A shot of the Hendry farm at Horn River. Note the tractor in the upper right comer. Crop is brome grass, seeded '74, harvested '75/ Seed was supplied *by GNWT.*
Photo courtesy Don Hendry.

brother Mickey had a cattle ranch (feedlot) going mid-way between Forts Chipewyan and Fitzgerald. They also raised horses and a vegetable garden. In the late 1930s, Mickey started another ranch, this time between Forts Smith and Fitzgerald, Horses, chickens, pheasants, peacocks and pigeons as well as cattle (for finishing) were raised here. The demand for fresh beef resulted in a slaughter house being built and meat was processed. In time, Mickey bought a refrigerator and opened a butcher shop. His farm eventually sold to the Hudson's Bay Company.

At Ryan Island, the Northwest Traders raised horses; people were growing hay there in 1915 and hauling it to Fort Fitzgerald. In the spring of 1980, two men, Walter Freund and Ray Steed, took their cattle (some Herefords, Charolais) to the island. When the partnership dissolved in 1985, Freund owned the" herd and 77 head were sold. The cattle were originally fed on a 50-50 mix of local slough hay and brome and alfalfa from Peace River. Steed notes several reasons for the end of the partnership: the distance to market; low protein of slough hay resulting in low calf-weight, and hardships on the cattle from flies, which despite the provision of barns, also resulted in low weights.

Harvesting oats at Fort *Smith, much earlier in this century. The operation is being done with* a *horse-drawn rake and hand stooking.* Sown crops *and wild hay* carried the livestock *through* the *winters.*
NWT Archives, Robert Porritt Collection

Reindeer Operation, Tuktovaktuk

Reindeer, originally from Russia and brought overland from established Alaskan herds, arrived in the Mackenzie Delta area in 1934-35, after a journey that had taken seven years. They were herded by Nils and Anna Polk, Laplanders who were contracted for the job. The herd's new home was to be a range up the Tuk Peninsula from Reindeer Station (a herding, semi-permanent settlement set up between what is now Inuvik and where the Delta empties into the Beaufort Sea; reindeer were also herded at Kittigazuit, along the east shore of the Beaufort between there and Tuk). The herd soon became comfortable in their new range and began to multiply, as well as supply tasty meat for Inuvialuit, Dene and Others of the region. Inuvialuit interested were 'trained' by the Polks over the years in the ways of herding and- the range the animals moved over expanded to Atkinson Point and beyond in a northeasterly direction in summer, and back down to the areas around Husky (Eskimo) Lakes in winter, Slaughters were conducted annually. The federal government project had been undertaken to assure a meat supply as indigenous caribou herds diminished or altered their migration patterns.

In the early 1970s a federal commission examined the operation and potential of the herd; a decision was made to turn it over to private enterprise. The first Inuvialuit owner was Silas Kangagana. In 1978, the present owner, William Nasogaluak bought the herd and continued to operate it in established herd patterns. With the Inuvialuit Land Claim settlement in 1984, however, things changed. Suddenly it appeared the herd's grazing areas and future had not been taken into account. "Politics entered into it, " Nasogaluak says. "The grazing range-was

now private "land and we were not able to range the herd as we used to. "

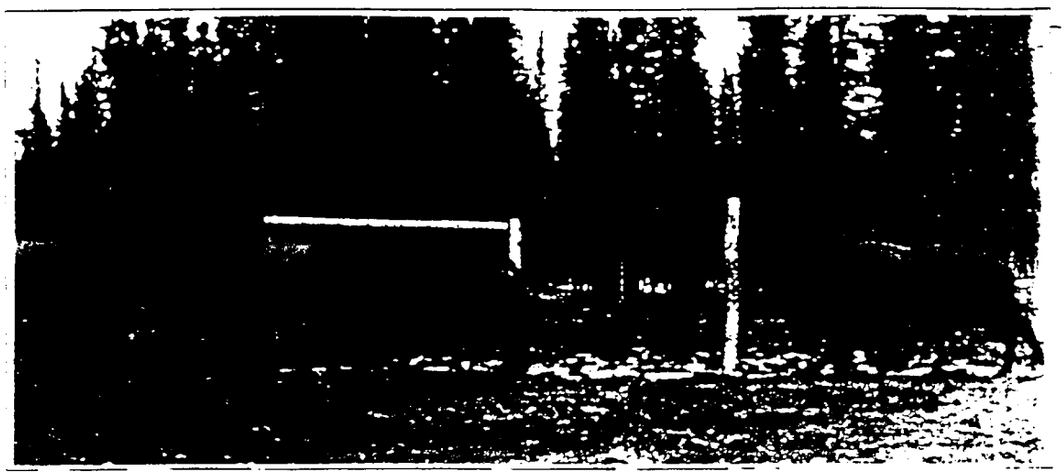
Today, ten years later, the herd's numbers are declining (at one time, 12,000 animals went through the corrals). Nasogaluak has litigation going on between himself and the federal government and the Inuvialuit organization. The herd as a meat source, he says, has fallen largely into disuse. ("The caribou came back," says Renewable Resources officer Duane Smith of Inuvik). Brucellosis has been found in (some of) the animals and the main harvest today is antlers in velvet for an Asian market. Nasogaluak says he is saddened at the present state of affairs: at one point, the meat from his herds was being processed in Innisfail, Alberta, and marketed all over Canada. He believes the best route to take would be to have a meat processing plant on the range so that a good product could be made locally and then marketed. Years ago, meat processing -of reindeer was done in Reindeer Station with excellent results. Another option Nasogaluak is interested in is in developing a tourism attraction with the herd, similar to an operation near Nome, Alaska; this, he says, is very popular Round-ups are still conducted and three or four people may be employed at this job seasonally. Today, rather than by foot or skis or dogs, herding is done with snowmachines.

Wood Bison Operation, Hanging Ice Lake/Fort Smith

Plans to establish a ranch stock of wood bison for the purpose of marketing meat were on the boards in 1989; with funding coming through in February, 1990, to establish the ranch, work was soon underway at a site on the east bank of the Slave River, some miles downstream from Fort Smith. The stock for the ranch, pure wood bison, came from Elk Island Ranch National Park in Alberta, from surplus stock, disease-free. The company, Hanging Ice Ranch Ltd., was own ed by the Hunters and Trappers Development Corporation.

Corals were built and over the next year, two huge perimeter fences were also built. The cost for fencing ran between $800,000 and S1 2 million. Various departments of GNWT. plus federal monies through the Economic Development Agreement and Canada Employment Commission went into the project. Market studies done (for domestic - NWT - markets only) showed promise, and after some years of haggling, the project had finally won approval so that when the 50-60 head of bison arrived from Alberta, there was a place for them to begin, both fattening and re-producing.

The annual migration of the herd south to Husky Lakes was also *the time for slaughter at Tuk. Thirty-five years ago, you walked out on the ice, put in your order and later a freshly killed and dressed animal arrived in a frozen* state *on your doorstep - you cut it up.* A *plentiful and nutritious* harvest.



If you don't hurry up, you'll just miss out, that's all! Wood Bison at the Hanging Ice Ranch in March, 1991 race along some of the extensive (and expensive!) fencing, into one of the 'home' corrals.
Photo courtesy Hub Publications Ltd.

Through the same period of time, the Fort Smith Hunters and Trappers Association built a small processing plant in Fort Smith - but, no bison meat (from the ranch) was ever processed in it. In the winter of 1992-93, a few animals (five or so) were slaughtered. For each of two years, Elk Island sent in additional calves, and when GNWT Department of Economic Development & Tourism got out of the operation in 1993, there were 121 animals. At that time, the Department of Renewable Resources took over completely. The Hunters and Trappers Development Corporation also got out of the project,

Some Department of Health problems arose. An attempt to Sell some live animals into southern Canada for breeding stock at live auction was halted by the incumbent **MIA;** it became obvious that the numbers were not sufficient to create a viable operation (only 50 or 60 cows to breed). As well, the operation had to be run as a working ranch to be properly and productively established: this would probably entail a ten-year haul. The ranch comprises about 1400 acres, and includes prairie, so summer forage is available. But winter feed has to be shipped in -7,000 to 8,000 bushels of grain and an "unknown tonnage of hay."

In November 1995, announcement was made that the herd would be taken over by the Deninu Kue First Nation at Fort Resolution, a take-over which will involve the physical movement of the herd (anticipated by Renewable Resources to number between 165-175 head) from the Hanging Ice Ranch to an appointed area near Fort Resolution, A round-up and count will occur in late December, early January 1996. Once an ice bridge is in place on the Slave River in January the move will go forward.

The Deninu Kue proposal is to run a ranching operation similar to the one at Hanging Ice. It is expected some animals will be sold to develop working capital and to reduce the number of bulls in the herd. Commercial sale of meat is a long term objective. For the first five years of operation Renewable Resources will continue to access the herd for research purposes. The Hanging Ice Ranch area will eventually be 'cleaned up' and returned as much as possible to a natural state.

Native Stock Operations, Central and Western Arctic, Rankin Inlet

Several harvesting and processing operations have been developed and undertaken by the territorial government through the Departments of Economic Development & Tourism and Renewable Resources. Also involved in some "such

projects is the NWT Development Corporation, an arms length govermnent corporation dedicated to helping develop and establish industrial style businesses, turning them over to private enterprise once fully viable. The projects pertaining to the harvesting of native (wild) stocks have been conducted with full participation of aboriginal peoples (Inuit, in most cases at present) in the areas of the projects. The federal government is also involved in one such project.

Processing plants have been established at Cambridge Bay and Rankin Inlet in order to handle the harvests of caribou and musk ox; the Rankin Inlet plant also handles fish. The plants have been built to and operate to specific regulations. The plant at Cambridge Bay, which is being re-built to meet full federal inspection standards (which will allow for export outside the NWT), processes both musk ox and caribou, the caribou from Southampton Island, the musk ox from the area. The Rankin Inlet plant, which is fully and federally licensed - the only one with a federal registration number North of 60- can ship its products internationally. As well as local fish catches, the Rankin plant takes caribou and some musk ox. Neither plant has a kill floor; products are processed and fully packaged - sausages, patties, portion-control - you name it. At both plants, carcasses are also bought from regular hunters for domestic use: hunters are paid on a per animal basis for those used for the domestic market.

Another harvesting operation has been going on at Sachs Harbour for about eight years. This is a federal operation and musk ox are taken. The Rankin plant has been operating for four years and the Southampton Island harvest has operated for two years.

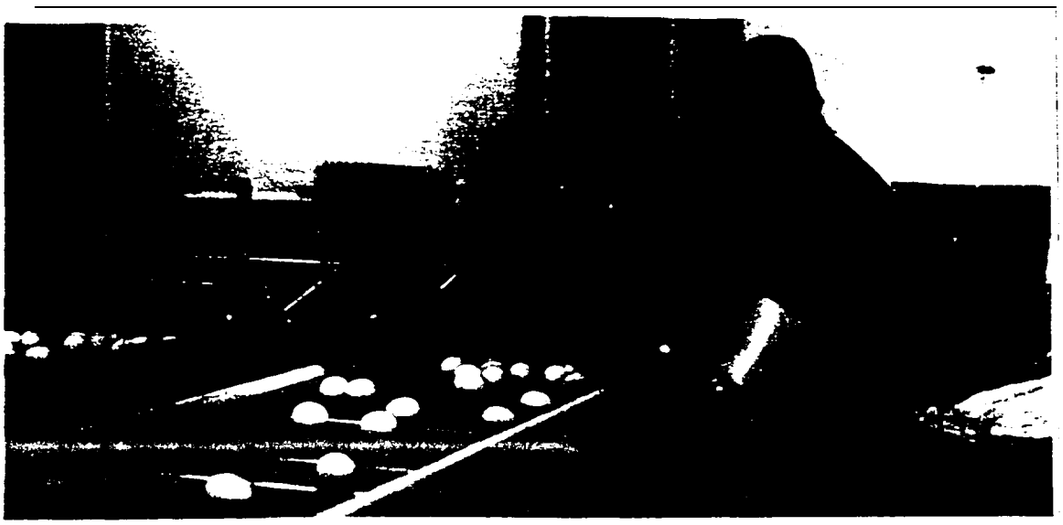
Regular inspections by Department of Health inspectors guarantee quality products that will meet the rigorous federal standards which allow for shipment out of the NWT into Canada and foreign markets. The products from these plants' can be bought within the Northwest Territories, if local buyers deem there are sales for the products, but marketing to establish this is required and is on-going.

In 1994, Dogrib Dene of the Yellowknife area shipped a number of caribou carcasses south; these were then processed through a federal plant and put on sale. The project was "on a trial basis" meant to reveal potential for the product. According to one official, it is considered that a number of jobs were lost to the NWT because of the south-shipping. Government officials say that eventually the new processing plant built in Hay River may be used for caribou taken in the North Slave area.

Pork Operation, Hav River

A commercial operation producing hogs for pork has been established in Hay River for the past three years. Northern Pork's barns are at a site on Highway 2, south of the town proper. Building began in 1991 and hogs were in and production beginning early in 1992. The farrow-to-finish operation is based on a stock of 100 brood sows. Young hogs are 'finished' at about five to six months, when they are shipped south to market, butchering and processing. The expectation and plan is that once the meat processing plant in Hay River opens its doors for business, Northern Pork will deliver approximately 35 - 40 hogs a week to the plant and the NWT will start producing its own pork products which can be marketed throughout the territories.

Northern Pork is owned by Frank Richardson (of Northern Poultry), the Southwest Territorial Community Futures Society and an Inuit development group out of Rankin Inlet. Richardson manages and operates the plant. He believes the potential exists for the operation to supply the complete pork market of the NWT. The animals do very well here, Richardson says, which is understandable as the barns are fully self-sufficient, high-tech systems with an enclosed environment, About 1000 animals are in the barns, including the brood sows, boars, finishing hogs, from newborns to finished, and breeding stock, which is also raised here. Three breeds - Yorkshires, Hampshires and Landrace - are used. At present, one person is employed full time in the operation.



Northern Poultry's busy Leghorn population produces enough eggs to supply the major part of the NWT's egg market and supply Whitehorse, Yukon. The 48,000 layers produce about 960,000 dozen eggs a year They are cleaned, graded and sorted, packed at the Hay River plant and then shipped.

It is interesting-to note ihat in 1993, a visiting delegation from the government of the Yakutz Republic of Northeastern Russia toured Northern Pork's barns to learn of the operation and set up a possible information exchange to help develop similar production methods for their country.

Poultry/Egg-laying Operations, Hav River

Northern Poultry, owned and operated by Frank Richardson and his family, has been producing eggs in Hay River since 1987, when the newly-erected barns started out with 10,000 laying birds. Now, in 1995, the barn operates at full capacity with 48,000 'Leghorn birds in residence. This capacity-operation status was reached four years ago, and has resulted in (approximately) the production of 960,000 dozen eggs a year, based on a 20-dozen eggs per bird, per year rate. The barns are battery-cage, tier set-up, automated to some degree. Some problems have existed with odor, largely as a result of the site location (which is in the industrial section of the Town of Hay River, with some proximity to residential areas and a prevailing westerly wind). Difficulty in keeping the litter dry also contributed to the odour problem. High water tables and originally boggy terrain have had something to do with this (wetness). Generally, such a barn may have been better placed in a locale more removed from residences; however, the land was offered to Richardson at the time of building, as the proposed operation was seen as a good economic addition (to the community).

The eggs produced by Northern Poultry are graded, cleaned and packaged daily at the plant. Northern Poultry supplies directly to Hay River and Yellowknife markets and conducts local walk-in sales in Hay River at the plant. The NWT-produced eggs find their way to other markets throughout the territories and to Whitehorse, Yukon, through wholesale distributors. The product is bought by transport companies as wholesale distributors - and the eggs are on their way to destinations such as CopperMine, Resolute, Fort Smith, Fort Resolution. Richardson keeps his birds two years, and the barn works on a staggered system: Pullets are brought in at about 18 weeks; their laying career begins at about 20 weeks.

Another egg-laying operation has been established in Hay River and its beginnings date back about twelve years. Villetard Brothers, who have an egg-grading operation in Edmonton, set up their barn on the former market garden property of Art and

Marguerite DeLancey, on a flat on the west bank of the Hay River. Gary Villetard has the same capacity in his barn as Richardson, approximately 50.000 birds. This barn has also produced the last decade, but on a less consistent basis.

The reason for this, largely, has been an on-going battle with CEMA (Canadian Egg Marketing Agency); in fact, Villetard is just coming back into production with birds in his Hay River barn after a two-year absence.

The battle with CEMA stems from the Agency's determination not to allow egg producers in the territories, either NWT or Yukon, to sell into the provinces, where a quota system exists. (This system means that all egg producers are allotted a quantity of eggs they can produce to ensure that all have opportunity to make a living, that the market is not flooded and that no one under-sells anyone else.) CEMA, apparently, did not consider Yukon or Northwest Territories as areas that might ever produce eggs on a commercial scale, and therefore its protocol does not include any such allowance. Because of this, both Richardson and Villetard considered they would be able to supply, not only NWT, but sell into the provinces. It is this possibility which CEMA seeks to eliminate.

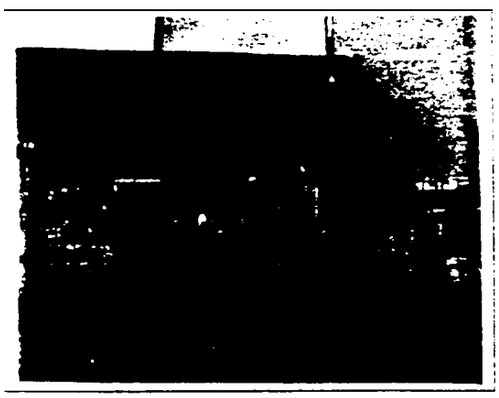
The fight has been in the courts for the last three years and more. In August, 1995, the Supreme Court of the Northwest Territories ruled CEMA's attempts to impose its rules on Richardson and Villetard were "unconstitutional"! Mr. Justice M. de Weerdt wrote: "CEMA is unable to justify the several violations of the rights and freedoms" of Richardson and Villetard. The Justice added that the producers would be legally free to sell their eggs anywhere in Canada. "

CEMA asked for a 'stay' from an Edmonton judge to close down Richardson's operation while it (CEMA) appealed the NWT Supreme Court ruling; this stay was granted. But, both Richardson and Villetard continued in operation (at this writing, October, 1995). CEMA did make an offer of a total allowance of 37,000 birds for all the NWT; this figure was not particularly appealing , and, as Mr. Justice de Weerdt pointed out, the production of 37,000 birds, which would be about two million eggs a year, represents less than one-quarter of 1% of Canada's annual egg production.

Whatever the final resolution of the dispute with CEMA, the fact that this is of particular pertinence to this report is that eggs *can* be economically produced in the Northwest Territories. Nor would this production, with the fully-enclosed barn system, necessarily be confined to the western portions of NWT. The availability for NWT and Yukon consumers of fresh eggs, reasonably priced and 'home-grown' has been a very significant step forward in the development of the agriculture industry and of the consumer market.

Fur Farming Operation, Hay River

While the 'north' is seen by the general public as an area engaged in the fur-trapping business, this does not preclude the raising of fur on a commercial basis in the same manner as practised by commercial fur farms in the south. Climatic conditions (cool falls. cold in November and December) are no problem', for instance. The real problem with this type of production is the same as that which faces trappers: the continuing depression of fur prices on the world markets.



The harvest of *fur was largely* what *brought Europeans into the NWT,* 200 *years ago. Although diminished fur prices* today *have reduced the nch harvest of* former *years, new trapping methods are now taught and practised. Above,* Delta *muskrats dry on the house side in Aklavik in the 1960s.*

Warren Magrum located his silver fox farm on a river flat acreage about two kilometres south of Paradise Valley, off Highway 2 on the Hay River Corridor. He began in 1985 with 50 animals; when he closed down about seven years later, he pelted-out 650. Magrum kept his adults in individual cages with boxes. The pelters were housed in cages in a 200-foot shed. Breeding stock were outside in pens with shelter and a nest box. He managed his own breeding, killing and pelting, hiring two people to assist at pelting time - which usually fell "right before Christmas!"

He fed his foxes commercial feed purchased in Edmonton. He considered trying to obtain rough fish from local fishermen, but would have needed a walk-in freezer to have done this practically; as well, feeding foo much fish is unwise as it can create problems for pups. Using the 'finished' chickens from Northern Poultry was another option considered; chicken would have been good for the foxes, but Northern Poultry's kill-time did not work with Magrum's pup-time, and again, the lack of a walk-in freezer was a restraint to this option.

His careful breeding produced for Magnum fur that put his product in the top 2°/0 for pelt quality on the Canadian market. "The breeding is most important; you have to keep careful records, find out which pairs 'click', " Magrum says.

His costs of production and the continuing low prices on the fur market meant Magrum was working a non-profit job: "It was costing double what we were getting for the fur, just to raise it. And, there was no indication this would improve. "

Although his fur farming venture ended without profit, Magrum says his operation show fur farming can be done in the NWT and that, with right conditions, if could be viable. Good to high pelt quality is needed as the end-product, especially in NWT, to offset high operation costs; good breeding stock is essential, as are those meticulously-kept

Beekeeping and the production of honey is another agricultural-style pursuit that *does well in the NWT. Above,* Kathleen *Haist feeds her hives supplement until the spring blossom comes out*
Photo courtesy Hub Publications Ltd

breeding records

Should fur farming ventures become more viable and common in NWT with better fur market conditions, it will remain to be seen whether this activity stays with agriculture or goes to Renewable Resources.

Beekeeping Activities, Fort Smith, Hay River

There are plenty of bees, wasps and some hornets in the NWT; the bumble bees here are huge and can be found amid the vivid blossoms of the high arctic islands as well as in the boreal forests. So it's not surprising that some enterprising 'southerners' have taken up the ancient art of beekeeping in their northern homes.

Art and Marguerite DeLancey kept a hive or two at their market garden on what is now Villetard's chicken barn site at DeLancey Estates, some twelve or fifteen years ago. They did . not winter the bees over but brought in new populations in the spring. More recently, Kathleen Haist, at her farm just a few miles further south from DeLancey, has been keeping bees for several years. In 1993 she had eleven hives, starting in June with a population of about 20,000. She anticipated about 50,000 at their peak period in late summer. While the bees must receive a supplement feeding of sugar-water syrup until sufficient blossom comes in, once the insects can find the blooms of pussy willow, poplar and dandelion, they'll look after themselves

Haist moved some of her bees to other locations for their summer 'feeding'. Some went to Paradise Gardens and Ben Greenfield's Saskatoon bushes; some went to the Settlement of Enterprise, where a bountiful supply of sweet clover is available. In 1993, the populations she kept at her farm harvested from strawberry and raspberry patches, part of Haist's market garden produce. She hatvested the hives in the fall and received a good yield of several distinct flavours of honey, all offered for local sale.

Pollens gathered by the industrious bees in 'northern' hives are free of pollutants: a fine honey is produced from these workers.

In the Fort Smith area, Bart Hardtop also raises bees and has good success with them. He and Haist have both wintered some bees over; Haist found she had a good survival rate with the hive she kept, having carefully insulated it and supplied a winter feed mixture of two parts sugar to one part water.

Feed Mill Operation, Hay River

Another agricultural industry venture Frank Richardson has set going in the Northwest Territories has been a feed mill. This operation is both successful and profitable, profitable, in part, because a subsidy on imported raw feed products for animals in food production taking place in the NWT currently exists.

Some of the feed used is imported from the U. S.A., items such as soya beans and peas; other 'raw' products come from Canada, mostly from Alberta. The grains, supplements, proteins and vitamins are processed, blended and bagged at the Hay River plant. The feed mill can provided any mix required by a customer, be it for cattle, calves, rabbits, horses, hogs, chickens, dogs or laying hens.

The mill currently supplies Northern Poultry, Northern Pork, the Villetard chicken barn, and a number of smaller customers. It employs seven people.

Richardson maintains that the potential for employment at the feed mill is substantial, if the local operations were large enough, from farming poultry (both eggs and meat birds) to hog raising to other operations that might develop. He estimates about a hundred jobs could be created.

Meat Processing Plant, Hav River

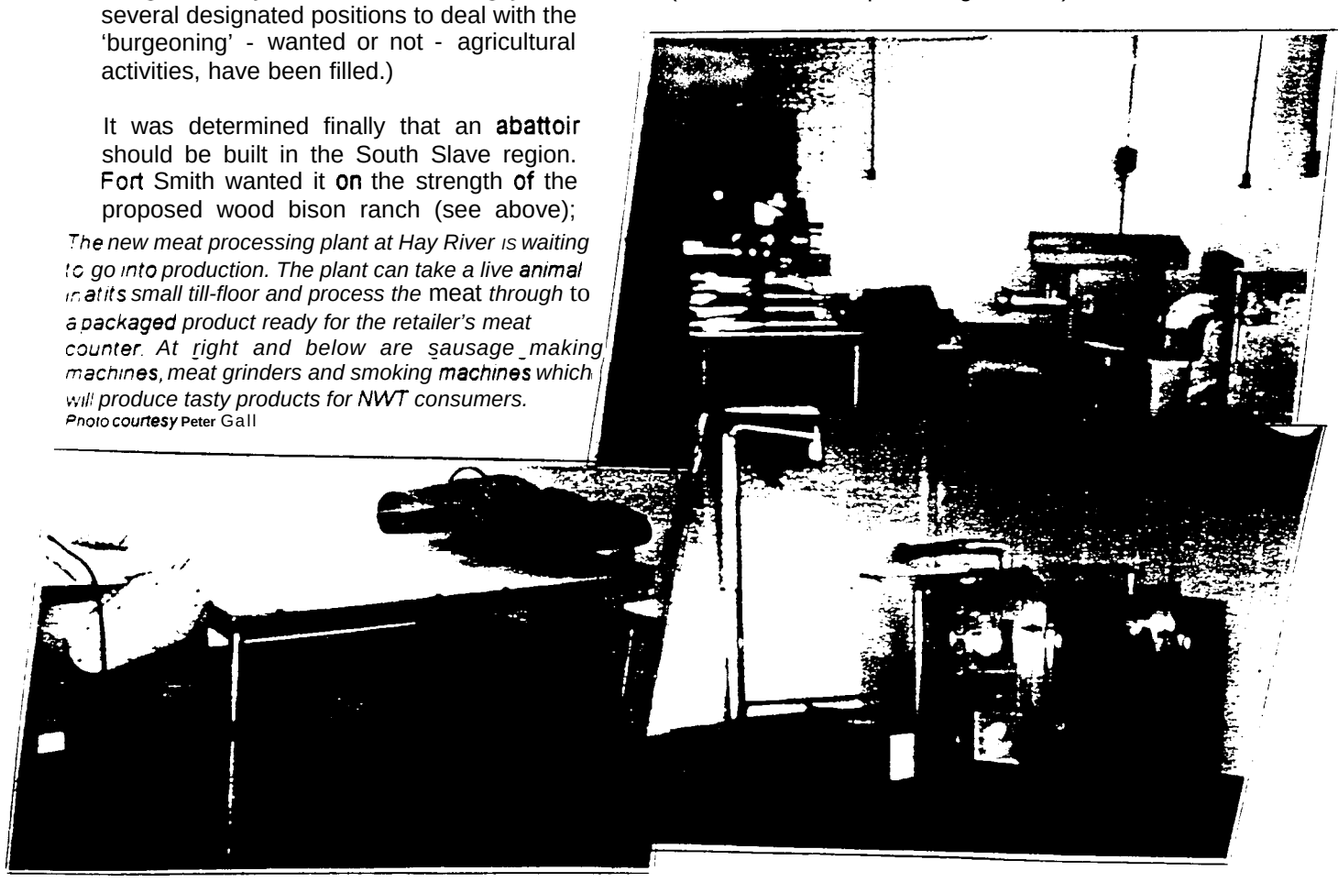
The concept of installing an abattoir or a meat processing plant in the South Slave area to round out to its natural conclusion the raising of animals for food production has been circulating for at least the last ten years. Those few individuals who had started to raise stock for meat production had all found in the past twenty to thirty years that regulations as well as the constraints of travel to a southern market made the operations less profitable than they might

otherwise be.

In the early 1980s, serious consideration began to be given to the building of some kind of facility in the region. Pressure on the TFA from producers and would-be producers resulted in pressure on government; some political pressure also came into play. At this time, the Department of Economic Development & Tourism began taking a little more active interest in agricultural possibilities: the recommendations of the S. C. O.N.E. Report having stressed the Importance of the NWT looking to 'import substitution' in every aspect of its resident's needs. (The ED & T department may not appear the most appropriate for agriculture industry matters, but as agriculture is viewed as generally distinct from Renewable Resources and could be considered as an *economic* matter, this department was assigned the job. Over the ensuing years, several designated positions to deal with the 'burgeoning' - wanted or not - agricultural activities, have been filled.)

It was determined finally that an abattoir should be built in the South Slave region. Fort Smith wanted it on the strength of the proposed wood bison ranch (see above); Hay River, on the other hand, had more cattle being produced in the area and the expectation of hog production. However, as the proposal was more thoroughly investigated, and the constraint of regulations for a *federally* registered facility became apparent, it became obvious the approximately $1 million budget being cited would not make an abattoir practical. A small meat processing plant, though, with a kill-floor, licensed and regulated to domestic standards (i.e., ship product only within the NWT), *would* be possible.

Now, after many, many changes in intent and-design, the facility stands completed and ready to go into production. Final costs were $2.1 million, including studies, plans; hard costs of the building and equipment as a finished, landscaped property including all the holding tanks and hide-storing unit, was $1.6 million. Funding through EDA (Economic Development Agreement) saw a



The new meat processing plant at Hay River is waiting to go into production. The plant can take a live animal in at its small till-floor and process the meat *through* to *a packaged product ready for the retailer's meat counter. At right and below are sausage making machines, meat grinders and smoking machines which will produce tasty products for NWT consumers.*
Photo courtesy Peter Gall

70°/0 - 30% split between the federal and territorial governments respectively. The plant has the ability to be turned into a full-processing fish plant. It has been built to "a tough program, " says Peter Gall, who has overseen the development and building. Meat inspection regulations are being written and will be geared to be universally acceptable in Canada. It would be possible, Gall notes, to become a federal plant if the kill-floor was dropped along with the barn facility, and equipment was concentrated only on meat *processing.*

As it is, the processing plant is built to receive animals and to keep them up to four days; such live-animal stay is not anticipated as common practice. The plant can handle "any four-legged animal, wild or domestic"; it is not designed for poultry. It is equipped to produce from the livestock it receives, processed products that will be prepared, mixed and packaged, ready to go straight to NWT markets. In other words, a hog coming in from Northern Pork at one door will finally exit at another in the form of hams, sausages, sliced meats - all neatly packaged and set for store meat sections.

Inedible by-products will be frozen and shipped south for rendering - unless, of course, someone decides it would be smart to start up a dog/cat food manufacturing plant or such.

The Hay River plant will, then, be able to produce a full line of processed meats, including hamburger, patties, loaves and portion-control meals. It can process country meats also: and it can do domestic orders. It needs to build its market as quickly as possible if it is to be in operation prior to 1996. It will operate with a market-driven mandate. Part of that mandate means developing livestock sources, replacing southern imports, creating employment and producing country meats.

Crop Developments

It is time to examine what has happened in the past hundred years on the grain, vegetable and fruit crop front.

The usual, 'common or garden variety' of root, cole and other such leafy vegetables and lentils are not indigenous to the NWT as it is known today; nor are the cereal grains - wheat, oats, barley as the most notable - or some of the grasses and hays found in the south and used for livestock feed. However, as was proven in the *last* century, many of these are quite happy to grow up here, not only North of 60, but North of the Arctic Circle also.

Threre's no problem growing vegetables of excellent *quality* and size *in NWT, especially along the fertile* banks *of the Liard* River.

When traders and missionaries came into the Slave Lowlands, the Hay, Mackenzie and Liard Valleys, they soon 'put in gardens'. Hudson's Bay Company records indicate a harvest of potatoes, turnips, carrots, cabbage, onions and peas as well as barley in 1828, All were new foodstuffs to the areas in which they were grown and all produced by hand with the simple tools of the era. Once these early gardeners discovered vegetables and grains would germinate and come to maturity in the soils around their posts and missions, life must have taken on a much brighter aspect: as long as they could get the crops in, nurse them through the short summers and get them off before severe frosts, they would not only have a varied and improved diet in the warm season, but some vegetable staples for the winter months. It must have been

comforting, too, to realise the new land they were in was not perhaps as harsh and unrelenting as it had first appeared, but that a little care and coaxing could make it accommodate much of the growth of the south.

Through the two hundred years during which this southern growth has been introduced, there is little that hasn't been tried. Whatever the results, failures and successes, all these 'tries' have provided a background of knowledge, much of it word-of-mouth, but much written and documented.

Experimentation, then, has been the key, and continues to be today. Field trials run in recent years by the TFA, have also been carefully documented as to yields, strains, weather conditions, soils, methods of irrigation and cultivation. These projects have been funded through EDA programs, Agriculture Canada assistance programs for trials and through the GNWT, which has provided core funding to the TFA so the organization could operate in a capacity which allowed for practical activities and the collection and dissemination of data.

As well as vegetables, soft fruits and fruit trees have also had 'trials' in the territories. Raspberries, strawberries, blueberries, Saskatoons and a form of gooseberry as well as a few red and black currants and numerous other berries can all be found naturally here. Cultivated strawberries and raspberries particularly do very well here, most prominently in the river valleys and Fort Smith areas. Saskatoon bushes at Paradise Gardens took to the soil and took off with a vengeance, providing a you-pick paradise for jam- and jelly-makers. Fruits do not have as much success, though at least one residential gardener in Hay River has apple, pear and apricot trees surviving the winters. Residential greenhouses produce a wide variety of 'exotics' as well as being another spot where experiments in growing the 'un-growable' take place.

Grains have also done well in NWT. Some samples over the years have found their way to the Toronto Royal Winter Fair where rape from Red McBryan's acres one year was classed among the best in Canada. Oats, barley and wheat can all be grown here. Triticale also does well. As hardier strains have been developed over the years, farmers in the north have been anxious to try them. While the concentration has been on grains for livestock feed, it is not unreasonable to project an ability for winter soils to produce wheat and cereals for the general food market.

Cereal Crops; Cole and Root Crops; Fruit Crops

Grain Farming Operation. W.R. McBryan

When Red McBryan had cleared acres on his land just north of the NWT/Alberta border, he started putting in crops. He originally grew rape (canola), which proved a very successful crop. He found this was 'hard on the land' and, as his chief interest was in having cattle, turned to crops that would better supply his needs for feed for the livestock. He found that oats and barley produced very well on his acres. Wheat did not manage quite as well regularly, as frost-free time was not always sufficient. He swathes and combines his crops, providing feed supplement for the cattle.

McBryan seeded pasture with crested wheat, red clover and creeping red fescue, In the hay meadow areas he has had under lease, McBryan has added timothy and brome and alfalfa. He has also found the natural hays to be very good feed for the cattle. Yields have been as high as five tons an acre.

In 1994, McBryan took part in the forage trials the TFA conducted and seeded about 40 acres to alfalfa in October of that year. In late May, 1995, there was only a sparse showing of this crop: McBryan noted the area is in the third year of a drought cycle and with the prevailing south, southwest winds of spring the land is dried even more. Crop yield he felt would depend largely upon summer rainfall and optimum weather conditions.

Grains, Vegetables, Fruit: Paradise Valley; J. Krauses, B. Greenfield

Joe Krause and his wife, Amy, came into the Hay River country in 1946. Within a few years, following the flood of the Hay River in 1951 and the advent of the all-weather road from the south, they moved away from the community to a river flat about 18 miles south, along the new 'highway'. Here Joe and Jack Cameron began to clear land, which eventually became 'Paradise Gardens" (named by Madame Vanier when she and the then-Governor-General visited the spot some years later). As well as the Krauses, Cameron and the Webb family were also living and farming in the valley, the Webbs commercially.

The Krauses produced vegetables and many varieties of berries; the land thrived under their care. They gardened 'by the moon', using a moon sign guide and gardening book for optimum planting dates. Root crops went in in conjunction with a full moon, while above-ground crops went in by the new moon. The work the Krauses did on their market garden included experiments for the research station at Fort Vermilion, Alberta. Experimental plots were set up by scientists from Ontario and these were monitored in part by Joe and Amy. Amy maintained that the crops she planted on the fruitful and semi-fruitful days of her calendar always had better yields and were easier to harvest than those in the experimental plots!

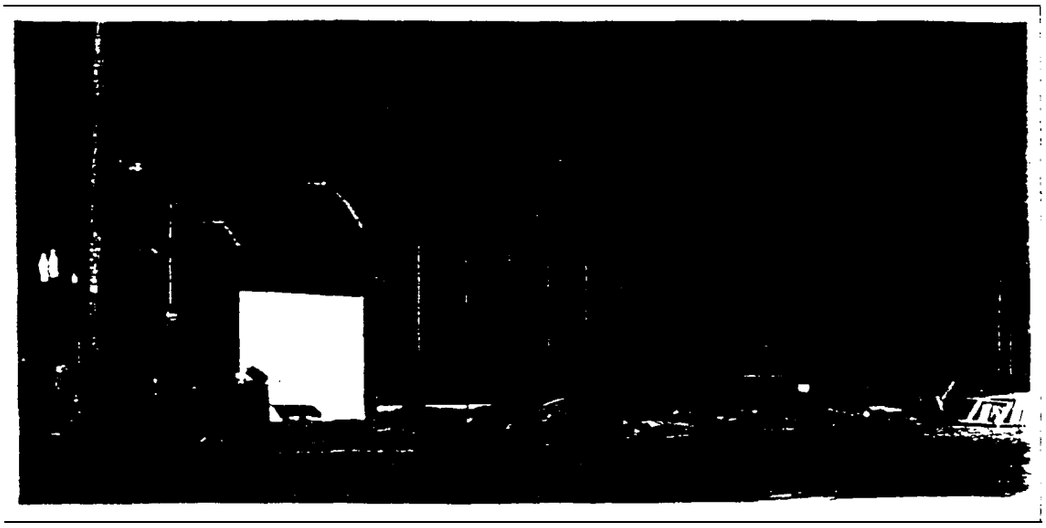
In 1966, Ben and Fran Greenfield came to the Paradise Gardens property. They started a chicken and egg operation, which they continued for many years, but their concentration was on vegetables as they took over the Krauses' beginnings. They grew both root and cole crops and also put in wheat - "If it could grow in High Level, 1 figured it could grow here" - which they threshed for feed for the chickens. In the early days Ben did just that, threshed, and the old machine can still be seen on his property, though there haven't been stooks in the fields for many years now. Ben also has grown oats and greenfeed over the years, supplying some of his neighbors for their livestock. The first strains he tried were Sun Wheat and Pendick Oats.

The Greenfields raised rabbits for the local pet market and kept peafowl for a time, too. The sight of a proud peacock with his marvelous tail spread has delighted many a visitor and entranced many a child.

But the market gardening aspect was chief among their endeavours and they started a greenhouse in their first year on the property. The structure, which is still in use (though they have changed from glass to modern products) is 28 feet by 100 feet. They have always heated with propane stoves. They

Ben Greenfield displays some of his luscious, bumper crop of Smokey variety Saskatoons now doing extremely well at Paradise Gardens.

now start their seedlings about the third week of April and transplant these from the house and office to the greenhouse. Bedding plants'. both flowers and vegetables, are for



The greenhouse at Gail Steed's and Joe Mura's property just south of Fort Smith. Bedding plants did very well in the computer-controlled environment of the huge structure, providing goad growth of a wide variety of plants for local markers.

sale as well as for their own planting for the market garden. Ben says although this has been a viable commercial operation, a winter job was always needed. He believes a person would have to specialize in one crop and sell it entirely to comfortably "make a go off it."

Greenfield has grown potatoes commercially over the years, and still does. He has about *40* acres in all, for his operation, and eight years ago put two of these acres into Saskatoon bushes. He brought in 1020 Smokey variety plants and lost only a few. In 1994 the bushes yielded a crop of 2400 pounds; he expected the laden shrubs to produce about 3500 pounds in 1995. A piped irrigation system runs through the rows, with water drawn straight from the Hay River, ensures enough moisture even in dry years. Raspberries also do extremely well, providing a crop of 1300 pounds in 1994. Rhubarb is another regular crop. Greenfield also provides young trees, including apple, crabapple, and Mayday trees. He is starting out apricots and cherries. thought these have not yet produced. Pin cherries, sand and choke cherries **can** also be obtained. In 1995, Ben started grapes and is waiting to see how they do through the winter.

Greenfields practise organic growth methods. "1 think this produces as much as does the chemical method; I'm not sure if 'shelf-life' is as long as others; but people certainly want our tomatoes and cucumbers!"

Greenhousing, Farming: Gail Steed, Joe Mura

Gail Steed and Joe Mura have been farming land just south of Fort Smith a couple of kilometres inside the Alberta border, working the land since 1989. In that year, they added a section of land to the 18.62 hectares of Ray Steed's original land. Ray Steed had grown a wide variety of grains and grasses, including oats, barley, sorghum, alfalfa, crested wheatgrass and potatoes. In 1989, Gail and Joe grew 55 acres of brome, alfalfa and timothy. They grow a regular crop of vegetables, mainly for personal and family use, though this is expanding. They have free-ranging chickens, a wonderful pot-belly pig who is more mascot than farm animal, horses (and a fenced riding ring so riding lessons are easily handled) - and three llamas!

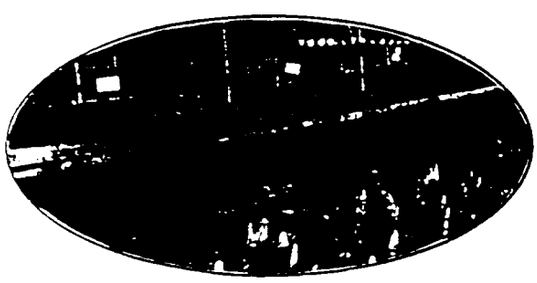
Gail has been very much involved in the various trials the TFA has conducted.

Strawberries was one of the crops she worked with, having excellent results. After careful consideration of various aspects of the industry, Gail and Joe decided to go into greenhousing for bedding plant production, with the possibility of producing year-round and hitting the winter market with flowers. They finally selected a gutter connect unit which they believed would suit their needs and could be constructed fairly easily.

"We **started** in the fall of 1993- and then it blew down in a heavy windstorm," Gail says. "It **was** finally built in 1994 and 1995 has been our first year of production.'

The greenhouse is a large structure, covering 6,000 sq.ft., with a height of 12 feet at the gutter. All walls and gable ends are covered with lexan (polycarbonate). The roof is clear double poly which is inflated. It is computer run for heating and cooling. The ridge vents and fans are all controlled by pre-set programs, fed in by the growers and adjusted according to weather and plant progression. (This feature did not prevent Gail from sleeping in the premises when it was -30C in April, '95.) 'There's constant feeding for the plants; fertilizer goes in with every watering, due to the soilless media that is used for growing. One thing I've found is the need for heat ventilation - the sun is hot in May and concentrated in here," she says.

Solid walls at the entrance portion of the greenhouse provide ample space for offices, showroom, seed-sorting space, soil mixing equipment and storage as well as for the utility and furnace rooms. Steed knows that if she decides to grow year-round, it will be an expensive proposition. But she had real success with her bedding plants and veggie transplants this year and is studying her market area to determine what will be best for the next seasons. As a nursery operation, Steed and Mura also stock trees and shrubs and soft fruit.



Potato Growing, D. Hendry

Potatoes will grow in the NWT and produce good yields. They will grow in the southern reaches and in the Mackenzie Delta. That they have not yet been grown on a full-scale, commercial basis is a pity, for this is surely one crop that could become a real 'import substitution' product - and one for which there is always a demand/market.

One of Don Hendry's plans for the farm at Horn River was a commercial potato growing operation. In 1970, to this end, he broke more land and in 1971 planted about an acre of potatoes. This was accomplished with no mechanical equipment. The crop did "quite well." In 1972 he built a 32-foot by 60-foot rootcellar. In that year he also bought a two-row planter, a picker and irrigation equipment. He put in 12 acres of potatoes, but the crop did not do all that well that season: "There was some bad seed; we were learning about the different varieties and found that the season was not long enough for Netted Gems, but Norlands did very well," he recalls. [n 1973 and '74, he raised mostly Norlands, about eight acres of them. He had steady markets in Fort Simpson, Fort Providence and Yellowknife. The Hire North program was running then and Hendry was shipping 110 bags of potatoes to Fort Simpson every two weeks; the potatoes "kept us going," he says.

With the land freeze coming into effect in January of 1975 and the termination of the Horn River farming efforts, Hendry grew no more potatoes.

Ben Greenfield and Al and June Eirikson grew potatoes commercially for several years at Paradise Gardens; Greenfield continues to do so, though not on a large scale. Greg Haist has also grown a few acres of this crop at his farm and at a second location, both along the Hay. There is always a market for this product; growers in the Fort Smith area have also found that such a market could be steady and viable.

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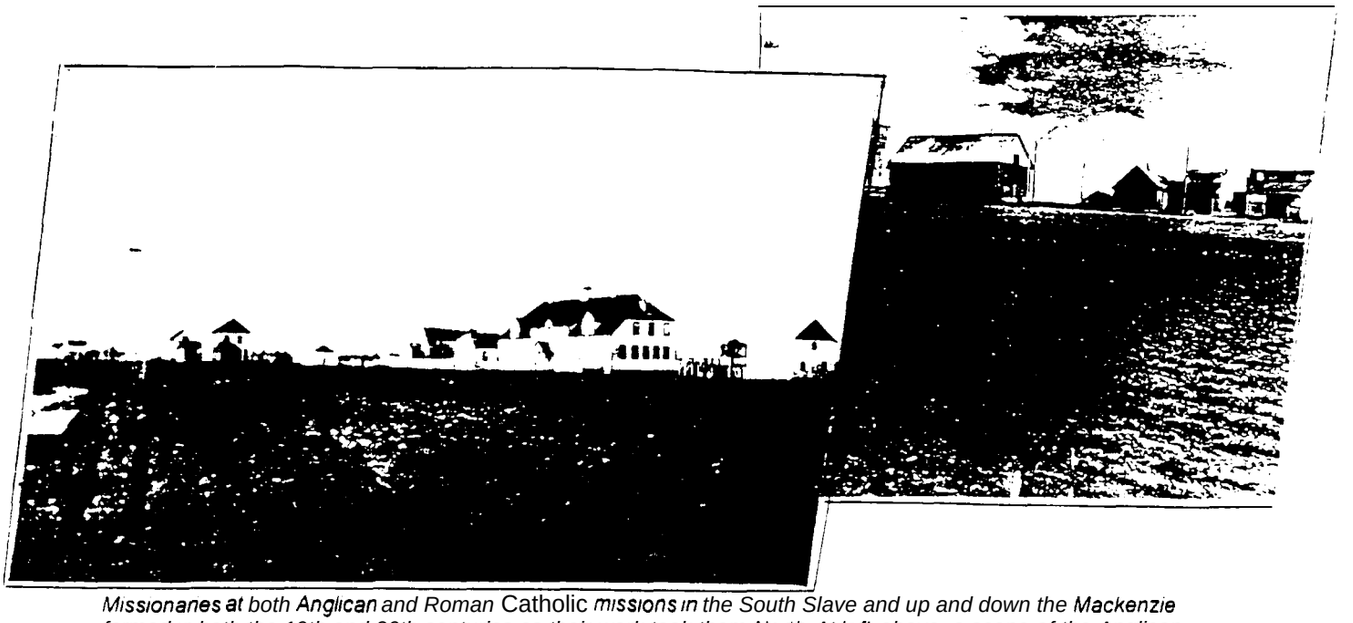


Missionaries at both Anglican and Roman Catholic *missions in the South Slave and up and down the Mackenzie farmed in both the 19th and 20th centuries as their work took them North. At left, above, a scene of the Anglican school and rectory* at Hay *River with the* **potato** *field in the foreground, On the right,* **a** *scene* **from** *Fort Providence and the R. C mission garden-there;* **the photographer notes that though it is** *June,* **"the** *vegetables are just beginning* **to** *appear."*
NWT Archives: left, Henry G. Cook collection; right, George Zuckerman collection

The biggest hindrance to the full development of this particular section of the agriculture industry is the lack of land.

Farming: Missions, Roman Catholic and Anglican

As late as 1959, the Roman Catholic and Anglican missions in Aklavik were still putting in gardens and providing part of the food supply needed for their residential schools and hospitals. In September of 1959, the residences and government school opened in Inuvik and the students and staffs were moved across the Delta to the new town on the eastern boundary of the great waterway. In December of 1960, the new government hospital opened in Inuvik; the Roman Catholic hospital and All Saints Anglican hospital in Aklavik were also closed, The same situation was occurring up-river, as the government built new residences, schools, hospitals and took over completely the running and supplying of these institutions.

The need for mission staffs to produce part of their annual food suPply was gone. Crops of potatoes, turnips, carrots, cabbage and some cole crops had been nurtured for years, out of necessity to begin with, out of practicality and continued necessity in later years. Land that had been patiently and labouriously tilled, cultivated, seeded and harvested was neglected or put to other uses.

In the upper Mackenzie and Slave Lowlands, farming had been a regular part of life at the missions of both churches and quite prodigious crops were brought off, considering the equipment at hand. At Forts Smith, Resolution, Providence and Simpson, and at Hay River, harvests comprised all the common root crops and not a few uncommon varieties. In 1935, at Fort Simpson, the Roman Catholic mission grew apples, crabapples and plums. In 1930, they had grown wheat. St. David's Anglican mission in 1935 grew tomatoes, asparagus, white clover, citron, pumpkin, squaw corn and cereals which were exhibited at the World Grain Exhibit in Regina. The Anglican mission also experimented with peas, potatoes, beans, beets, what and barley, and as far back as 1914, observations record fields of oats at Fort Simpson, with melons

growing in cold frames, and cabbage, cucumbers and cauliflower also produced.

The R.C. mission at Fort Resolution in 1902 boasted chickens and eight or ten cows. Potatoes, tomatoes, alfalfa, sweet clover and celery were all grown in the area; years later, a Mr. W. Albright discovered apple trees growing near Fort Res., so someone in those early days must have brought in saplings and nurtured them.

In 1911, the mission staff was conducting agricultural experiments as a Dominion Farm Sub-station. Unfortunately, it seemed no one of the staff had a scientific background and it is concluded that the experiments did not satisfy all criteria. But in 1915, Mr. Albright began the research station at Beaverlodge, Alberta, and experimental plots were set up in both Fort Res. and Fort Smith. In Fort Smith, the Hudson's Bay Company had a few acres of potatoes, turnips and barley, while the Anglicans grew potatoes, turnip, carrots, beet, onions, cauliflower, cabbages and peas.

It is obvious that the tradition of growing their own food which began in the 1800s with the traders and missionaries was still alive and well in the first half of this century. It appears that improvements in the food/services industry, the transportation industry, coupled with the inability to attain land, all factors of the latter half of the 1900s, are largely responsible for the slump in what might have been the more naturally anticipated development of the agriculture industry in the NWT.

Dominion Experimental Station, Fort Simpson

For twenty years, between 1945 and 1965, an agriculture research station was operated at Fort Simpson. It became a sub-station of the Beavertodge Research Station in 1965; it was finally closed in 1970.

The station was set up by J.A. Gilbey on an island off Fort Simpson at the confluence of the Liard and Mackenzie Rivers. Experiments with crop rotation, summer fallowing, tillage were carried out, as were trials with fertilizers for wheat. It was documented that windbreaks and irrigation were beneficial to crops, while root maggots were a major problem with crop production: treatment with Chlordane proved successful in combating this pest. A Yorkshire sow and one boar were successfully raised there, on a diet of local grains, vegetables and minerals. Poultry trials were included in the programs, but experiments with growing fruit trees such as apple, crabapple, plum and cherry in 1953 did not have as much

Small plots as well as large ones do well in the south, southwest portions of the territories. The crop yield in an average year will help feed a family, both through the summer months and into the winter, if properly stored. The pretty garden at right was that of Vera Turner, on her property along the Liard close to Blackstone Territorial Park, Sue and Edwin Lindberg garden extensively in the same area.

success; however, in 1965-66, it was reported that tomatoes were successfully grown at Fort Simpson.

Other experimental plots were run at Yellowknife, Inuvik and some other locations. In 1965 emphasis moved to the potential for cattle production in the South Slave Lowlands. Calculations were made on the number of frost-free days needed for cool-season crops (at least 80, with 110 growing days and adequate rainfall). Trials with other vegetables, cereals and soft fruit showed that strawberries, cabbages, potatoes, carrots and salad stuffs did well, as did winter rye, wheat , alfalfa and sweet clover. Forages could also be grown from early June to late September. During this time, work was going on at the Beaverlodge facility to develop new strains of barley and oats that could be grown 'north': at least two crosses with better yield potential came from these experiments. .

Crop Trials: TFA

The Territorial Farmers Association has conducted field trials for soft fruits, cole crops and forage crops over the past several years. These have been classed as Northwest Territories Agricultural Research and Demonstration Projects, and have included not only the actual crops, but the methodologies and equipment practised and used in the growing of the respective crops.

Plots were established in Fort Smith, Hay River, Enterprise, Fort Providence, all with varying degrees of success. Different varieties of cabbage, broccoli, cauliflower were tried out with some different irrigation systems. The same parameters were applied to trials with different varieties of strawberries. With the forage trials (conducted in 1994/95), two sites were used in Fort Smith, one at Fort Providence (which did not get seeded in '94), one at Hay River and one at McBryan's farm, just north of the border. Different seeding, cultivation and irrigation methods were appiied at different sites.

All results of these various trials have been documented and form part of the TFA's growing library of agriculture information pertinent to the NWT and the areas most -prominently in use for food production. The" TFA has aiso been holding annual seminars over the past five or six years, to which both members and the public are weicome. The aim of these seminars has been to provide lectures or talks, demonstrations, reports on as many aspects of farming, gardening and food-producing opportunities as possible. A number of experts and persons knowledgeable on the specific subject(s) being dealt with have made presentations. These have covered such topics as, among others, commercial greenhousing, forage crops, animal husbandry/veterinary services, soft fruits, irrigation and weed control methods. The seminars have had good response from those in the industry and have attracted many members of the public.

As well, the TFA has continued its efforts to have a firm agriculture policy developed and adopted by GNWT, working in the political arena and with government officials.

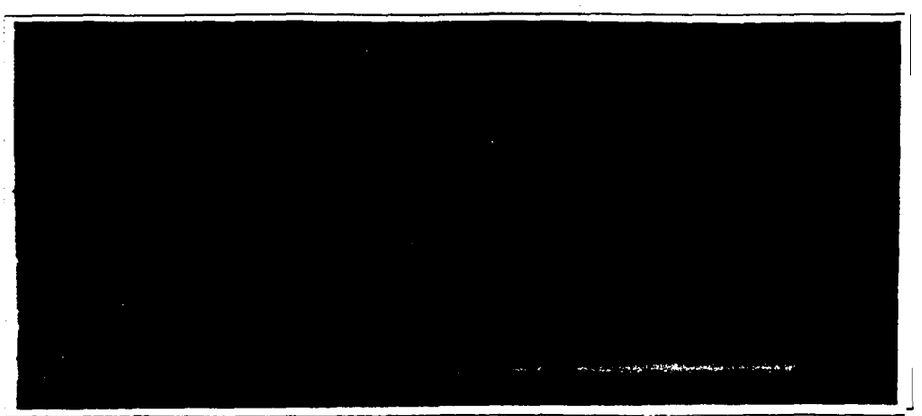
Greenhouse Operation, Gerrv Loomis, Norman Wells

A greenhouse operation in Norman Wells which employs trickle irrigation and hydroponics has been active over the past twenty years, growing steadiiy to one that not oniy produces a good variety of vegetables for commercial use locally, but beyond the Wells, too.

Gerry Loomis grew lettuce, potatoes and other vegetables for personai use at the outset of his venture. For the past number of years, he has operated the greenhouse commercially. Produce from the operation is used in his restaurants in the community, and soid locally. Some produce is now exported to markets in Yellowknife and Inuvik.

Loomis has experimented over the years and has grown peanuts, hot peppers, spices, egg plant, melons of different varieties as weii as the more common strawberries, beets, cucumbers and tomatoes. His garden produces rhubarb, potatoes, carrots and other vegetabie delights. His future plans for the greenhouse include the use of fibre optics,

Chapter IV - Soils and Climate



Potatoes do well in the NWT, especially in the soil of river flats. *The 1995 crop* at Paradise *Gardens, run by Ben* and *Fran Green field, is seen at left* as *it was in July. In the background are a pair of sandhill cranes.*

As noted in the Summary, this report does not purport to provide a treatise on the soils and climate of the Northwest Territories. However, in a historic perspective, it must be noted that studies and surveys have been done which identify and classify the lands that are arable within the NWT boundaries.

Surveys of soils and their potential were undertaken in 1968 (Day) ',1972 (Day) and 1976 (Rostad, White and Action)'. Approximately 3.6 million hectares of arable land, located in three main regions have been identified. These regions are the Slave River lowlands; the Upper Mackenzie including Hay River corridor; and the Liard and Mackenzie River areas. Soils identified in the survey areas include Brunisols, Gleysols, Regasols, Luvisols developed in fluvial, lacustrine, alluvial and morainal deposits. Some further soil surveys were conducted in the Hay River Valley in 1977.

Soil fertility testing was also done, though this work was not extensive and, because properly organized trial testings of soil with and without fertilizer additions had never been conducted, data regarding crop-yield increasing was not obtainable. Test on Ph content, salinity and nitrogen phosphorus, potassium and sulphur contents were also included.

Climate ratings put most of the arable lands in Class 3 to Class 5 brackets. It is interesting to note, that the Fort Liard area has an average of three more frost-free days in the growing season than the Edmonton. Alberta area. The generally warm summers experienced along the major river valleys, coupled with the increased number of daylight hours, do allow for a growing season mat is capable of producing for harvesting substantial crops. And it should be further noted that these conditions also allow for production above the Arctic Circle. The strong sunlight that predominates for so many hours from April until August in the far northern regions of this land also allow greenhouse operations and for tne production of green leaf-ies'. Production of root crops in both Aklavik and Inuvik, where ample soil deposits make this possible, has been going on for nearly a century. Some additional heating is necessary during the nights in the springtime for all greenhousing, but the generally good summer climate we enjoy makes operating greenhouses today as feasible as it did for those persevering early gardeners who believed they could grow anything, anywhere!

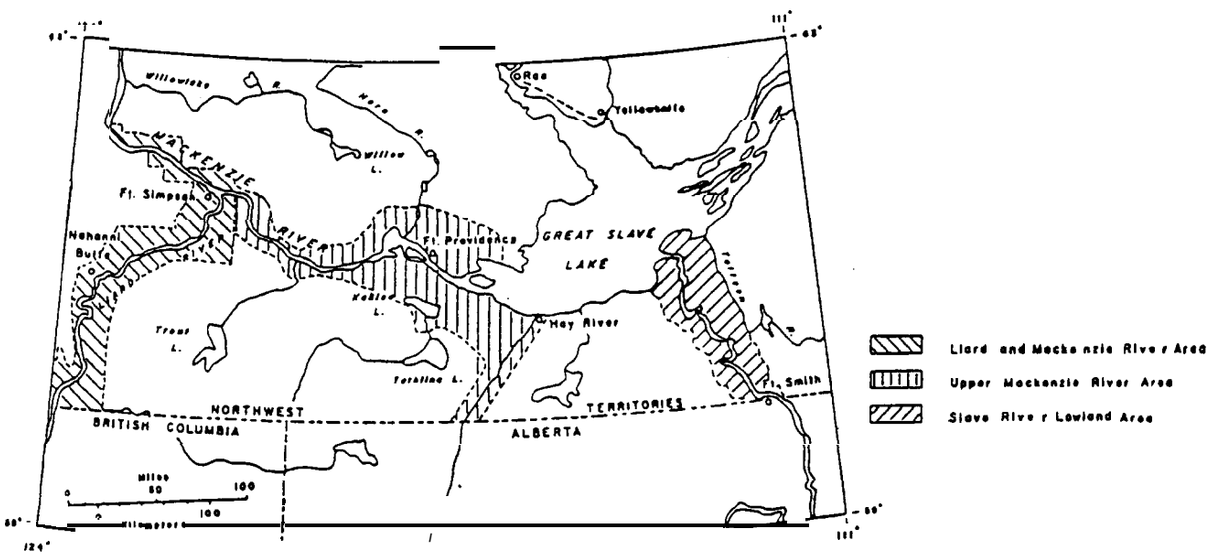
Proudly N. W. T *Grown*

At present, in the South Slave areas, what may be called a drought cycle is being experienced. Rainfall at the right times is vital for growing here as in the south and one

Ref. 3;4

Areas of Soil/Climate Class by Region **Surveyed** AREA (000 hectares)						
REGION CLASS	III	IV	V	VI	VII	TOTAL
Slave River Lowland	178	26	518	3	7 4	799
Upper MacKenzie River	449	222	342	—	943	1956
Liard and MacKenzie	293	148-!	449	88	278	1256
TOTAL by Class	920	396	1309	91	1295	4011
% OF SURVEY AREA	23%	109'0	.–33%	2'%0	32%	100%
Types of Crops	Cool season vegetables, **berries, barley, oats, forages**	Many cool season **vegetables, barley. oats,** forages	Forages	Grazing on **native growth only**	**No agricultural capability**	

The **table above** *illustrates the surveyed soils by class*



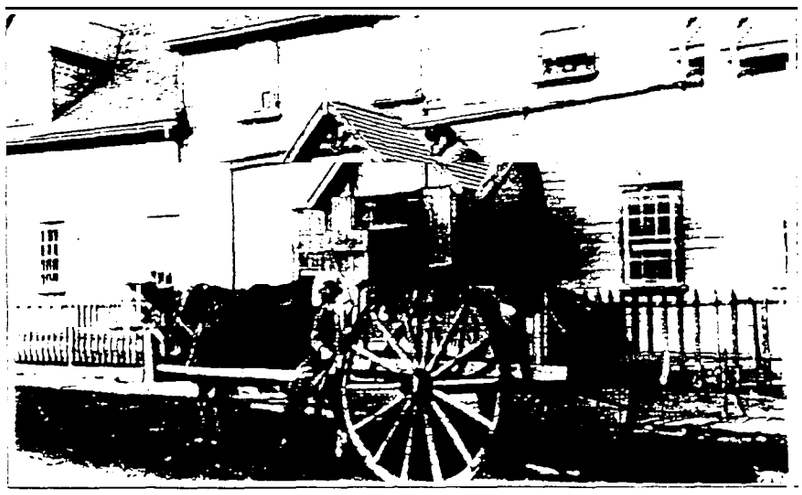
The map above illustrates soil regions.'

vital for growing here as in the south and one of the many things good crops are contingent upon. Hail can and does occur in all regions considered to have arable lands, and can appear in the Mackenzie Delta region also. But such storms are not generally as frequent as those experienced in the prairie provinces

. . . .

Ref. 5

Chapter V - Tools for the Trade



The 'tools' of the agriculture industry have changed over the years; but in 1928, this was how water was hauled at the Anglican School in Hay River.
NWT Archives, Henry G. Cook collection.

Farming, food production methods and animal husbandry have experienced incredible changes over this century, especially in the last 30 years. While `old' methods are still the norm in many Third World countries, ways and systems to intensify production and yield, to improve soils and irrigation methods, breed and maintain better stock, improve the care and health of animals and 'fowl in domestic use as well as devise safer, quicker and better ways to package, market and deliver the products have all changed the face of the agricultural industry in Europe, North America, Australia, New Zealand, and in some parts of Asia and Africa.

The simple explanation may be that as the world's population has grown at an astounding rate in this century, the need to develop better food-producing methods has been basic and the driving force for such development: however, some of the advances have been a 'fall-out' from discoveries and/or disciplines other than those precisely agricultural (the use of computers in many food-producing operations is one example of this). Other factors also play a role in the application of new agricultural methods, technology and developments, however, not the least of which are those of economics and 'big business'.

Domestic or 'barnyard' fowl have found a home in the NWT over the years - and been comfortable.

While the NWT is reasonably free of the `big business' influence in its most detrimental form, the north has been likened to a Third World environment as far as its agricultural development is concerned, an appellation not entirely deserved, but still applicable in some areas.

No one `farms' in the NWT today with a dogteam pulling a single ploughshare - but, if someone did, this would not be a catastrophe or unacceptable. If such a method was practical in the individual case, if the farming' was being done for personal support and supplement only, if it worked - then let it be used!. But such methods would not work if the aim was to produce a substantial crop and deliver it to a wide domestic market. Such an undertaking in the 1990s, would require applying the most modern methods possible to ensure high

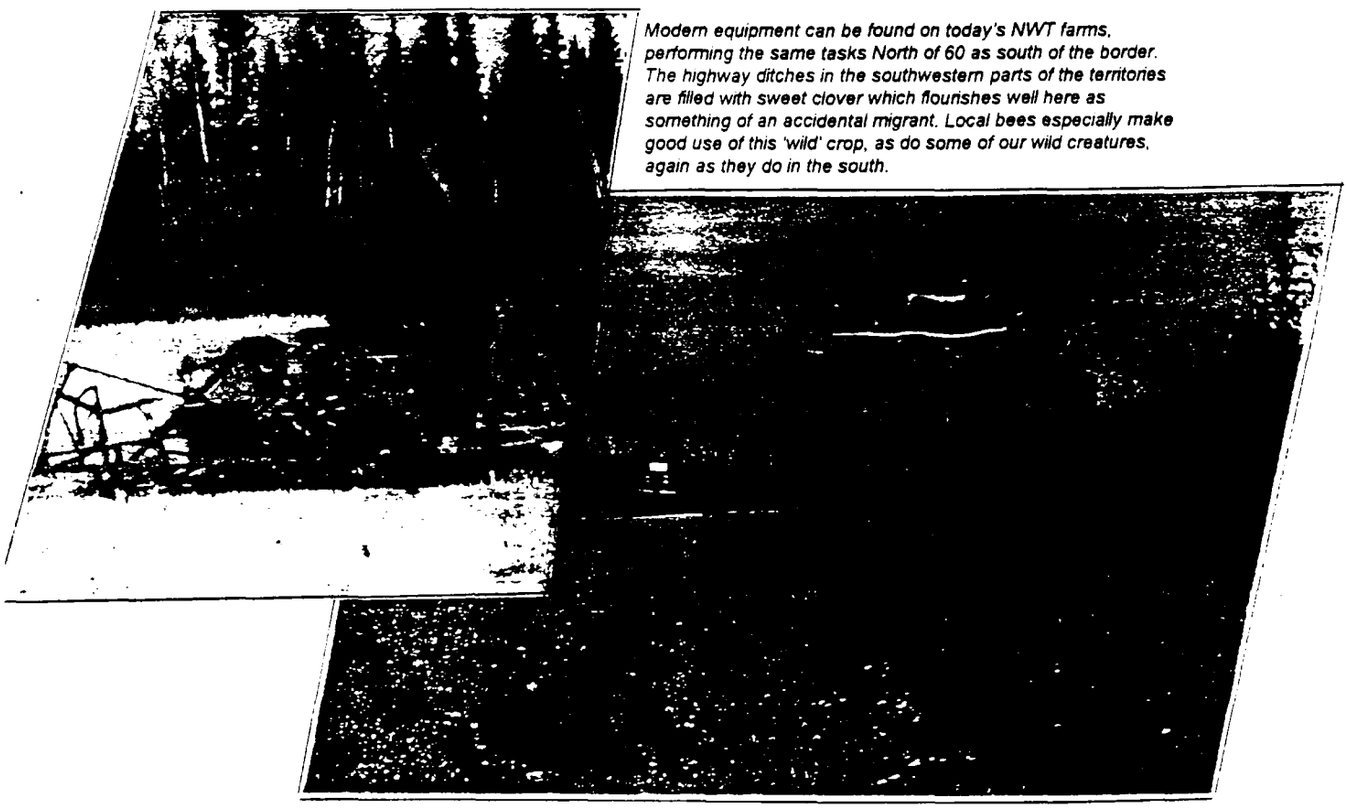
production of good quality goods; further application of the most up-to-date methods of marketing and transportation/delivery would also be necessary.

Reliable, linking transportation systems are essential to the modem agriculture industry. Most of the infrastructure to accomplish this is already in place in the NWT . Although air transportation is expensive and would add to the cost of the product, the benefit of providing home-grown produce, dairy, chicken and meats to residents of the territories should be recognized and not discounted out-of-hand. Import substitution has become a policy and aim of the GNWT in recent years: full development of the agriculture industry potential, in all of its many facets, is one means by which this aim could be accomplished.

From low-built, log barns to fully modern egg-laying barns with a 50,000-bid capacity is a long way, but is just one example of the changes in 'the tools of the trade' which has occurred in the NWT in the past 100 years.'- The egg-laying operation of Northern Poultry in Hay River uses modem battery techniques for egg production, and is a complete operation in that the eggs are graded, packed and shipped from the site to markets across the NWT, making full use of transportation systems in place here.

Another example of changing methods *and* equipment that can be cited is in the harvesting of grain and hay crops. From the days of back breaking work with sickle or scythe we have moved to harvesting with a combine - and, in between, we used the threshing machines of old-time prairie fame!

Advances in irrigation and mulching methods along with gardening . accessories' such as weed covers and fruit crop nettings have also made their way north to help improve production. New strains and hardier varieties of plants and soft fruits and of grains have been introduced over the years; at the same time, gardeners as well as farmers



Modern equipment can be found on today's NWT farms, performing the same tasks North of 60 as south of the border. The highway ditches in the southwestern parts of the territories are filled with sweet clover which flourishes well here as something of an accidental migrant. Local bees especially make good use of this 'wild' crop, as do some of our wild creatures, again as they do in the south.

throughout the north have done their own experimenting with different varieties and methods, often coming up with surprising and excellent results.

Despite a lack of real encouragement, the agriculture industry in the NWT has continued not only to progress, but to take an educated and vigorous interest in new developments and advances developing in the industry south of the border. In particular, the Territorial Farmers Association has been instrumental in making sure its members and the public have been kept abreast of any such relevant developments. The Association has negotiated funding through arrangements with the **GNWT** Department of Economic Development & Tourism and through implementation of some aspects of the Economic Development Agreement over recent years to run-a series of field trials aimed at discovering better plant strains, forage growing, and irrigation systems. The data from these trials have been carefully documented. The resulting information adds to the knowledge accumulated from the experiences of 200 years of agricultural endeavors in the territories. It is available to anyone considering operations in the future and provides invaluable information when making decisions on types of agriculture activities, methods, equipment, etc..

When Don Hendry and his fellow-ranchers at *the Horn River first* **went** *into the area, there were no real roads: ice roads served in the winter and the river in the summer, once Hendry built the small barge, above, He moved in many of his 'tools for the trade' in this manner,*
Photo courtesy Oon Hendry.

Tools for the trade today must inevitably include serious consideration of general economic factors influencing the area of **a** proposed operation. Awareness of infrastructures of transportation, of consumer needs and trends, of markets and market values is as necessary to the modem farmer **in the** NWT as was the weather sense and knowledge of their forerunners who laboured by hand and recorded the dates of frosts, floods and growing seasons year by year, without the aid of long range forecasting or computers.

Also necessary is some reasonable understanding of economics and finances. A`friendly banker' is a piece of modern equipment unfortunately often hard to find in the NWT **when** it comes to agricultural operations: untitled land is not a great security risk. However, discussion with and advice from banking institutions is not to be disregarded, despite the sense of frustration which may ensue - a good bank is a tool modem farmers need, and it is to be hoped that, eventually, firm government policy regarding agriculture and the ability to obtain land will allow for better banking relationships.

Of all the 'tools for the trade' most necessary to this industry, land and its availability is the prime one. While some small tracts of land have been obtained over the years, and are now under title, land in amounts to make an agriculture venture feasible, let alone viable, cannot today be obtained.

Lands suitable for a variety of operations exist and have been identified: future availability is a matter of political will.

Chapter VI - Farmers and Politics

Farming, by its very nature - that of tending growth - will conjure, generally, a peaceful image. However, just as that imaginary jet airline traveller in the first pages of this report, viewing the NWT from 30,000 feet would gain a wrong or incomplete impression of the types of activity here, so an impression of farming and its adherents as passive would be wrong

Think rather of passion!

And, if there's passion, politics, most often, won't be far behind.

Canadian farmers or agronomers are no strangers to political games and wrangling, from negotiating the Crow Rate a century ago to losing the same, to battles with wheat boards and marketing bodies established by governments (such as CEMA) to regulate production and ensure (or try to!) that all engaged in the industry have the chance to earn from it. Farmers, ranchers, vegetable and fruit growers, all must abide by regulations and standards, and probably almost all, at one time or another, have called their MP, MLA, or attended meetings of a political nature because of some rule or policy which directly affected them

Farmers in the Northwest Territories have been attending meetings over the last 18 years to try to get a policy on agriculture and its development here that they could then deal with.

It is highly doubtful that any of those involved with the agriculture industry in the NWT wish to be as 'politically motivated' as they have had to become, but there has been little choice. Nothing, if it pertains to land, gets done here at present without resorting to political avenues: it is simply "the name of the game. "

A newspaper article of June 1, 1977, states: "The Territorial Farmers Association fingers native land claims as the drawback to development of agriculture in the Northwest Territories." This statement came some two and one half years after the federal government, through then Northern Affairs Minister Judd Buchanan, in January, 1975, slapped on the land freeze. At the time, Buchanan had stated that no more land could be put into production until studies had been done to prove the north's agriculture potential; statements following this one by the next Northern Affairs Minister, Warren Allmand, and Government of the Northwest Territories officials, the article continued, indicated that the main reason for the land freeze is land claims.

A number of residents **today are** *trying their hand at* **small-scale** *farming, in the* **case** *of the Pete Boden family of Hay River, this includes raising hogs for* **fall** *butchering,*
Photo courtesy **Peter** Gall

Soils *in the NWT often* **need** *help, just as in other parts of Canada. Some gardeners use chemical* ***fertilizers****, others prefer mulching and* ***organic*** *methods. Irrigation is also often employed to ensure intensive crops in* ***small areas.*** *Above, in sunny* ***Fort Liard****, Stephen* ***Malesku*** works *in* **his garden,** ***already showing growth in early*** *June.*

At its May, 1977 meeting, the Territorial Farmers Association (TFA), drew up a number of recommendations which were submitted to the GNWT. These recommendations included the following:

- that the GNWT look at setting up the same rules and regulations as applied to farming in southern Canada, that would allow northern farmers to compete on the same basis economically as their southern counterparts;
- that farmers be allowed to lease two sections (1280 acres) of land, and that once certain improvements were made for cultivation, they should be allowed to purchase the land;
- that low standard roads to the areas (for farms) should be a government provision; farmers would be responsible for roads and lanes on their properties;
- the TFA recommended that 160 acres be put aside in each farming area as the site for future community developments;
- recommended that grazing land be leased according to the same regulations as now (1977), allowing 35 **acres** for each head of cattle to a maximum of 6400 acres, at a rate of 5 cents per acre annually;
- recommended that the government pay the full cost of surveying farm lands;
- requested that the TFA be able to appear before a or any (government) committee set up to consider farming.

The Territorial Farmers Association asked the Government of the Northwest Territories to develop a policy for agriculture, in light of the fact that Allmand had said in 1976 that the GNWT was being given control of agriculture in the NW. Farmers believed this control should have been given to them, as well.

Government response was that a policy would be developed and that it would be coming down in 1978. That year came - and went: no policy. So did 1979, 1980 - and every year since. During his tenure as president of the association, long-time farmer of the Hay River Valley, Ben Greenfield appeared "before the Committee of the Whole of the NWT Legislative Assembly, May 15, 1981 when the committee sat to consider Sessional Paper 1-81(2), Principles for the Development of and Agricultural Policy.

Seven recommendations comprised the Paper. On that May day, the first recommendation, that the Government of the Northwest Territories support the development of commercial agriculture in the NWT, was considered in some detail by the Committee of the Whole, insofar as each Member asked questions, made comments. Some Members were in full support; others felt that it would be premature (to support it), in light of on-going land claims 'in--the Western Arctic. Mr. Greenfield expressed

the opinion that, while goods produced in the NWT might not end up costing the consumer much less than produce from the south, the northern goods would likely be of superior quality to that which came in from below the border. He also noted that the TFA wished to see a committee of government representatives, farmers and native band members set up to review applications for land for agricultural purposes.

Since 1981 and that memorable Legislative Committee of the Whole session, things have progressed - a little.

Between January 1994 and January, 1995, members of the Territorial Farmers Association developed a draft agricultural policy, in response to government requests for input from them and for their concepts of what such policy would be. To this end, a working committee of the TFA was struck. Research included review of the agriculture policy developed and adopted in the Yukon, as well as interviewing active agriculturalists in the NWT. Some of the issues noted concerned harmful taxes and subsidy matters. The draft policy of the TFA, now 'down on paper', was presented to the GNWT departments of Economic Development & Tourism and Municipal and Community Affairs, and to then-Government Leader Nellie Coumoyea in February 1995.

In their letter to Government Leader Cournoyea, the TFA cited the various steps of governments and the agricultural development of influence in the 20 years since the land freeze of 1975:

- 1975-1977, land surveys for potential agricultural land in the western NWT;
- 1977, June, federal and territorial governments announce a policy on market gardens;
- 1979, September, federal government indicates it would consider disposition of certain well-defined tracts of land for agriculture if a policy is developed by GNWT;
- 1981, May, Legislative Assembly of NWT considered Sessional Paper 1-81 (2), Principles for the Development of an Agricultural Policy. (At this time, Mr. Don Stewart MLA for Hay River moved to "report progress" because he had the sense that the motion on the floor relating to the policy

Barbed wire **fences** *and* **horses** *in* **a** *pasture* ***alongside*** *Highway 5 a little north of Fort Smith can* **make** *you believe you're driving through Alberta, Saskatchewan* **or** *Manitoba, rather than the Northwest Territories. Horses aren't used much in agricultural pursuits* **today,** *but* a *number are kept* **for** *riding,* ***while*** *others are found with* ***big*** *game* ***outfitters*** *in the Mackenzie Mountains.*

would be amended or defeated and hence set back policy development even further,)

- late 1980s, intensive agricultural projects (one being the egg-laying operation in Hay River) moved the GNWT to tackle policy development again:

- 1990, a background report for a policy was worked on by the Department of Economic Development & Tourism.

- and, in 1994, the letter notes, "there have been assurances that the GNWT will again renew its efforts to develop a policy".

Eighteen years is a long time to wait, and although the TFA complied with government's interest in receiving policy suggestions and duly compiled and submitted the same, the organization has received no response from the GNWT, to date. The rules for playing the agricultural game are still not clearly defined, let alone in place. The games and rules of politics, however, are.

Frustration among those who are trying to carefully build a viable, steady agricultural industry here are at about the same level as passion now, as land claim settlements drag on and the land freeze remains in effect.

Having an agricultural policy in place would at least create a sense that agriculture is recognized as a part of the NWT economy; even so, the policy alone would not provide the land upon which it can be applied.

Until Dene politicians and the federal government come to final resolutions of land claims settlements in all areas, agricultural politicians will have to continue to wear their political hats as well as their farming ones: they have no choice if they wish to realize concrete results from all the years of effort and negotiating .

Because the health of a nation is irrevocably tied to its ability to feed its populace, the cultivation of land for the purpose of food production is essential. Those who produce food, especially the 'raw products', are vastly important to a nation's well-being; this was true for nomadic peoples also - the greater the skills of their hunters, the stronger their group, band or tribe would be. Economics and politics aside, people must eat. It's as simple as that. And a nation or country that can produce the majority of its own foodstuffs in sufficient amounts for its inhabitants will ultimately be in a healthy position, world-wide, both economically and politically,

Now, in the closing years of the 20th century, the hard facts are that in the NWT, our population is growing steadily just as our costs are. At the same time, job development is not growing at a comparable rate. An agriculture or food-production industry, as sound business and future investment, is not an aspect of northern development we can afford to ignore or relegate to the self, despite a 'delicate' political climate. It is, rather, one form of import substitution whose time, historically, has come

Yes, corn grows in the NWT! Paradise Gardens owner Ben Greenfield above in his 'corn patch' uses organic growing methods for his market garden produce,

Chapter VII - Looking to the 2 1st Century

If the people presently involved in agriculture in the Northwest Territories have learned anything from the history of farming endeavors in this country, it is perseverance - and, often, perseverance in the face of adversity.

The land is tough; it is demanding and requires nurturing.

These were facts two hundred and two thousand years ago; they are facts today.

Historic records show a continuous growth **in production of foodstuffs of all varieties** in NWT, despite setbacks and even a short hiatus in this steady progression, following the land freeze.

Recorded facts also tell us that the NWT population continuously grows and that there is a demand for a variety of high quality foods as knowledge of better health and nutrition practices also grows. Economics tell us that the more we can produce 'in house', the better off our economy will be: import substitution is a valid and laudable goal. That at least certain portions of the food industry can be supplied from within our boundaries on a constant basis is not an unreasonable assumption; nor is it an unattainable goal. Food production is 'big business', world-wide. There are no reasons, climate and soil conditions notwithstanding, why the territories should not competently become a player in this 'big business'.

No reasons, except an unavailability of land and lack of a creative, definitive agriculture policy. Land and a good policy to allow, encourage and foster the agricultural activities which would put the players (our farmers) in the 'big business' game are needed. This is not to suggest that there be any but an orderly approach adopted; but it is to suggest that on matters agricultural, a far more time/y and positive approach be taken.

A hundred years ago, just before the beginning of the 20th century, agriculture activities were undertaken as a matter of course, necessary for survival and growth. For thousands of years before the coming of southern Canadians to this part of the country, the Dene and Inuit practised their styles of 'agriculture' for the same reason: survival. This past century has not changed the need for food for survival, for all of the residents of NWT. The self-sufficiency imperative which instigated the early agricultural efforts is reflected today in the import substitution policy of the territorial government.

Considering the gains in techniques and methods for agriculture which have evolved over the past hundred years, it is a little disconcerting to find only such a small percentage of the NWT population gainfully employed in the production of foodstuffs for domestic markets. Markets and a great deal of the required infrastructure to support a far greater agriculture industry are already here or developing.

It is not unreasonable, therefore, for NWT agriculturists to look to the 21st century with hope and anticipation - hope that their aspirations may be realized, or, as Greg Haist puts it, "that farmers here are on the same footing as farmers anywhere else in Canada"; and anticipation that the government, with other players in the field, will' take a **constructive, firm and positive approach, allowing for the continued and progressive development of this industry.**

References

Ref. 1;2 . . . *Shield Country, Life & Times of the Oldest Piece of the Planet,* by Jamie Bastedo
Ref. 3 . . . Day, soil survey, 1968
Ref. 4 . . . Rostad, White and Acton, 1976

Other sources:

Agriculture Potential of certain areas in the Northwest Territories, H.P. W. Rostad and L.M. Kozak;
Invitational Prospectus, Agriborealis Limited; Joe Kronstal;
Northwest Territories Agricultural *Research & Demonstration Project, 1994,* Territorial Farmers Association; .
***Hansard Official Report* for Friday, May 16, 1981;**
Financial Post, September 2, 1995;
The *Hub,* issues 1977, 1978, 1979;
The Mackenzie Press, issue July 19, 1963;

Unpublished government report;
Unpublished draft 'discussion papa', N. *W. T. Agricultural Opportunities;*

Personal interviews/communications.