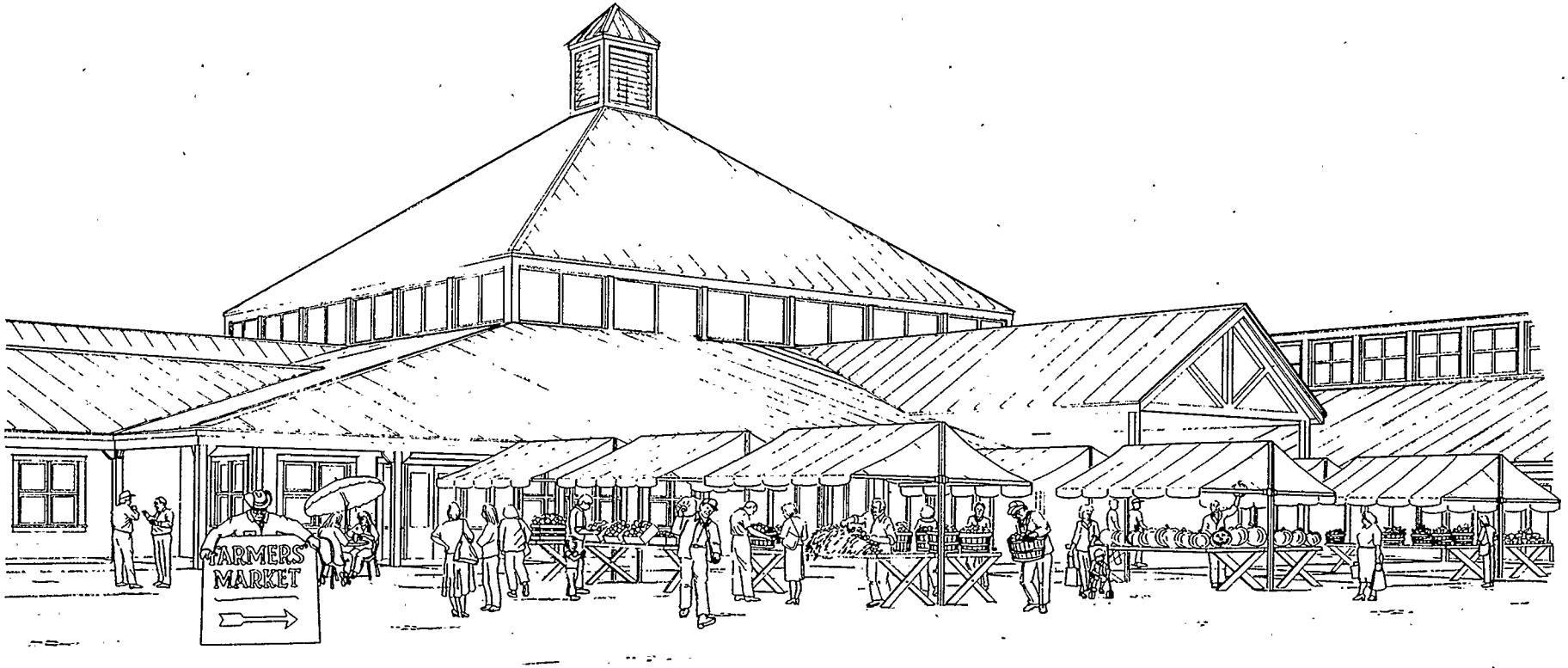
THE DRUMHELLER AGRICULTURAL CENTRE

A Proposed Facility Concept and Architectural Design



Prepared in partial fulfilment of the requirements for the degree of Master of Environmental Design (Architecture) in the Faculty of Environmental Design, The University of Calgary, Calgary, Alberta, Canada, April, 1990

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The undersigned certify that they have read, and recommend to the Faculty of Environmental Design for acceptance, a Master's Degree Project entitled "The Drumheller Agricultural Centre - A Proposed Facility Concept and Architectural Design" submitted by Douglas John Campbell in partial fulfillment of the requirements for the degree of Master of Environmental Design.

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This project was carried out in response to difficult economic circumstances of the City of Drumheller, Alberta during the decade of the 1980's. Due to poor weather and low international grain prices, farmers in the Drumheller region experienced a drop in income during this period. Agricultural supply and service businesses in the city suffered in turn. To help them, Drumheller economic development authorities proposed an "Agri-Mart", a one-stop commercial centre for farmers including the agricultural machinery dealers, hardware stores and other farm suppliers on land provided by the city at favourable rates. This Master's Degree Project involves, first, the development of the "Agri-Mart" concept into a more extensive facility and, second, a proposed architectural design.

The project began with research into the historical, economic, planning and social context of the community. Based on this, a facility concept was developed, proposing that in addition to commercial operations, the Centre should include federal and provincial government offices, private business advisors, a business incubator, a farm equipment museum and space, both outdoor and indoor, for social gatherings and displays.

A site for the Agri-Centre was chosen in the city close to related facilities, the railway tracks, the downtown core and public parks.

The design centres around a large enclosed space for social gatherings and displays. Four outdoor courtyards lead into this space, each with a different function. All of the stores, offices and other facilities are grouped around these courts. The building forms are based on vernacular farm building types.

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to my advisory committee, Professor M. Robert Kirby (Chairman), Dr. Don D. Detomasi, both of the Faculty of Environmental Design, and Dr. James B. Graham of the Faculty of Management for their advice and encouragement throughout the project.

I would also like to thank my wife, Rosalie Merkosky, who was more patient than I could reasonably expect, and my son Geoff, who did not understand why his dad had to work so many nights.

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1. INTRODUCTION

Drumheller is a typical prairie community in an unusual and dramatic setting. Located in the Red Deer River valley of central Alberta, it is surrounded by grey, starkly beautiful badland hills. This remarkable backdrop makes such a powerful impression on visitors that they can easily overlook the city itself. The citizens have further drawn attention away from their city by identifying it with the dinosaurs whose bones lie buried in the surrounding hills. Dinosaurs are everywhere: in statues, signs, shops, street names and museums. However, the extraordinary setting and dinosaur image belie the true nature of Drumheller. It

is at heart a typical prairie community; indeed, a very attractive one. A closer look reveals all of the familiar features: the grain elevators, the farm equipment dealers with their long rows of colourful machines, the tall storage towers of the feed and fertilizer suppliers, the hardware stores and lumber yards. At the centre of town there is a pleasant main street lined with solid red brick buildings. Shops, grocery stores, banks and restaurants serve the townsfolk and the nearby farmers.

The last 10 years have brought changes to Drumheller. The farm equipment dealers have had fewer new machines lined up along the roads and fewer farmers have driven away in them. The grain elevator has not been so busy. Some businesses have disappeared. The fortunes of farmers have dropped, and those of the city have followed.

This paper outlines a response to the needs of this city. It is a proposal for an agricultural centre: a place for farmers and townsfolk to meet, do business, plan for the future and enjoy each other's company.

1.1 Background to the Project

During the 1980's Drumheller area farmers did not fare well. Due to depressed world grain prices and, sometimes, unfavourable weather, their incomes dropped. The farm supply and service businesses which depend on them suffered in turn. One farm equipment dealer nearly went under. The city's economic development authorities wanted to take action to bolster the sagging fortunes of these businesses and to try to ensure the future of this industry in the community. One of their ideas was to establish an "Agri-Mart",

a one-stop shopping centre for farmers including equipment dealerships and suppliers of farm goods and services. The purpose was twofold: first, to provide a convenient and pleasant place for farmers to shop and, second, to assist the businesses by selling city-owned land to them at favourable prices.

The purpose of this Master's Degree Project is to explore the ways in which the "Agri-Mart" idea may be developed, both as a facility and as a work of architecture.

In developing the concept of the Agricultural Centre I interviewed several planning and development officials of the City of Drumheller, the Palliser Region and the Alberta Department of Agriculture as to their respective policies on agricultural and "agri-business" development. I also spoke to two of the four farm equipment dealers in Drumheller about their needs, and I discussed the Agri-Centre idea with a number of farmers. During the course of the project I made many trips to the city to get to know it and to evaluate possible sites. Finally, I read a variety of materials about the history of agriculture, the history of the Drumheller area and past and present agricultural trends and government policies.

1.2 Objectives of the Project

The project has four objectives:

1. To develop the facility concept of an agricultural centre to suit the present and future needs of Drumheller:

(a) who will use the Centre (i.e. who will the market groups be);

(b) what activities may take place there, both initially and in future; and

(c) based on these considerations, what facilities should be located in the Centre, including those already existing in the town and new ones which may be appropriate?

2. To develop an architectural programme from the facility concept:
   (a) what indoor and outdoor spaces will be required;
   (b) how large will they be; and
   (c) what will be the relationships among them?
3. To develop a proposed architectural design on a specific site in Drumheller; and
4. To do all of these in such a way as to meet the Master's Degree Project requirements for the degree of Master of Environmental Design.

1.3 Scope and Limitations

The subject of this Master's Degree Project is architectural programming and design, with the emphasis on the latter. It has been necessary to do some investigation into the economics and sociology of agriculture in order to develop the concept of an agricultural centre as a facility. However, these investigations were not intended to be exhaustive.

The architectural design presented here is a proposal only. It is certainly intended to be a workable, practical design which meets the programme and responds aesthetically to its site and the vernacular building traditions of Alberta. However, technical issues of structure and mechanical systems have been addressed only in a preliminary way.

2. CONTEXT

In order to understand the need for an agricultural centre in Drumheller, particularly one of the size and complexity proposed here, it is necessary to understand something of the history and the current economic, political and social situation of the city and the surrounding agricultural community. That is the subject of this chapter. The next chapter explains how the concept of the Agricultural Centre was developed in response.

2.1 Historical Context

2.1.1 History of the Drumheller Area

The great wave of prairie settlement swept into Alberta in the 1890's, bringing farmers[1] from across two continents to turn the vast grasslands into grain fields. It was a remarkable event: the settling of a stretch of land nearly a thousand miles wide in less than a decade. The immigrants did not find the plains entirely empty. Since the 1870's, with the buffalo gone and with peace assured by the Northwest Mounted Police, ranchers from Britain and the United States had moved in, bringing their herds.[2] Soon, however, the cattle gave way to the homesteaders and the virgin sod yielded to the plow. From 1901 to 1905, when Alberta became a province, 40,000 homesteads were granted. In 1910 the province began its own promotions and the wave grew. In April, 1911 there were nearly 1,000 homestead applications in the Edmonton land office alone. It continued until 1913 (14,348 new homesteads) and then dropped sharply with the coming of war.[3]

The C.P.R. arrived in Calgary in 1883, opening the way for many newcomers. Settlement initially clustered around the established towns. In 1891 the line from Calgary to Edmonton was completed, and land between them began to fill in.[4] Then the homesteads spread out to the east and west.

The present site of Drumheller was first occupied by Thomas Greentree and his wife in 1902. Greentree was something of an adventurer. He had come to Canada from England at the age of 14 and had worked as a farm labourer, cowpuncher and railway hand. During a brief trip back to England he had

Fig. 1
Location Map

become a brewmaster. He first visited the Red Deer valley in 1901 and returned the following year, bringing his own herd, and settled into ranching. He had no title to the land at the time. It was not until 1907 that he filed a homesteading claim, on the same day that the land was surveyed.[5]

One winter in 1908 or 1909 a traveller named Sam Drumheller appeared at the Greentree ranch house. He was an American and was out with his brother "looking for wheatlands."[6] Greentree was away at the time, but the Drumhellers made themselves at home, as was the custom of the day. They noticed that there was coal for the stove and, realizing that there was no regular supply in this area, went to investigate. Following footprints in the snow, they found a coal seam in the valley walls. The family had been hacking the coal out for their own use, but Sam Drumheller saw bigger possibilities. He bought a block of land from Greentree and proposed to the Canadian Northern Railway that a town be established on his land. The railway agreed. In 1910 the block was surveyed into lots.[7] Two years later the C.N. line from Stettler was pushed down into the valley from Munson[8] and two years after that the line from Calgary was completed.[9] In 1914 Drumheller was officially incorporated as a village.[10]

Coal mining figured prominently in the development of Drumheller and of this whole section of the Red Deer valley. The first mine was opened in 1911. By 1934 there were 30 mines. The city's population grew to nearly 3,300 in 1931. However, during the 1940's and 50's demand for coal fell dramatically as oil and gas replaced it as fuels.[11] In the 1960's the industry died out entirely. Such are the vagaries of the energy business.

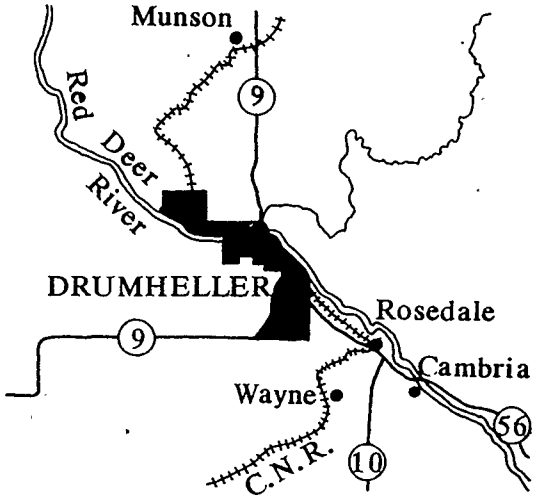


Fig. 2
Drumheller and Vicinity

Agriculture, however, is not so fickle. The farmers and ranchers were first into the area and remained after the miners had left. Nor was mining the first non-agricultural business. In 1910, when the new town was being formed, Thomas Greentree retired from ranching and began to deal in farm implements.[12] Thus, the two major industries were started by the two founding fathers: mining by Drumheller and agricultural service by Greentree.[13]

Before Drumheller was established farmers bought their supplies from Munson or Rosedale and sold their grain at Rosedale. Munson, in fact, was booming by 1910, when Drumheller was just being laid out.[14] As Drumheller grew it took over as the primary service and supply centre of the region. Some businesses moved from the smaller towns to Drumheller. The industry grew steadily and when coal mining declined it emerged as the city's primary economic activity.

Soon Drumheller began to serve farmers in another way: it became a centre for agricultural planning and education. Shortly after 1910 the Alberta Wheat Pool and the United Farmers of Alberta became active in the area.[15] The Alberta Department of Agriculture opened an office in 1943 to provide educational and other services to local farmers.[16] A 4-H Club was set up in 1946[17] and one member went on to win two world championships for his wheat.[18] Finally, Farm Women's Institutes were established around 1912.[19]

2.1.2 Developments in Farm Technology

Agriculture came to western Canada a relatively short time ago. However, within the span of less than a century the prairies witnessed changes that

revolutionized farming. Most settlers arrived on their land with only the barest essentials: a plow, a few hand tools and perhaps a wagon.[20] Many were hard pressed to find the money for a pair of oxen or horses to harness to the plow. Some had to borrow animals from neighbours. A good deal of the prairie was first broken this way: a man walking behind a plow cutting furrow after furrow in the tough sod. In the first year or two all of the planting, harvesting and threshing were done by hand as well. More modern machinery was available at the time, but it was far too expensive for most farmers in the early years.

Even the poorest of farmers, however, already had some of the benefit of new technology. Thanks to the ingenuity of the American John Deere, their plows were equipped with steel blades which cut cleanly through the heavy prairie earth. The earlier iron blades had become caked with gumbo.[21] They wore out both animals and men and did not cut proper furrows. In later years increasing prosperity enabled farmers to buy the new machines. Plows mounted on wheels were more precise and efficient, and seed drills took much of the risk out of planting.

There were holdouts. Some thought that only a lazy man would ride on a plow. Others were not convinced of the advantages, for example, of mechanical seed drills over the tried and true method of planting by hand.[23] Soon, however, the evidence was too strong to deny.

The most dramatic improvements were in harvesting. Cutting, binding, stooking and threshing: one by one all of the steps of getting the grain from the field into the bin were mechanized. Horse-drawn self-binders cut the stalks and tied them into sheaves.[24] Mechanical threshers beat the grain from the heads far

"As soon as the frost was out of the ground my father with his yolk of oxen broke 7 acres of land. This he seeded by hand to oats. The growth and yield were phenomenal. He harvested it with a scythe, threshed it with a flail and winnowed it in the wind. This was real pioneering ..."

Margaret MacCrimmon: homesteading east of Drumheller in 1908[22]

more efficiently than the flail, and fans were added to blow away the chaff and straw.

There were revolutionary changes in power as well. In the first years settlers relied on their animals to plow and on themselves to plant and thresh. Later, threshers were powered by treadmills or sweeps[25], but these still depended on horse or ox power. The work placed heavy demands on the animals. Especially in the first years farmers often had to work them close to the limits of their endurance, always worried that the poor beasts might perish from the effort.[26]

The advent of steam power was a real breakthrough. It ended the reliance on the frailties and quirks of draft animals (many of whom, like the ox and mule, could be exasperating) and offered great increases in power. The first engines appeared in Alberta around 1885.[27] Used to power mechanical threshers, these were stationary machines that were hauled from field to field by horses. Then came the great steam tractors. These quiet giants had both power and versatility. In the spring they were hitched to plows, and they could break the sod at unheard of rates. A man with a pair of oxen hitched to a walking plow could turn over about an acre a day. A 30-horsepower steamer pulling an eight-bottom plow (cutting eight furrows at a time) could turn over twenty-five acres.[28] In the fall the steamers were used to power threshers. These had come a long way since their first appearance, and by 1905 there were efficient, high-volume machines on the market.

These great machines were too expensive for most farmers. Most still did their plowing with teams. However, almost all could get their benefit at

The farm worker using a scythe or cradle just a few decades earlier would have done well to cut and bind by hand the crop on an acre in a day. Then with one of the earliest reapers hauled by a single horse, he could cut six or seven acres in the same time while a second man walked alongside to pull the cut grain from the platform as often as enough had accumulated for a sheaf to be tied later with its own straw. The same worker could achieve still more with the improved reaper fitted with a mechanical arm that would draw the cut grain off the platform without human intervention. The binder and the small threshing machine elevated him to a position of mastery and now, with the huge steam tractors and the correspondingly big threshers, the man who so recently had been cutting with a cradle and threshing with a flail found himself part of a coordinated threshing crew clearing up to seventy-five or eighty acres in a day.[29]

threshing time because itinerant crews with steamers and separators were available for hire.

After 1900 improvements in the machinery came quickly. The steamers gave way to thundering gasoline tractors, and these in turn to diesels. They grew smaller and more versatile, and the prices fell to within the budget ranges of most farmers. Cultivation equipment was constantly improved. Harvesters and threshers were joined to become "combines." These machines increased farmers' efficiency and with it their prosperity. They could put the extra money into more land and even bigger equipment. The modern farmer can now cultivate thousands of acres each year, using giant tractors and combines.

There have been similar improvements in crops. The Red Fife wheat that the original settlers planted gave way to Marquis and other varieties that have long growing seasons and resistance to many pests. These strains, developed by Canadian scientists, have won many world championships for yield and quality.

The development of western Canadian agriculture has been truly revolutionary. Pioneers who threshed their first harvest with a flail lived to see grain on the same land harvested by a modern combine.[30] Nor have the changes stopped. Ongoing research and development by governments and businesses promises to bring further improvements in the future. It is valuable to keep in mind how far we have come, as an inspiration to others now and in the future.

2.2 Economic Context

Picture a prairie town. To a person approaching across the prairie it is announced by the proud, brilliant row of grain elevators. At the outskirts he is greeted by rows of gleaming new farm machines and by the modest, practical structures of the fertilizer and fuel dealers, garages and tire shops. Lined up along the broad main street are the grocery and hardware stores, the bank, the coffee shop, the hotel and various other small shops. Further down the street are the meeting hall and the arena. Beyond is a cluster of tidy houses. The role of the town is clear. It is an inseparable part of the larger farm community. Farmers rely on it for supplies and services, and the townsfolk rely on the farmers for their livelihoods. They meet in the hall and their children play hockey in the arena. The town and the surrounding farms form an interconnected whole.

This, essentially, is Drumheller. It is an agricultural town and must be seen in the context of the larger farm community. It is also, however, larger and more diverse than the other towns in the region and so has unique opportunities.

2.2.1 Economy of the Drumheller Rural Region

The Palliser Region, in which Drumheller is located, has a primarily agricultural economy. The Palliser Regional Planning Commission states, in the Introduction to its Regional Profile Update of 1986:

> "Today, nearly 80 years after development began population levels appear to be stabilizing, urban centres are growing, and farmers are among the most successful in the province. Despite significant limitations of soil quality and

moisture, agriculture provides a strong economic base for the region."[31]

This rosy assessment gives reason for optimism, but it is valuable to look at the circumstances of both the region and the city in more detail. There are some favourable and some worrisome trends, and both give clues as to the function of an agricultural centre.

Agriculture is the dominant industry in the region. In 1980 an estimated 30.6% of the people in the region worked in agriculture, down slightly from the 1971 figure of 38.7%.[32] This is the largest single group in the labour force, approximately 12 % higher than the next largest group, the service workers.

The average farm income of farms in the Palliser Region is 28% higher than the average for farms in the province.[33] However, the Palliser farms are, on average, three times as large.[34] There are significant limitations of both moisture and soil quality, and the productivity of the land is relatively low.

The farms in the region are devoted primarily to wheat and cattle production. The better soils are located north, east and just west of Drumheller, and this land is given to crops. The areas to the southeast with poorer soils are used as rangelands.

Figures 3 and 4 show the distribution of farm and crop types for the region compared with those for the province. It is important to note that there is a much greater proportion of land devoted to wheat here than in the province as a whole. This lack of diversity renders farmers in region subject to wheat price fluctuations. The effects have been particularly severe during the 1980's. It is common knowledge now that the wheat subsidy war between the United States and the European community during the last half of the decade wreaked havoc

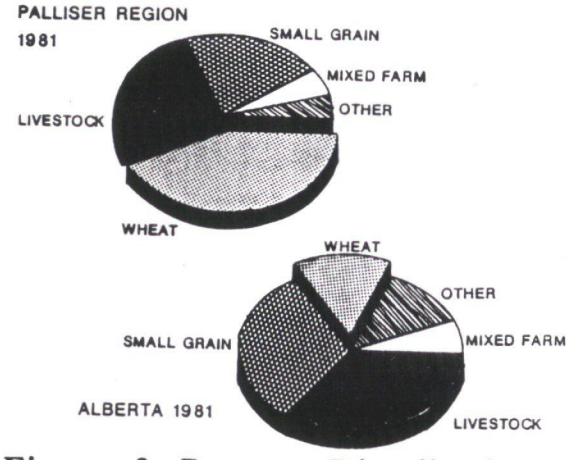


Figure 3. Percent Distribution of Farm Types

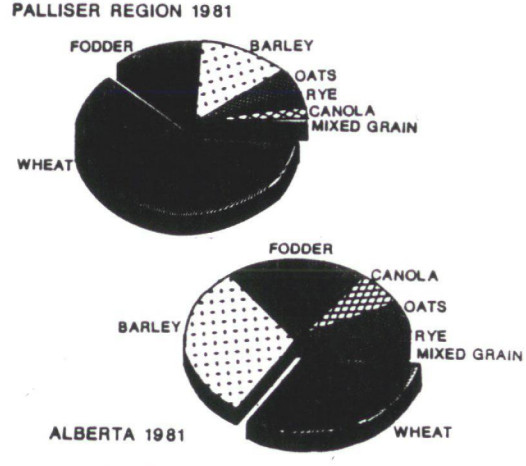


Figure 4. Percent Distribution of Crop Types

among Canadian wheat farmers. The battle forced prices down, but Canadian farmers did not receive comparable subsidies to compensate, and their incomes suffered. The situation has been especially difficult for farmers who borrowed money to buy more land in the belief that bigger is more profitable. Their loan payments did not go down in step with their income.[35]

Although the population of the region is now stable, the number of people on farms is decreasing. The rural population declined by 26.7% over the past 23 years, and the trend continues today because of consolidation of farms.[36] Drumheller and other urban centres in the region have grown, drawing both displaced farmers and people from smaller communities.[37]

Although agriculture currently provides a strong (if somewhat uncertain) base, the economy of the region is too narrow. It has little diversity. The manufacturing sector is weak. Palliser has proportionately fewer manufacturing businesses than other regions, and the percentage of the labour force in manufacturing is lower than the provincial average (2.4% compared to 9%).[38] Businesses must deal with high transportation costs, small local markets and a poor water supply.[39]

On the other hand, the Planning Commission observes that:

> "Entrepreneurs who reside in the region have to a large degree been successful. They believe in the region and are receptive to new ideas and work hard with the aim of achieving an economically viable region."[40]

2.2.2 Economy of the City of Drumheller

Drumheller is the largest urban centre in the region, with a population of approximately 6500. Like the other towns, it supplies goods and services to

"It's shaping up to be a banner year for Prairie farmers - at least, in terms of the potential harvest.

The grim news is that Agriculture Canada recently forecast that farm incomes will drop substantially because of lower grain prices, reduced government subsidies and last year's drought."

Farmers face better harvest, lower returns, Calgary Herald, July 13, 1989

farms in the surrounding area. Because of its size (which provides a local market) and because it offers a wider variety of goods and services, it serves the largest area in the region and has the largest volume of business. The trade area of the city is shown in Figure 5.[41] Of course, the areas shown on the map are approximate and vary for different items.

Although Drumheller's retail and service trade is the largest in the region, it is slow compared to that of larger cities, because of its relatively small population. This is aggravated by the fact that, for more expensive items such as furniture, Drumheller loses the business of about 25% of its people to larger centres such as Calgary and Medicine Hat.[42] This is offset partly by shoppers coming to Drumheller from smaller towns.[43]

The agricultural retailers and services available in the city are shown at right. The market area for agricultural equipment is particularly flexible. Modern farm machines are so expensive that it is essential for farmers to "shop around" for the best price. They may go as far afield as Winnipeg for a tractor or combine.[44] Dealers are beginning to accept this trend. With the advent of computerized inventories linked into "networks," a dealer may now search across the prairies for a particular model, which may then be delivered through his dealership.[45]

The fortunes of farm supply businesses in Drumheller are, of course, tied to those of the farmers, and over the past 10 years they have shared in the farmers' troubles. First, the large size of farms and the trend toward consolidation of farms has reduced the market. Larger farms and fewer farmers mean fewer machines sold by local equipment dealers, although the machines

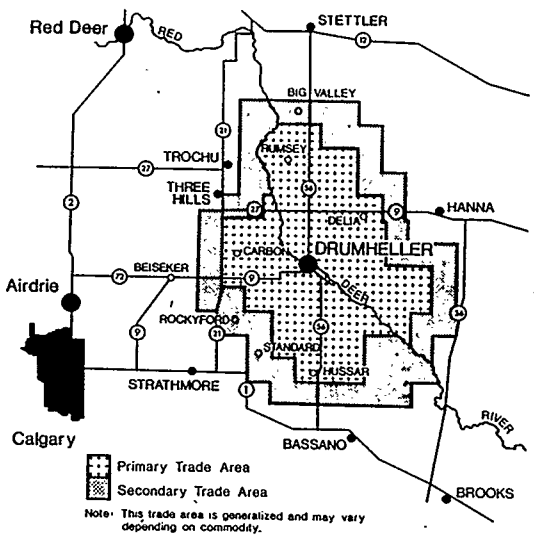


Fig. 5 Drumheller Trade Area

DRUMHELLER FARM SERVICE AND SUPPLY BUSINESSES[47]

Farm Equipment Dealerships (4)
Fertilizer (3)
Hardware, Parts (3)
Lumber (2)
General Supplies (3)
Bulk Fuel (3)
Tires (3)

may be bigger. There will also be less business at the hardware stores and the lumber yards. Second, they are subject to the same risks as the farmers. The businesses must rely on farms in an uncertain climate producing a grain whose price is unreliable. It is something of a high-wire act, and during the past few years some of them almost fell. All of the farm equipment dealers had trouble. One very nearly went out of business.[46]

As is the case in the region as a whole, the city's industrial base is not well diversified. There are 8 manufacturing firms in the city employing between 180 and 420 people (of a total labour force of 2960). The largest (a maker of structural wood trusses) employs 100 to 250 people, depending on demand. Two others (which make plastic products) account for another 70 to 150 jobs. There is only one food processing firm, a meat packer with a staff of 5 to 9 people.[48]

Tourism is a significant industry in Drumheller. The badland hills are a strong attraction, as are the remains of the coal mining equipment still found among them. Most importantly, the dinosaur fossils found in the hills draw people to the city. The new Tyrrell Museum has over 500,000 visitors per year, who spend a total of over $6,000,000.00. However, the city does not get the benefit that it could from these visitors. First, accommodation in the city is lacking in both quality and quantity.[49] Second, the Tyrrell has done little for the Central Business District because tourists simply pass through the city to and from the museum without stopping. They buy meals and souvenirs only at the museum.[50] There is an obvious linkage here. Since growth of the local market will likely be slow, the way to increase retail spending in the city is to entice

the tourists to stop on their way through. With the right facilities and activities, perhaps they could be persuaded to stay for a day or two. Conventions, in particular, would be lucrative.

2.2.3 Rural Economic Development Trends

An observer of the agricultural scene may have noticed a number of encouraging trends recently. Prairie farmers may be finding ways to break out of the crippling dependence on depressed world grain prices. Essentially, these consist of finding new products, new versions of existing products, and new markets for existing products.

There has been some crop diversification during the 1980's away from traditional grains and into specialty crops such as mustard, forage seed, dry field peas and lentils. This is still not a large movement: in 1986 specialty crops accounted for about 2% of the total acreage cultivated in the province. However, it is a possible alternative for Drumheller area farmers, particularly since such crops can be grown under dryland or irrigated conditions.[51] Such crops find their major market in the United States, the Canadian population being too small,[52] and with the advent of free trade, such crops could be profitable. However, since there are no marketing boards for these commodities, the price depends entirely on supply and demand. Further, since demand for many crops tends to be relatively stable, oversupply can cause serious price drops (i.e. demand is "inelastic").[53] Producers, therefore, must be well informed about market conditions before making decisions.

A similar alternative is to diversify into other grains such as soft wheat, or into livestock. Again, diversification gives farmers something to fall back on to break the reliance on a few popular crops.

Another trend has been to take advantage of the growing demand for "natural" food. The Ribstone Ranch south of Calgary recently began to raise cattle free of hormones and antibiotics, and opened a store in the city to market them. It has been a resounding success.[54] Some other farmers across the prairies are growing grain "organically," that is without using chemical fertilizers, pesticides and herbicides. They have formed a co-operative organization and are currently petitioning the Canadian Wheat Board to establish a special pool for organically grown grains so that they may be stored and marketed separately (with the expectation that they may fetch a premium).[55] These ventures do not offer new products, but rather existing products raised in different ways.

Another kind of diversification is through non-farm businesses. It is nothing new for farmers to "moonlight." Even in the early days many took jobs in the coal mines to supplement their incomes. Now, however, some people are going out on their own with business ideas. For example, many farmers have invented new types of machines and want to market them. Also, women have successfully turned hobbies into businesses, selling handicrafts, clothes and toys.[56]

2.3 Planning Context

2.3.1 Provincial

The Province of Alberta offers many programmes to assist farmers and to guide the development of agriculture in the province as a whole. These fall into three categories. The first includes programmes to stabilize farmers' incomes through insurance and subsidies. In the second are programmes to reduce farmers' costs by providing for low-interest loans and by subsidizing fuel, fertilizer and feed grains, among other things. Finally, there are programmes aimed at "developing a more competitive and diversified agriculture industry through initiatives on research, soil and water management, transportation, market development and food processing."[57] These include:

- two irrigation development programmes,
- the Subsidiary Agreement on Agricultural Processing and Marketing (a joint programme with the federal Agriculture Department)[58] and the Processed Food Market Expansion Program, both of which encourage and support food processing ventures,[59] and
- Farming for the Future, a "research and technology transfer program... established... to support the development and adoption of new crop varieties, improved crop and livestock management methods and improved financial management, product processing and marketing technologies."[60] This programme funds both research and on-farm demonstration projects.

Alberta Agriculture also operates a food processing research and development

centre in Leduc. Free of charge, people in this facility will develop and test new types of processed foods for prospective entrepreneurs.[61] This is an outstanding resource which should be invaluable to both new and established food processors.

Finally, grants are available through the Agricultural Initiatives programme for exhibitions, fairs, educational events or other activities aimed at improvement in "agriculture, horticulture, homemaking and the quality of life in the agricultural community."[62]

The details of these programmes are not important for the purposes of this paper. They are outlined here to show the range of the initiatives and their basic thrust. What is essential is that farmers and other businessmen be aware of them. A knowledge of these various programmes can lead to ideas about the role of an agricultural centre in informing farmers and helping to further the purposes of the Alberta Agriculture initiatives. The same is true for federal programmes.

2.3.2 Federal

The federal government also offers a variety of programmes, many with the same basic purposes: agricultural development, risk management and financial assistance. Federal statutes have established the marketing boards and implemented special income tax provisions to help farmers. As with the provincial programmes, these will be outlined briefly here to give some idea of how an agricultural centre may help to achieve their purposes.

Scientific research and development is perhaps the best known of Agriculture Canada's activities, and justly so. Through its laboratory work and its experimental farms it made Canada one of the major producers in world agriculture. Thanks to the Marquis wheat strain which it developed in 1904, prairie wheat production in 1911 was five times what it was a decade earlier. This wheat and direct descendants from it won 57 of 65 world wheat championships for Canada beginning in 1911.[63] Agriculture Canada still conducts about 50% of Canada's research and development work in agriculture.[64] Its work is extensive, covering animal and crop production and food processing technology, and ranging from sophisticated genetic engineering work in the laboratory to on-farm help to individual farmers. Also, it gathers data and does research on soil and water resources.[65]

The Crop Production programme is aimed at identifying promising new crops or strains and carrying out testing and marketing work to establish commercial production. It involves the application of both scientific and marketing skill.[66]

Agriculture Canada is well aware of the importance of timely and reliable information in planning and marketing. The Marketing and Trade Analysis programme has been set up to gather, analyze and disseminate such information, including detailed data on market activity (both domestic and international) for food products, commodity forecasts and consumer demand analyses.[67] The Regional Development Analysis and Advice programme provides economic analysis and recommendations as to federal agricultural policies and initiatives. The aim is to help to tailor policies to the various regions and to coordinate the regional policies into a national whole.[68]

Agriculture Canada participates with the province in providing comprehensive crop insurance.[69] It also pays subsidies to reduce farmers' costs for transportation,[70] credit[71] and fuel.[72]

This brief outline covers only some of the federal programmes respecting agriculture. Again, the details are not important here. What is important is that there is a wealth of information available that could be invaluable to farmers. An agricultural centre should help to publicize the programmes and help local farmers and ranchers to take advantage of them.

2.3.3 Regional

The Palliser Regional Planning Commissision has prepared a Regional Profile (January, 1982) and Regional Profile Update (April, 1986) to identify the issues that need to be addressed by municipalities in their planning. Many of these are discussed above in the Economic Context section. In the Palliser Regional Plan (1984) the issues are reviewed and goals and objectives are formulated based on them. Among the regional issues identified are:

> "5. The region could achieve a more solid economic foundation and become more attractive for newcomers if its human and natural resources were more fully developed. There is strong public support within the region for it to grow in population with attendant economic development.
>
> 6. The tourism, agricultural and, to an extent, manufacturing sectors of the economy have been identified as requiring enhancement to more fully integrate the region into the Alberta economy.
>
> 7. Agriculture is the mainstay of Palliser's economy and the Regional Profile identifies many agricultural issues: (1) Preserving farmland; ... (4) irrigation; (5) land management; ... (11) diversification of production; and

(12) the need for local applied research."[73]

The Goals and Objectives of the Official Plan include the following:

GOAL: Attainment of Favourable Economic Development

OBJECTIVES:
(1) Protection and enhancement of agricultural economic base.

GOAL: Provision of Opportunities to Participate in a Range of Social and Recreational Activities

OBJECTIVES:
(1) Identification of indoor and outdoor recreational needs and potentials.
(2) Encouragement of growth in a manner that permits facility development.

Although these are somewhat vague statements of policy, they give some indication of the types of facilities that may be included in an agricultural centre.

2.3.4 Municipal

The Drumheller General Municipal Plan takes the same approach, as the following exerpts show:

"3.0 Growth and Development Strategy

3.4. Population growth within the City of Drumheller shall be encouraged. ... This policy may be implemented in the following manner:

3.4.1 The City of Drumheller shall adopt policies aimed at retaining existing businesses and promoting the inmigration of all economically productive businesses. ...

3.4.3 The City of Drumheller should investigate the establishment of an

office of economic development whose aim shall be to actively promote the City to potential businesses and residents. ...

3.5 The City of Drumheller should take an active role in strengthening the urban economic base and make maximum use of local resources.

This policy may be implemented in the following manner: ...

3.5.3 Pursuing the development of a more diversified economic base emphasizing agricultural services, tourism ... and light manufacturing."[74]

Planning and development officials in the city have, in fact, made efforts toward business development. To begin with, they have begun to promote the idea of an "Agri-Mart." This would be a commercial centre for farmers including all of the agricultural service and supply businesses in town. These businesses, particularly the equipment dealerships, have been very hard pressed by the agricultural recession of the past few years. They would be offered city-owned land at favourable rates in the Agri-Mart to reduce their costs.[75] The facility would also appeal to farmers because of its convenience.

They have also tried to attract new businesses by actively promoting the city to entrepreneurs and even, in one case, attempting to buy a food processing operation and move it to Drumheller.[76]

Finally, they are thinking of establishing a "business incubator" to encourage and assist fledgling business ventures, especially those related to agriculture (new machinery manufacturers or food processors, for example).[77]

2.4 Social Context

Drumheller area settlers were a varied lot. They came from Canada, the U.S., England, Ireland, Scotland, Wales, Norway, Sweden, Holland, Germany, Japan and many other countries.[78] They brought with them their various cultures and seeded them in their new country, creating a mosaic of cultures across the prairie. However, they all had one thing in common: the experience of deprivation, back-breaking work and desperate loneliness. Those who survived emerged in later years with a sense of proud self-reliance and, especially, of community. As one remarked, "Country people never take the casual attitude of city dwellers toward their neighbours. We were too essential to each other."[79] Social events were an important part of life on the homesteads. They gave people the chance to talk, to compare notes and learn from one another, to enjoy each other's company and to escape, for a time, the loneliness of life on isolated farms.

Farmhouses were used for gatherings at first, since they were the only buildings available. The Thomas Greentree ranch house saw many dances, one notable one being on the occasion of the addition of a new log kitchen in 1906. Schoolhouses were next. These buildings did good service. In addition to classes, they were home to plays, concerts, "socials," bridge and whist clubs, dances and Thanksgiving chicken dinners. They held meetings of the United Farmers of Alberta, Alberta Wheat Pool, Women's Institute and the Orange Lodge. They were also used for church services.[80] With the development of Drumheller many of these activities moved into newer facilities in the town. They may now use one of the meeting halls or schools in town.

"From miles around came the merry makers to the old fashioned hoedown - in sleighs and on horseback, all arriving before dark in time for supper and leaving the next morning after breakfast. The party lasted all night... How all got word of the Greentrees' house warming in the vast range is hard to say, but they all found out about the open house and a big turn-out attended. For myself I rode horseback from Rosebud with my fiddle under my arm to play for the dance. A Mrs. Low from Fish Lake district accompanied me on the guitar...
And so we rounded out the first dance held in Drumheller while our four-legged motor cars spent the night in Greentree's corral fighting to keep warm. On returning home we fed the cattle and went to bed."

Mr. John Martin, Rosebud[81]

Agricultural fairs and exhibitions have a long history on the prairies. Indeed, these events go back almost as far as agriculture itself.[82] They have always been enjoyable, but they also had an important educational function. By offering prizes for the best livestock and crops of all kinds, they helped to improve the quality and diversity of agriculture. Competitions in baking, weaving, sewing, tanning and carpentry gave a similar boost to home economics. Young people got a good start in farming through the 4-H Club competitions.

Drumheller, unfortunately, has no annual agricultural fair. There is a rodeo each summer, but it has very few of the traditional activities of fairs. Local Alberta Agriculture officials are trying to establish such activities.[83]

There is, however, a farmer's market during summer months. This is reasonably well attended even though it is held at the rodeo grounds which are not close to the centre of town.[84] It could be expected to be even more successful if it were held in a more central location. Also, one can envisage a series of small fairs or festivals being held in association with the market.

NOTES

1. Clifford Sifton, the Minister of Agriculture who presided over the great immigration, did not want just any people on the land: he wanted *farmers*. Berton, Pierre, Settling the West, Toronto, McLelland and Stewart, 1984, p. 14

2. Swindlehurst, E. B., Alberta Agriculture, A Short History, Edmonton, Alberta Department of Agriculture, 1967, pp.9-10

3. Ibid., pp. 12, 23, 24

4. Ibid., p. 12.

5. Drumheller Valley History Association, The Hills of Home, Drumheller, Drumheller Valley History Association, 1973, pp. 205-6

6. Ken Liddell's Column, The Calgary Herald, Date unknown (copy available in the Drumheller History file in the Drumheller Public Library).

7. Martin, John L., The Dinosaur Valley, Drumheller, The Big Country News, 1971, p. 15.

8. Clipsham, M.L.; Adie, A.G.; Gaschnitz, E. C.; Howard, A. B.; Memories of Verdant Valley, Cassell Hill, Livingston, Rainbow; Drumheller, Drumheller East U.F.A., 1966, p. 51.

9. Palliser Regional Planning Commission, City of Drumheller General Municipal Plan, Vol. 1, 1989, p. 5.

10. Ibid., p. 5.

11. Ibid., p. 7.

12. He also dealt in insurance and real estate. Drumheller Valley History Association, The Hills of Home, Drumheller, Drumheller Historical Association, 1973, p. 206

13. The town might have been called Greentree, but Sam Drumheller won the coin toss to name it. Ibid., pp. 25-6.

14. Martin, John L., The Dinosaur Valley, Drumheller, The Big Country News, 1971, p. 15.

15. Clipsham et. al., Memories of Verdant Valley,Cassell Hill, Livingston, Rainbow, Drumheller, Drumheller East U.F.A., 1966, p. 430

16. Personal communication with the Drumheller District Agriculturist, Mr. Don Poisson.

17. Clipsham et. al., Memories of Verdant Valley, Cassell Hill, Livingston, Rainbow, Drumheller, Drumheller East U.F.A., 1966, p. 213

18. Ibid., p. 445

19. Ibid., p. 429

20. This was not true of all settlers. Many Americans had sold farms for handsome profits and arrived with both money and sets of machinery. Berton, Pierre, Settling the West, Toronto, McLelland and Stewart, 1984, pp. 173, 176.

21. Jennings, Dana Close, Days of Steam and Glory, Aberdeen, S. Dakota, North Plains Press, 1968, p. 63

22. Clipsham et.al, Memories of Verdant Valley, Cassell Hill, Livingston, Rainbow, Drumheller, Drumheller East U.F.A., 1966, p. 239

23. MacEwan, Grant, Grant MacEwan's Illustrated History of Western Canadian Agriculture, Saskatoon, The Western Producer, p. 80

24. The binder was an improvement on the McCormick reaper, which had cut the stalks and left them to be tied by hand. The binder had an ingenious knotter which tied the stalks into bundles. Ibid, p. 80

25. Sweeps were turntables with radial arms to which the horses were harnessed. They had to walk constantly in a circle. Ibid, p. 84.

26. MacEwan, Grant, Power for Prairie Plows, Saskatoon, The Western Producer, 1971, p. 2.

27. Ibid., p. 87.

28. Ibid., pp. 44-5.

29. MacEwan, Grant, Grant MacEwan's Illustrated History of Western Canadian Agriculture, Saskatoon, The Western Producer, pp. 88-9.

30. Ibid., p. 80.

31. Palliser Regional Planning Commission, Regional Profile Update, April, 1986, p. 1.

32. Ibid, p. 27; Palliser Regional Planning Commission, Regional Profile Update, pp. 9, 10

33. Ibid., Regional Profile Update, p. 17

34. Ibid., Regional Profile, p. 39

35. "Harvest of Despair",The Globe and Mail Report on Business Magazine, June, 1988, pp. 36-47

36. Palliser Regional Planning Commission, Regional Profile Update, April, 1986, p. 3; Personal communication with Mr. Frank Wesseling, Chairman, Palliser Regional Planning Commission, Nov., 1989.

37. Palliser Regional Planning Commission, Regional Profile, January 29, 1982, p. 21; Regional Profile Update, April, 1986, p. 3

38. Ibid., Regional Profile, p. 27; Regional Profile Update, p. 10

39. Ibid., Regional Profile Update, p. 9

40. Ibid., Regional Profile, p. 25: "Development Incentives"

41. Palliser Regional Planning Commission, City of Drumheller General Municipal Plan, Volume 1, 1989, p. 35. The Plan explains: "The concept of a trade area is based on distance. It assumes that, all other things being equal, people will travel to the nearest facility. Other factors such as physical barriers, accessibility and quality of competitive facilities will also influence the trade area." (p. 33)

42. Palliser Regional Planning Commission, Regional Profile, January 29, 1982, pp. 27-8, 32

43. Ibid.

44. Personal communication with Mr. Frank Wesseling, Executive Director, Palliser Regional Planning Commission.

45. Personal communication with Dr. Murray Hawkins, Professor of Rural Economy, Faculty of Agriculture and Forestry, The University of Alberta

46. Personal communication with Mr. Laurie Reiffenstein, Drumheller Economic Development Corporation, September, 1987

47. Drumheller Yellow Pages

48. Alberta Economic Development and Trade, Alberta Community Profile, monograph about Drumheller, November, 1988

49. Palliser Regional Planning Commission, Regional Profile, p. 33. This was confirmed as to the City of Drumheller in particular by Personal communication with Mr. Frank Wesseling.

50. Personal communication with Mr. Laurie Reiffenstein, Drumheller Economic Development Corporation.

51. Veeman, Terrence S., "The Economics of Alternative Crops", Agriculture and Forestry Bulletin, Vol. 11 No. 1; Spring, 1988, p. 10

52. Ibid.

53. Ibid., p. 12

54. "Quest for the ultimate steak goes beyond price", Calgary Herald, December 23, 1987, p. C2

55. Interview with Mr. Elmer Laird, President of the Canadian Organic Producers' Marketing Co-Op, Saskatchewan, on the Wild Rose Country programme on C.B.C. Radio, Calgary, October 26, 1989.

56. "Women's artsy skills help to rescue family farms",The Globe and Mail, January 7, 1988, p. B1. This article discusses American examples only.

57. Alberta Agriculture, Alberta's Commitment to Agriculture, November, 1986, p. 4

58. Alberta Agriculture and the Government of Canada Regional Industrial Expansion, Canada/Alberta Subsidiary Agreement on Agricultural Processing & Marketing, undated monograph.

59. Alberta Agriculture, Alberta's Commitment to Agriculture, November, 1986, p. 11

60. Ibid., p. 12

61. Personal communication with Mr. David Schroeder, Director of the Food Processing Development Centre.

62. Alberta Agriculture, Agricultural and Community Services Branch, Agricultural Initiatives - Western Canada Lottery Funding Guidelines, 1989

63. MacEwan, Grant, Grant MacEwan's Illustrated History of Western Canadian Agriculture, Saskatoon, The Western Producer, pp. 100-106

64. Government of Canada, Minister of Supply and Services, Economic Growth *Agriculture*, A Study Team Report to the Task Force on Program Review, Ottawa, 1986, p. 37. The other participants are: universities (25%), industry (16%), the provinces (6%) and the National Research Council (3%).

65. Ibid., p. 37

66. Ibid., pp. 56-7

67. Ibid., pp. 30-31

68. Ibid, pp. 33-5

69. Ibid., pp. 178-79

70. Western Grains Transportation Act, Statutes Of Canada, 1983

71. Farm Credit Act, Revised Statutes of Canada 1980.

72. Energy Administration Act, Statutes of Canada 1985

73. Palliser Regional Planning Commission, Palliser Regional Plan, 1984, pp. 5-6

74. City of Drumheller, General Municipal Plan, Volume 2: Plan Policies, 1989, pp. 8-10

75. Personal communication with Mr. Laurie Reiffenstein, General Manager of the Drumheller Economic Development Corporation.

76. Personal communication with Mr. Frank Wesseling, Executive Director of the Palliser Regional Planning Commission.

77. Personal communication with Mr. Laurie Reiffenstein, General Manager of the Drumheller Economic Development Corporation.

78. Clipsham et. al., Memories of Verdant Valley, Cassell Hill, Livingston, Rainbow, Drumheller, Drumheller East F.U.A., 1967, pp. 48-9

79. Ibid., p. 97

80. Ibid., pp. 52, 80

81. Martin, John L., The Dinosaur Valley, Drumheller, The Big Country News, 1971, p. 25

82. MacEwan, Grant, Grant MacEwan's Illustrated History of Western Canadian Agriculture, Saskatoon, The Western Producer, p. 59

83. Personal communication with Mr. Don Poisson, the District Agriculturist.

84. Ibid.

3. THE AGRICULTURAL CENTRE: FACILITY CONCEPT

City officials in Drumheller have decided that some action is needed to help local farmers and their suppliers after a number of years of disappointing farm incomes. They envisage an Agri-Mart, a convenient one-stop shopping centre for farmers including farm equipment dealerships, hardware stores, chemical and fertilizer outlets and other agricultural supply businesses. This would be built on land provided at low cost by the city. The Agri-Mart would save cost for the businesses and time for farmers. Further, it would be an exciting place, full of people going about their business, picking up supplies, pausing for a chat or

stopping in to look over the rows of gleaming new machines. But upon reflection, considering the many aspects of modern farm life, one can imagine that it could be more than simply a commercial centre. The various things discussed in Chapter 2 point the way. In this chapter The "Agri-Mart" concept will be expanded into a full Agricultural Centre. All of the facilities will be added and their relationships discussed.

It is important to be clear at the outset about the purposes of the Agri-Centre and its role in the life of Drumheller. This will determine which facilities will be included. It is also very useful to select themes for the Centre. These will help to guide the choice of facilities and the relationships among them, and may also provide a starting point for the architectural design.

3.1 Role of the Centre in City Life

The Agricultural Centre as envisaged here will have many roles. Just as the life of the community itself has many aspects, so will the Centre which serves it. The facility concept arises directly from the context of the Drumheller region in all of its aspects, as discussed in Chapter 2. Further, although these aspects are separate, they are all related. A farmer's life is a complex mix of technology, economics, and social networks. The various facilities of the Agricultural Centre will reflect this richness and diversity: it will house many farm-related businesses, both existing and new; it will help to inform farmers of the latest developments in agricultural technology and it will serve as a focus for the traditional social functions of the prairie community.

3.1.1 Economic Role

A large part of the Centre's function will be economic. First, it will house many of the agricultural service and supply businesses that are already located in the town. Second, new types of services may be included. Finally, by the mix of services and activities, the Centre may become a focus for the development of new business ventures.

A glance through the yellow pages shows what the existing businesses are: farm equipment dealerships, hardware stores, general supply stores, fertilizer suppliers and a number of farm consultants. These are currently scattered throughout the town, many on the outer fringes. Most of these will have places in or near the Agri-Centre. Location of all of these businesses in one place will be convenient for farmers. This is the "one-stop" shopping idea of the Drumheller Economic Development Corporation. It will also help the businesses themselves, because they will have attractive, efficient buildings and because the customer traffic will be combined. Customers coming to one store will be likely to drop in to others nearby. There should also be space for suppliers of new types of equipment such as computers.

There is also an opportunity to add new agriculture-related services to the town. As was pointed out in Chapter 2, farming is becoming an increasingly complex business. A great deal of information and many sophisticated techniques of communication, management and finance are available to farmers to help with planning, production and marketing. Specialists in these areas, both government and private, should be located in the Centre to help. Individual farmers would certainly benefit. Further, with the proper coordination, farmers

could begin to plan on a regional basis. It may be, for example, that marketing opportunities for particular crops could be identified. Interested farmers could get the necessary financing, learn about cultivation techniques and obtain marketing information from experts at the Agri-Centre. The addition of new services such as these will be beneficial to the community because it would draw business to Drumheller which it does not presently get. It would mean not simply serving or expanding an existing market, but adding a new one, so that the Centre could serve a wider area than it does now.

The Business Incubator which City officials are contemplating would fit in very well. Local farmers with ideas for innovative machines, for example, could get the necessary advice about financing and marketing. They could be put in touch with designers and technologists. If local entrepreneurs were interested in starting a food processing business, they could find out about local supplies at the Agri-Centre. If there were producers in the region, they could be put in touch. If not, farmers could be alerted to the opportunity by the District Agriculturist or a Business Incubator official. Thus, supply and demand could be arranged within the region, and both town and country would benefit. The Agri-Centre should be a place where ideas can germinate, grow and flower.

Finally, the Centre could help to increase the tourism income of the city. This will be discussed in more detail later.

3.1.2 Educational Role

To a non-farmer it is impressive to see how much knowledge and skill a modern farmer needs. Cultivation techniques, bio-technology, machinery,

weather forecasting, planning and management strategies and communications are constantly evolving, and the farmer must keep up. The provincial and federal governments offer a great deal of information, and an increasing amount of valuable information is coming from private research and development companies. It is important that a farmer have easy access to this material so that he can make informed decisions. The Agri-Centre can play an important role here. The various government departments should be represented, as well as consultants in management, marketing, finance and other services. Some of these may be associated with the business incubator.

The Agri-Centre may also help to educate non-farmers about farm life and technology. To many urban people, farming is a quaint, somewhat vague occupation. During drives in the country there are always cattle in the pastures and grain in the fields, but the picturesque simplicity of these scenes belies the complexity and sophistication of modern farming. Shoppers are used to seeing a thousand and one varieties of food in tidy packages on the store shelves (and take for granted that they always will) but they know little about the process of getting it there. Displays and activities in the Agri-Centre could help. In addition to the normal activities, there could be special events to celebrate various aspects of farm life past and present, or to show local products.

3.1.3 Social Role

The Agri-Centre can provide a place for the traditional social activities of the prairies. The weekly farmers' market may be held outdoors in summer and indoors in winter. There may also be special events such as agricultural

exhibitions. Particular types of local produce could be promoted this way. Harvest festivals with pie baking contests and competitions for the largest strawberries and squashes are popular among farm and town people alike.

The activities of the 4-H Club would also fit in very well. Their projects and displays would be of interest to many people, particularly younger ones.

Another traditional farm activity is crafts. Homemade quilts, clothes, toys, drawings and paintings, furniture, harnesses or baked goods could be displayed and sold in the Centre. For some craftspeople, perhaps, this could grow from a hobby into a full-fledged business.

The Agri-Centre could also be a focus for social gatherings such as meetings and square dances.

Finally, all of these events could attract tourists to Drumheller. Many people now drive through to see the Tyrell Museum, but they do not stop in town. Activities in the Agri-Centre, if properly publicised, could entice these tourists to stay a while.

3.2 Purposes of the Agricultural Centre

The purposes of the Agricultural Centre may now be defined explicitly. These are based on the analysis of the Centre's context and its role in the life of the community. There are four purposes:

1. To consolidate and expand Drumheller's role as the major agricultural service and supply centre of the region by:
   a. Providing more efficient and attractive structures to house existing

agriculture-related businesses;

b. Making agricultural service and supply businesses more convenient to farmers by grouping them together in a single complex;
c. Providing more services to farmers than currently exist in the region (including technical, financial and managerial advice) and in combinations which may encourage and nurture innovative developments in agriculture and related businesses (including food production, processing and marketing;
d. Providing farmers with access to the latest information on agricultural technology, and adding a component of agricultural research, development and demonstration to the region; and
e. Making these services available to farmers within and beyond the current Drumheller market region so as to expand the Drumheller market without disrupting the traditional markets of other towns (such as Beiseker);

2. To provide a town-country meeting place to enhance and focus social and commercial interactions between farmers and townsfolk;
3. To inform and entertain tourists with varied agricultural displays and events; and
4. To serve as a prominent and memorable symbol of the agricultural basis of the city.

3.3 Themes

Three themes should be carried throughout the entire project. These will help, first, in the choice of facilities for the Centre. Also, they may give clues as to architectural design features. Finally, the themes may suggest events and

displays in the completed complex. The three themes are:

1. State-of-the-Art Agriculture: Display of the most advanced farm technology which may be applied in this region;
2. Historical Continuity: The evolution of agriculture in the region from the earliest days to the present, with an eye to future trends and possibilities;
3. Farm-to-Table Food Technology: Representation of all aspects of food production, from the growing of crops and livestock to processing techniques to preparation for the table, with an emphasis on local products.

The themes may be expressed in various ways: displays and demonstrations of agricultural articles and techniques, markets and restaurants, business development projects and in special events such as exhibitions and contests. These themes will be of interest to all of the Centre's users: farmers primarily, but also townspeople and tourists. Farmers will be offered information on the latest kinds of machinery and techniques of crop production and farm management. Displays and development projects on food processing and marketing may inspire ideas in both farmers and townspeople about business opportunities they may pursue. Tourists with a general interest in farming will appreciate the demonstrations and special events such as markets and exhibitions.

4. PROGRAMME

Chapter 3 dealt, in the words of the great architect Louis Kahn, with "the unmeasurable": the essential nature of the Agricultural Centre. It envisaged people carrying on business, talking, displaying the products of their skills and learning new ones, exchanging ideas, meeting for a meal and dancing on a Saturday night. In short, it envisaged a microcosm of life in a modern prairie community: people from the town and the country going about the complex, demanding, rewarding and frustrating business of producing crops and getting them to market. This chapter will begin to deal with "the measurable". It will

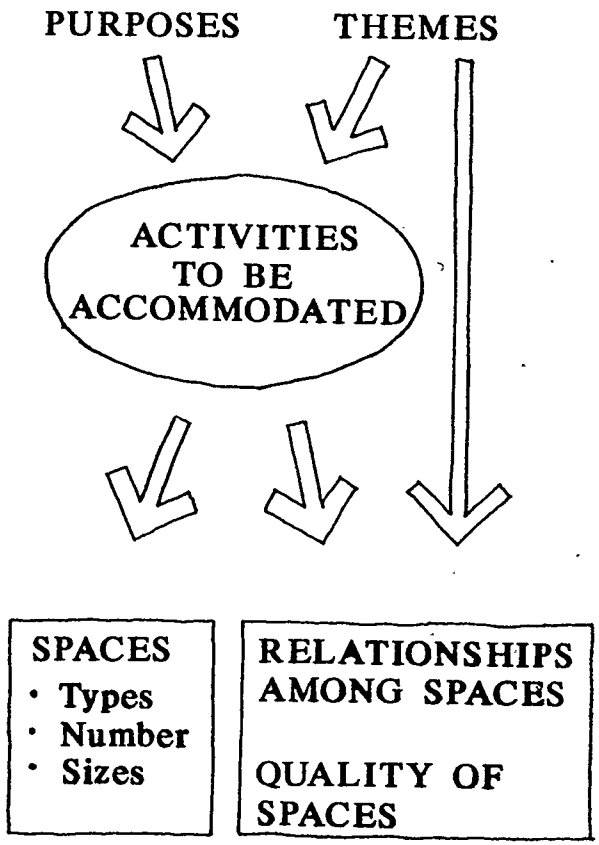
describe the facilities that will be included in the Centre, their sizes and the relationships among them. Left to later chapters is "the immeasurable", the embodiment of the essential concept of the facility in an actual building.

In this stage of programming and the later stage of design the Agri-Centre will become more and more definite. Activities will be listed and located on the site, spaces will be allocated to them and the spaces will be parcelled into buildings . These will be given specific shapes and divided into rooms with windows, doors and particular dimensions. However, during the whole process it is crucial to keep in mind a clear picture of the things that will happen there. In the Facility Concept stage, the purposes and themes of the Centre (which arose from the context) determined the selection of activities that were included. In this stage the activities must begin to shape the complex. The programme includes a list of the sizes and shapes of the spaces that are needed. But it must be more: it must be the vehicle through which the activities begin to give physical shape to the buildings. The activities, along with the themes of the Centre, determine the relationships among the spaces and, just as importantly, their character. In order to accomplish this, it is essential to see, in the imagination, people going about their business in the Centre.

4.1 Facility Types

The first step is to decide upon the types of facilities that will be needed to accommodate all of the activities that will occur in the Centre. The relationships among the types of facilities and the particular spaces needed within each type will be discussed later in the chapter.

PROGRAMMING OF THE AGRI-CENTRE



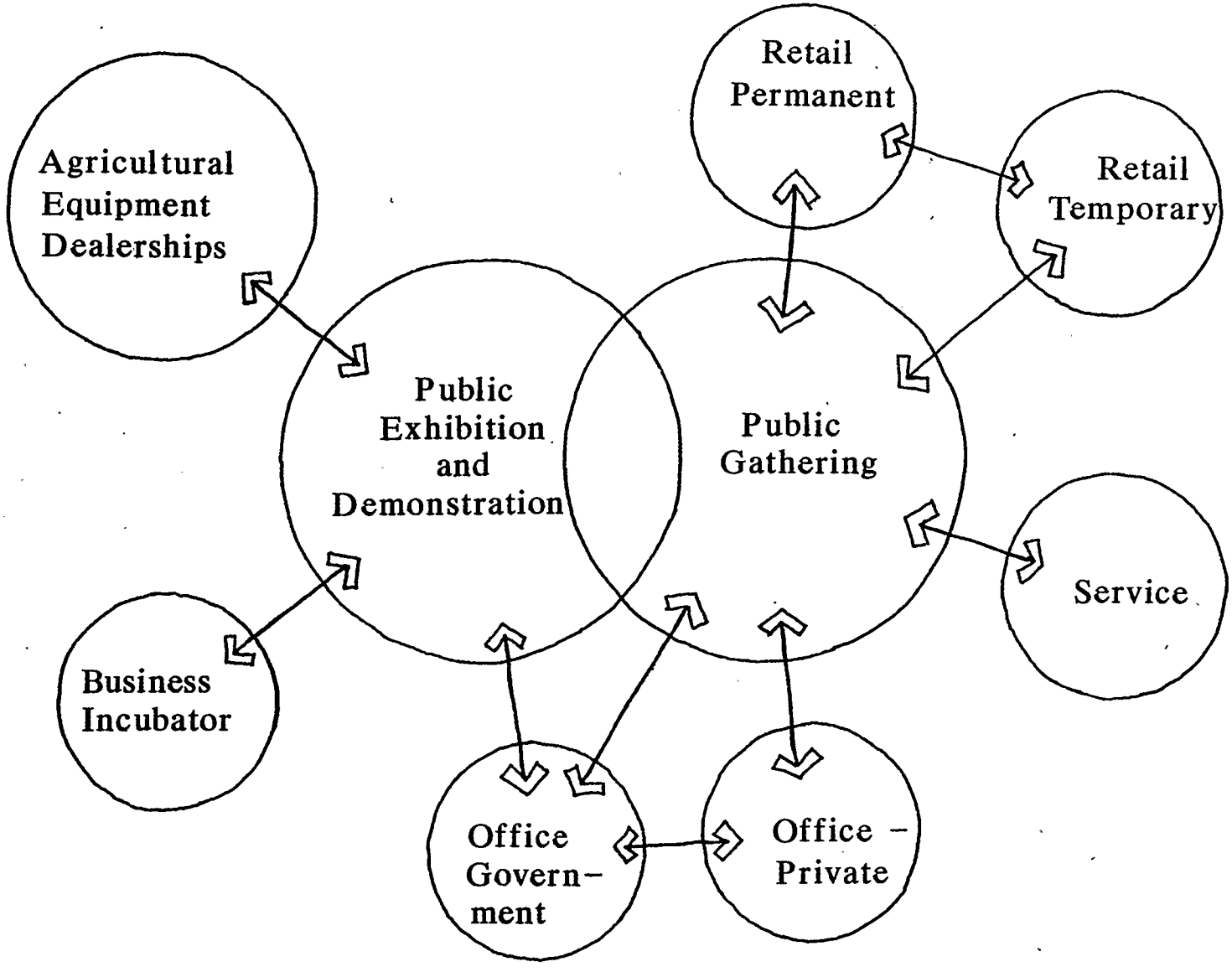
FACILITY TYPES	ACTIVITY
1. Agricultural Equipment Dealerships	Farm equipment supply and service
2. Retail Stores - Permanent	Agricultural supply General farm-related retail
3. Retail Space - Temporary	Farmers' Markets Craft, bake sales
4. Service	Bank or credit union Restaurant
5. Office - Government	Information about federal and provincial agricultural programmes (financial and technical) and help in using them
6. Office - Private	Agricultural consultation: technical, finance, management, marketing, planning
7. Business Incubator Offices and Workshops	Business opportunity and product development
8. Public Exhibition and Demonstration Spaces - Outdoor and indoor	Museum Displays of new machinery, crops or livestock 4-H Club exhibits Government programme publicity New service or product displays, including new locally processed foods
9. Public Gathering Spaces - Outdoor and Indoor	Fall fairs and exhibitions Meetings Square dances Country music concerts or jam sessions Threshermen's reunions

As discussed in Chapter 3, there will be different groups of people using the Centre: farmers, townsfolk and tourists. These groups will not use the Centre in the same way. Each will use some parts more than others. It is useful to predict the use patterns of the various groups so that they can be accommodated in the site layout. This can be summarized using a matrix.

USERS / FACILITY TYPES	Farmers	Farm Families	City Businessmen	Townsfolk -General Interest	Tourists
1. Agricultural Equipment Dealerships	3	2	1	1	1
2. Retail Stores - Permanent	3	3	1	2	2
3. Retail Stores - Temporary	2	3	1	2	2
4. Service	3	2	2	2	2
5. Office - Public	3	2	2	1	1
6. Office - Private	2	1	2	1	1
7. Business Incubator	2	1	2	1	1
8. Public Exhibition and Demonstration Spaces	3	3	2	3	3
9. Public Gathering Spaces	3	3	2	3	3

LEGEND 3. Frequent use
2. Moderate use
1. Infrequent use

4.2 Relationships Among Facility Types



4.3 Particular Facilities: Space Requirements and Description

The next step is to determine the spaces needed for each type of facility, their sizes, and any special requirements. There follows a discussion of each type in turn. A summary appears in the column to the right.

1. Agricultural Equipment Dealerships

There are four dealerships in Drumheller currently, one for each of the major farm equipment manufacturers. Each has a building and surrounding land for display and storage of the large machines. The buildings serve many purposes. They include offices for the manager and sales staff, a parts counter and related storage space and a service and repair shop. The floor area of the existing buildings is approximately 750 - 800 m^2. About half of this is occupied by the repair shop. Each dealership has an outdoor display and storage area of 5 - 7 acres.

The dealerships may save both space and expense by locating their service and repair shops in a single building and, to the extent possible, integrating them. This could effect savings in a number of ways. First, the dealers could share common expenses of the building, such as heating and maintenance. Also they could share some tools and equipment such as socket wrenches, hoists and engine testing machines. Finally, they might even share some of the time of their staff.[1]

Farm Equipment Dealerships (4)

Building: 600 sq. m.
(each dealership)
-Lobby
-Offices for Manager and 2 Salesmen
-Parts sales counter and storage
-Video viewing room

Repair shop: 900 sq. m. (to serve all dealerships)

Outside display space: 3-4 acres (each dealership)

Railway unloading dock

During the 1980's there has been a trend among farm equipment dealers toward more efficient marketing. Inventories have become smaller to reduce interest expenses[2] and dealers have begun to use video-tape presentations to sell machines[3]. Farmers are still encouraged to try out machines on their farms, but, increasingly, the machines they choose are ordered from the factory rather than delivered from the lot. Thus, the demonstration and sales areas of the dealerships may be reduced somewhat from their current sizes. Also, each dealer must have a room suitable for video presentations.

Each dealership must have enough space around it to display a representative sample of machinery, perhaps four or five tractors, two or three combines, a swather, seeder and plow. The bulk of the inventory could be kept in a separate location on less expensive land. In this way the dealers could reduce land costs and have the opportunity to make more of the display space surrounding the dealership. Further, the space around the existing dealerships is not used efficiently. Much of it is left enpty. The dealers could save by buying less land and using it more fully. Taking these factors into account, the outdoor space of each dealership may be reduced to 3 - 4 acres.[4]

Farm machines are delivered either by rail or by truck, so there should be an unloading facility for both.

There should also be room for another farm equipment dealer, should one wish to locate there.[5]

Also, room should be available for a truck dealership. Trucks are essential on the farm for hauling grain to the elevator at harvest time and other goods throughout the year.[6]

2. Agricultural Retail: Permanent

The Agri-Centre is intended to be a one-stop shopping centre for farmers. The facilities listed here will supply most of their normal needs for agricultural supplies. Those not met by the Agri-Centre will be covered by existing facilities nearby. This will be one of the criteria for site selection (Chapter 5).

There must be a store for parts and specialized hardware such as Allied or Acklands. There is one of each in Drumheller. The buildings are approximately 450 - 550 m.^{2} in area.

The farmers' needs for general hardware and supplies may be met by a store such as U.F.A. or McLeods. These sell not only hardware, but also housewares, garden supplies and lumber. The area of such stores in Drumheller and similar towns is approximately 550 -600 m^2. It is not known which of these stores would move into the Agri-Centre. In a real project a tenant would likely be found in the early stages of planning, and the detailed space requirements determined from it. This programme, however, will merely allocate the necessary space, on the assumption that a tenant will be found by the market.

There is also a place in the Agri-Centre for a new type of store called the "Green Shop," which is currently being developed by Canadian Co-operative Implements Limited. According to the President, this will be a "one stop information and product centre" which will offer a range of goods and services which is "essentially limitless with the exception of having to relate to agriculture."[7] There may be some overlap with the goods offered by the general supply store, but the Green Shop appears to have a component of information

Specialized hardware and parts store: 550 sq. m.

General hardware store: 550 sq. m. with lumber yard

Tires

Small engines, equipment

Computers

Feed

Fuel

Agricultural chemicals

and general interest that the other stores do not. Since it is in the development stage only, perhaps its product range could be adjusted to dovetail with that of the other stores.

In the early stages of this programme outlets for bulk fuel, chemicals (such as fertilizer and pesticides) and feed were considered for inclusion in the Agri-Centre. However, there are existing outlets for all of these near the site that was ultimately chosen, so there is no need to include them. If these facilities were not present, they should be included in the Centre.

Computers are becoming important tools for farm planning and communication. Therefore, there should be space available for a dealer.

The Centre should have specialty stores for locally produced foods. These would bring immediate income and also serve to advertise the products to visitors to the city. This is especially important for new products just establishing markets for themselves. For example, if local ranchers were to begin producing beef free of artificial chemicals the Agri-Centre should have a specialty butcher shop and restaurant to sell it. If new industries begin to process local grains or other produce (into pies or cakes, for example), these should have outlets as well. Properly promoted, these could provide employment and income for the townspeople, both from local customers and tourists.

Specialty stores for local foods:

- Butcher shop
- Bakery
- Processed foods

There is a tradition among farm families of making crafts: quilts, knit goods, woodwork, drawings and many other things. A store in the Centre could provide effective marketing of these goods. A single store operated permanently could carry many types of crafts. Also, there should be space available for occasional temporary use for special or seasonal sales.

Home Craft Stores

- Permanent
- Occasional

Some of these activities may become full-time businesses. A person could, for example, establish a company to produce tooled leather saddles. Such products should have outlets available in the Agri-Centre.

Although the Agri-Centre is intended to be a "one-stop" shopping place, there is a danger that if too many facilities are included, the unique character of the Centre will be lost. In order to be included a facility must be directly related to agriculture, particularly that of the Drumheller region. Using this criterion, stores such as supermarkets must be excluded.

3. Agricultural Retail: Temporary

There is a weekly farmers' market during the summer months in Drumheller, and this will be accommodated in the Agri-Centre. It requires both outdoor space for fine weather and indoor space for rainy days. Also, if market gardening activity in the area increases (particularly through the use of greenhouses) and if the demand warrants, the market may begin to operate during winter, although perhaps only occasionally. Therefore, a heated indoor space is needed.

The market is reasonably well attended currently,[8] and it may be expected to do even better at the Agri-Centre because of a more centralized location and because of the gathering of facilities. However, demand is difficult to predict with certainty, so it is necessary to estimate the space needs of the market roughly. The exact dimensions of the market spaces were worked out during the design stage, as discussed in Chapter 7.

Farmers' Market

-Outdoor: 1500 sq. m.
-Indoor: 750-1000 sq. m.

Temporary sales space: 10 - 15 sq. m.

As mentioned previously, there will be space for temporary sales of such things as handicrafts, art, flowers or baked goods. A partially enclosed space of approximately 10 - 15 sq. m. will be provided for these. Alternatively, displays may be set up in the public gathering spaces.

4. Service

A bank or credit union will be an important component of the Agri-Centre. Farmers will be able to arrange financing through the Alberta Farm Credit Stability Program.[9] The dealerships and other merchants may also obtain financing from the Centre's branch. Further, fledgling enterprises in the business incubator could obtain the necessary loans. It is hoped that the bankers in this particular branch will have a farsighted and innovative approach. If they take an active part in the agricultural initiatives growing in the Centre they may be of invaluable assistance in their success. This will redound to the benefit of the bank.

Bank or Credit Union: 350 sq. m.

The Agri-Centre branch will be largely a commercial one dealing with loans to farmers and other businessmen. It will have only a small component of deposit and withdrawal service. A standard bank branch in Drumheller has a floor area of approximately 400 sq. m. A commercial bank will be less than this because there will be less counter and circulation space. The Agri-Centre branch will be 300 - 350 sq. m. in area.

A restaurant is also an important part of the Centre. It can serve as an informal meeting place for all of the various people who will go there. One can

Restaurant: 500 - 600 sq. m.

imagine farmers chatting with the District Agriculturist and perhaps an entrepreneur from the incubator, going over their plans and concerns and "hatching" new ideas.

The restaurant may also promote special local products, such as fruits or chemical-free beef or grains. This could be a draw for tourists.

Standard family restaurants seating 150 - 200 people are approximately 500 - 750 sq. m. A size of 500 - 600 sq. m. would be appropriate here.

5. Office - Government

The provincial agriculture department should have a prominent place in the Centre to advise farmers on government policies and programmes. As discussed in Chapter 2, there are many such programmes, offering funding for research, development and demonstration in agriculture and food technology.[10] Their aim is to enable farmers and entrepreneurs to get more income from agricultural products by improving their quality, diversifying or processing them more extensively. These could be invaluable to people in Drumheller, and they should be publicized. Also, the department has assembled a great deal of information about farming technology, planning and marketing, horticulture, home economics, building construction, shelterbelt planting and a hundred and one other subjects. These would be intended primarily for farmers, but could also be of interest to townsfolk and tourists. Graphic Displays or models could inform people of the latest crops or techniques, which they could then see in local fields.

Alberta Agriculture: 600 sq. m.

-District Agriculturist office
-District Home Economist office
-Agriculture Development offices (2)
-Extra Offices (2)
-Library
-Meeting room for 10 - 12 people
-Meeting room for up to 50 people
-Laboratory
-Secretarial space

The permanent staff of the Drumheller office includes the District Agriculturist, the District Home Economist, two officials of the Alberta Agricultural Development Corporation and three secretaries. During the summers one or two students may also join the office. All of these people require offices, with the exception of the secretaries, who have desks in the open office space. The District Agriculturist and Home Economist also require a small laboratory for carrying out tests and demonstrations.

Agriculture Canada has no permanent representative in Drumheller. However, there should be space available in case an official comes temporarily. A small meeting room or boardroom would suffice.

A library with literature on government programmes as well as general reference materials should have a place in the Alberta Agriculture offices. It should be easily accessible to the public.

Finally, meeting spaces of various sizes are needed. A room of 25 - 30 sq. m. will accommodate meetings of 10 to 15 people. Also, the District Agriculturist organizes lectures and seminars for up to 60 people. A room of approximately 200 sq. m. will be needed for these.[11]

The farm organizations such as the Farm Women's Institute and producers' associations do not maintain permanent offices, but they should have access to the meeting rooms for their meetings. Also, there should be a prominent place where they can display literature or exhibits of their members' products.

6. Office - Private

Among the farmers of the region there is no shortage of ideas for improvements to agriculture or new businesses.[12] Many have thought up new products or services, but lack the expertise or financing to develop them. The Agri-Centre may help. It is intended to be a focus for agriculture-related development in the region and, as such, it must have the resources to help new business ideas grow and flourish. It is proposed that there be experts in farm management, financial planning, business organization and marketing located in the Centre. There may also be people knowledgable in farm law and accounting. At the start they may be available only part time and may be paid partly by the City of Drumheller. These people should be associated with the Business Incubator, or at least work closely with it.

There is a need for 5 or 6 offices of approximately 50 sq. m. each (including reception areas).

Offices for Business Development Advisors (300 m.^{2})

- Farm management
- Finance
- Marketing
- Business organization
- Law
- Accounting

7. Business Incubator Offices and Workshops

One way that the City may encourage new agriculture-related businesses is to establish a business incubator. People with ideas for new machines or services, or for new processed foods are provided with space for offices or workshops, and basic office services at rents below market rates. The incubator also has business development experts available for advice. The fledgling entrepreneurs are thus able to develop their new products or services at low cost

Office Space:

- Coordinator (25 sq. m.)
- Advisors (2) (40 sq. m.)
- Lobby (25 sq. m.)
- New Business Offices (5)(20 sq. m.)
- Secretaries
- Service space: circulation, supplies
- Workshop space (1200 sq. m.)

and begin marketing them. When they become successful they move out.

There are two components: an office area and a workshop. Within the office there must be spaces for the permanent staff and for the new businesses. The permanent staff will include a Director or Coordinator, one or two full-time business advisors, and secretaries. The Coordinator will plan and oversee the operations of the incubator, and also be available for advice to clients. The client businesses must have their own entrance, and each will have its own offices. There will also be a common meeting room, spaces for secretaries, a room for computer terminals and a supply room. The workshops will be simply large open spaces with large doors. They could be subdivided in many different ways. Businesses could move their machinery and equipment in to develop products and to get a start on production before going out on their own.
There should be space available for display and demonstration of the products developed in the incubator.

8. Public Exhibition and Demonstration Space

Exhibitions have a long history in Canadian agriculture. They help to spread new ideas and techniques among farmers, they help city people to learn about farming, and they are fun. The Agricultural Centre must have spaces to carry on this tradition. There must be space for exhibitions and displays of many types and sizes, both permanent and temporary. Also, there must be both indoor and outdoor spaces, so that there can be exhibits in all seasons and all types of weather.

Museum: Farm Machinery and household items: 2400 sq. m.

Indoor and outdoor space for temporary displays: machinery, livestock, 4-H Club, government programme publicity, new product or service advertisements

Permanent outdoor farm demonstration space - crops, livestock

It is here that the three themes of the Centre will be most prominent. The first, "State-of-the-Art Agriculture," will be seen in displays of modern farming technology. These could include up-to-date information from research and development programmes and in shows of livestock and horticultural produce. There should also be an area for test and demonstration plots for new crop varieties that may be planted in the area. Alberta Agriculture could sponsor these demonstrations [13], as well as the 4-H Club and perhaps the agricultural associations. Display of old steam tractors and threshers alongside the latest diesel tractors and combines will illustrate the second theme, "Historical Continuity." Prototype machines from the Business Incubator should be shown as well. The third theme, "Farm-to-Table Food Technology," may be represented in new types of food processing being tried in the Incubator, or in traditional cooking or baking contests using local produce.

The existing Homestead Museum has approximately 1000 sq. m., half of which is used for household goods and local history, and the other half for farm machinery. The farm machines are jammed into the space cheek by jowl and some pieces have been left outside. There is no space for restoration work. The collection would be displayed to greater effect in a space of 1200 sq. m. This would also leave space for restoration work. The household and local history section should be 500-600 sq. m.

The outdoor spaces for crop and livestock demonstrations were worked out in the design stage according to the land available on the site.

9. Public Gathering Spaces

From the outset the Agricultural Centre has been seen as a place where people would gather: a town and country meeting place. At the heart of the Centre will be places where people can do this, both indoor and outdoor, winter and summer. First, there will be a great public hall. This will be the focal point of the Centre. It will link directly to all of the other facilities, so that people will pass through it as they come and go. Intimately connected to this will be a general-purpose outdoor space. This must be easy to see and to get to for the general public.

These spaces will be used for a multitude of activities: farmers' markets, public meetings or celebrations, square dances, country music jamborees and rodeo breakfasts. Many of the exhibitions discussed in the previous section will be held here: livestock or produce competitions, machinery displays, flower or craft shows and bake sales. The spaces, both indoor and outdoor, must be large enough to accommodate these. Further, these spaces should be very prominent in architectural expression. They have symbolic as well as functional importance. There will be various building forms representing the various facets of modern agriculture, but they must be integrated into a harmonious whole. These busy public spaces which will accommodate most of the activity of the Centre, must be the unifying features of the complex. They will represent the essential integrity which ties together modern farm life.

4.4 Phasing

Drumheller officials are anxious to pursue the Agri-Mart concept vigorously in the near future. The business incubator will be developed some time later, but there is no definite timetable. The other facilities proposed for the Agri-Centre may, in their minds, be feasible, but they would need clear indications of this before making any definite commitment.[14] Given this state of uncertainty, the Centre must be designed so that it may be developed in stages. The enterprises of the original Agri-Mart concept will come first. The others will follow at some time, but the order of their development is uncertain.

NOTES

1. The concept of a shared repair shop is advocated by Mr. Boyd Grieve, the Manager of the Co-Op Implements dealership in Drumheller. However, the manager of the Case International dealership, Mr. Bud Pierce, believes that it is not workable because the machines and tools are too different. Neither man is swayed by the arguments of the other. It is beyond the scope of this paper to resolve the feasibility of the idea, and it is advanced here as a promising concept only.

2. Case International is an exception here. It is not an independent dealership, but rather a factory outlet owned by the manufacturing company. As such, it does not own the machines on its lot and does not pay interest on them. (Personal communication with the Manager, Mr. Bud Pierce, September, 1988)

3. Personal interview with Dr. Hawkins, Professor of Agricultural Marketing, Faculty of Forestry and Agriculture, University of Alberta

4. Mr. Boyd Grieve, the Manager of the Co-Op Implements dealership finds this area adequate. (Personal communication, September, 1988)

5. It is unlikely that a new dealership will locate in Drumheller because all of the major manufacturers are already represented.

6. Personal communication with Mr. Laurie Reiffenstein, who is both the General Manager of the Drumheller Economic Development Corporation and a local grain farmer.

7. Letter dated April 19, 1988 from Mr. Vic E. Kuffner, President, The Canadian Co-operative Implements Limited.

8. Personal communication with Mr. Don Poisson, the Drumheller District Agriculturist (March, 1990). Mr. Laurie Reiffenstein, General Manager of the Drumheller Economic Development Corporation, has stated the contrary: that the market is not well attended (personal communication, September, 1987).

9. Alberta's Commitment to Agriculture, monograph published by Alberta Agriculture, November, 1986. p. 5

10. Three prominent ones are Farming for the Future, which funds agricultural research and on-farm demonstration projects, The Agricultural Processing and Marketing Agreement, which pays capital costs of new food processing businesses, and Agricultural Initiatives, which funds projects to "encourage improvement in agriculture, horticulture, homemaking and the quality of life in the agricultural community".

11. All of this information on space needs for Alberta Agriculture was obtained through personal communication with the District Agriculturist, Mr. Don Poisson, November, 1989.

12. Personal interview with Mr. Laurie Reiffenstein, General Manager of the Drumheller and District Development Corporation.

13. Under the Farming for the Future programme, for example.

14. Personal communication with Mr. Laurie Reiffenstein, General Manager of the Drumheller Economic Development Corporation and Mr. Ray Romanetz, City Manager, September, 1988.

5. THE SITE

Conventional wisdom holds that the three critical factors in business success are location, location and location. While this is an oversimplification, a good site is undoubtedly important to any facility serving the public. This chapter deals with the selection and analysis of a site for the Agricultural Centre in Drumheller. The location will certainly be important for the retail stores and services, for whom prominence and ease of access mean business. Also, the government agencies will want to be conveniently placed so as to reach out

effectively to the farmers. Further, the placement of the Agri-Centre is important to the town as a whole. As outlined in Chapter 3 (Facility Concept), the Centre is intended to be the seed for the development of new agriculture-related businesses. The Centre should be located where it may be a hub for this development. It is also intended to attract tourists, so visibility, access and place in the town context will be important.

The first part of the chapter gives an introduction to the city. In the second the Agri-Centre site is chosen and in the final part the site is analyzed to determine the factors which will affect the design.

5.1 The City Context

Drumheller is a city of 6,500 people. It is located in the valley of the Red Deer River 140 km. northwest of Calgary. This is the badlands. The visitor approaching across the prairie has a dramatic introduction to the city as the highway suddenly drops into a stark, narrow coulee, winding down through layer after layer of earth before emerging into the broad river valley where the first buildings spring up. For the first-time visitor it is easy to overlook the town itself because of the remarkable setting. However, upon further acquaintance one comes to see it as a pleasant small prairie city.

The city has been shaped by the natural features. Bounded on the north and south by the valley walls, it grows out to the east and west. The river, winding through the valley, divides the city. Major roads run along both sides of the river and Highway 9 crosses it, connecting Drumheller with Calgary to the west

and Saskatoon to the east. The Canadian National Railway line runs south of the river through town and then crosses to the north to climb out of the valley through a coulee. The central business district is set into a bend in the river. Commercial development stretches out from it along Highway 9 to the edges of the valley and southwest along Highway 9 towards the community of Rosedale. Many of the residential areas are located along the river. Others are tucked behind the commercial strip on both sides of Highway 9. A light industrial park is set beyond the residential belt south of the river. There are two riverside parks.

Apart from its unique setting, Drumheller is much like other prairie towns. On the outskirts is the usual jumble of commercial development: stores, filling stations and restaurants in the usual potpourri of buildings. The main street is wide and lined with dignified two-storey brick buildings. The nearby residential neighbourhoods have frame or stucco bungalows in the various styles of their times. The industrial and service buildings are unpretentious off-the-shelf types.

There is a good deal of vacant land in Drumheller and one has the impression of a community in transition. Development along Highway 10 toward Rosedale and the North Dinosaur Trail is scattered and seemingly haphazard. Also, there are many abandoned mine buildings and relics that serve as reminders of the former mainstay of the town.

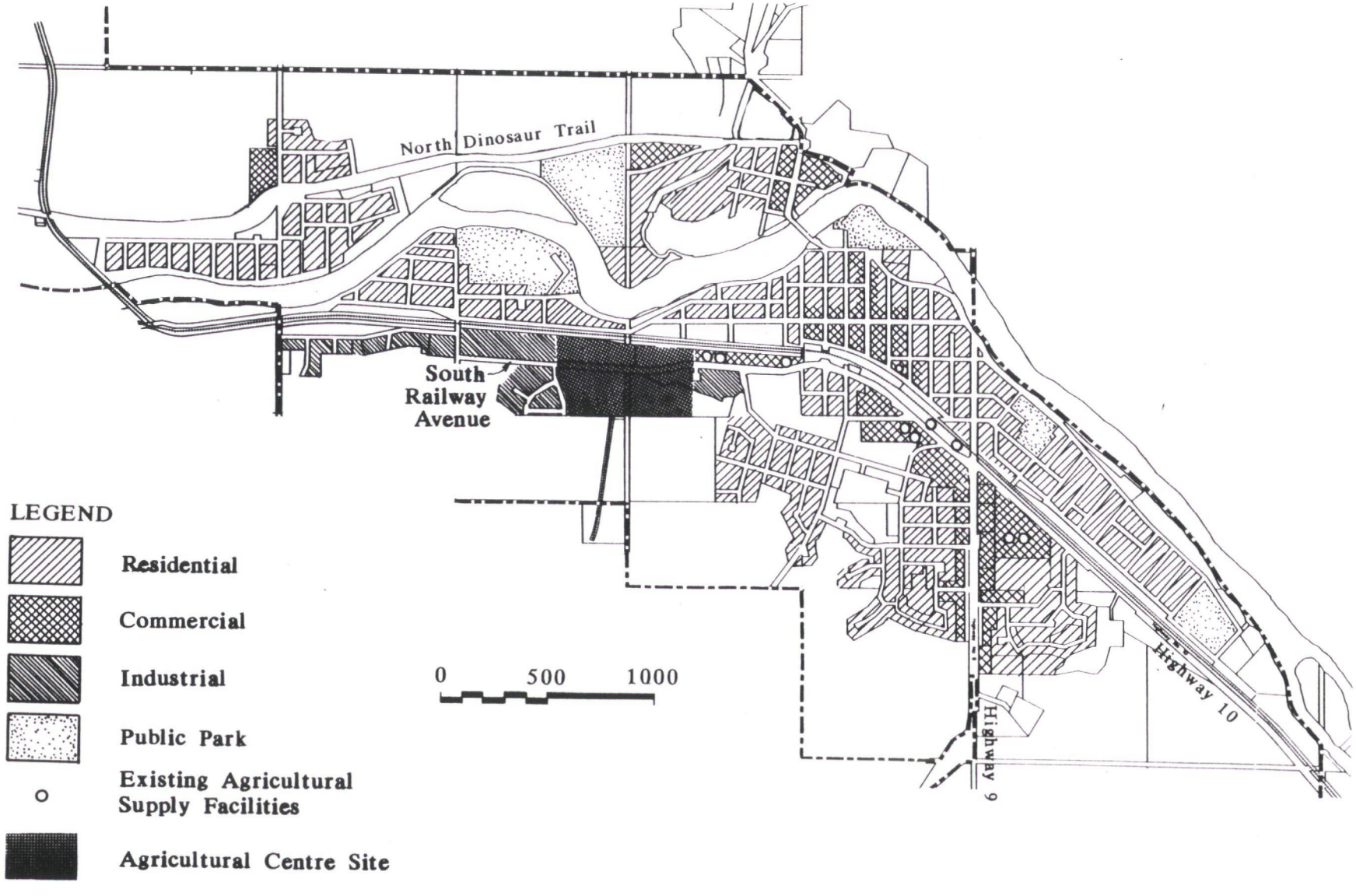


Fig. 8 City Context

5.2 Site Selection

Several factors were considered in choosing a site. Each of the facilities has its own needs, and all must be considered together. Many of these needs are practical and immediate, arising directly from the programme. Others are less definite but no less important. These involve consideration of the overall town context and trends and opportunities for future development.

There were three steps to the site selection process. The first was to make up a preliminary list of the necessary and desirable features of the site. Next this list was used to identify all of the sites that might be suitable. Finally, the preliminary selection criteria were expanded and refined, and these were used to evaluate all of the possible locations and choose the best one.

Three criteria were used for the preliminary survey of possible sites:

1. Size. At this stage the programme was still in its early stages, so the specific size was known only approximately. A generous estimate was 30 acres (4 acres for each of 4 dealerships, 0.75 acres for the other retailers, 0.25 acres for offices, 0.5 acres each for the business incubator and museum, up to 5 acres for outdoor activity space, circulation and parking and, finally, 7 acres for the test and demonstration plots).
2. Ease of Access. The Agri-Centre must be located on a major road. This will make it easy to reach for all of its users: for farmers in a hurry, townsfolk and tourists on their first visit to Drumheller. Also, farmers may be driving large combines or tractors, so a wide road will be necessary. Finally, a site near the tracks was preferred because many of the agricultural machines are

delivered to the dealerships by rail.

3. Place in the Overall City Context. From the outset the Agricultural Centre was seen as a meeting place between townsfolk and farmers. It was important to choose the right location in order to facilitate this. There were two possibilities. First, the Centre could be at the city's outskirts: literally at the meeting place of town and country. It could be seen as a prominent gateway to and from the city, proclaiming the importance of agriculture to the city and region. Second, it could be close to the city's centre and thus closely integrated into the life of the city. Each of these alternatives has its merits, and it was too early to decide between them at that point. In either case, it was important that there be quick and easy access between the Centre and the downtown business core and the other agricultural service businesses such as the grain elevator and fertilizer suppliers. The site must also be suitable for future light industrial development. Finally, the Agri-Centre should be close to the city's amenities such as the parks for the benefit of all users, particularly tourists.

Four possible sites were chosen (see Figure 9). The one that appeared most promising initially was a vacant field between the North Dinosaur Trail and the river just east of the Homestead museum. The second was the site occupied by the Co-Op shopping centre at the intersection of Highways 9 and 10. Use of this site would, of course, mean either demolishing or incorporating the shopping centre. The third possibility was south-east of the Co-Op site on Highway 10. The final option was the one preferred by Drumheller planning officials for the Agri-Mart.[1] It is located in the Elgin Hills Industrial Park area on South Railway Avenue.

At this preliminary stage a number of sites which were large enough were rejected because they did not have a favourable place in the town context. One was the site of the rodeo grounds where Highway 9 emerges from the coulee west of town. This appeared at first to be promising, but on reflection seemed too remote to play an active part in the city's life. Nor would this land be suitable for future industrial development, being close to the federal prison. There is also land available on the river to the east and west of the city, but this was dismissed, again, because it is too remote from the city.

In the final stage the four possible sites were evaluated in detail. The process was carried on in coordination with the development of the programme and the initial design studies. As the idea of the Centre came more into focus and its form began to evolve, the site selection criteria could be refined. The results are summarized in the Site Selection Table.

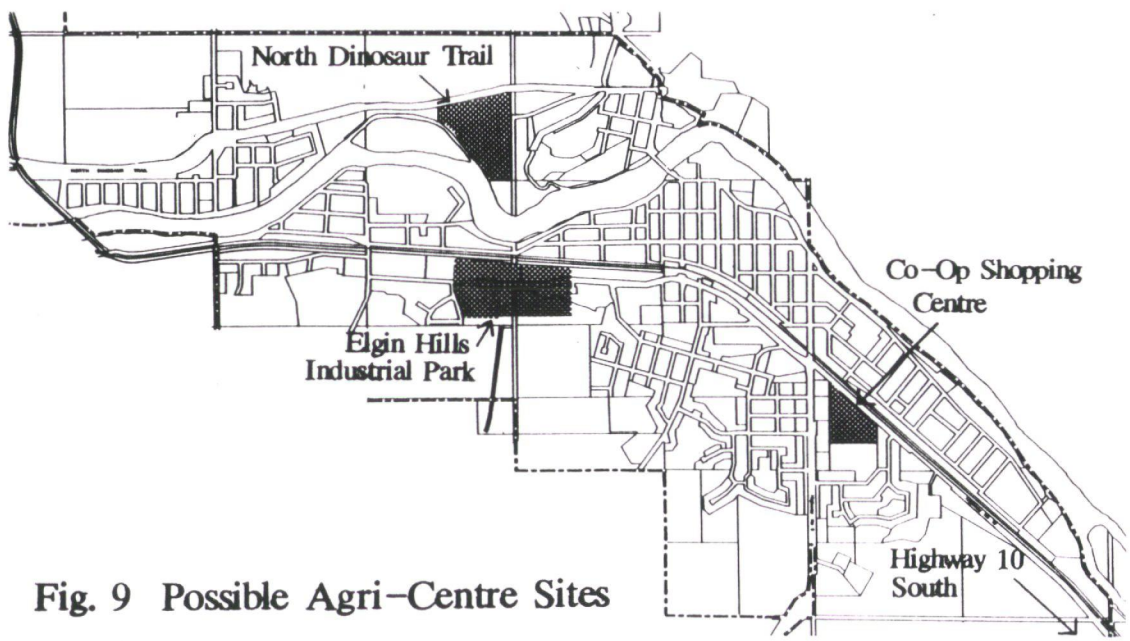


Fig. 9 Possible Agri-Centre Sites

Site Selection Table

SITE	Availability	Initial Size	Size for Expansion	Size for Industrial Park	Visibility	Ease of Access	Proximity to Rail	Proximity to Agric. Services	Proximity to City:	-C.B.D.	-Parks	-River	Potential for Conflict:	-Roads, Traffic	-Noise	-Odours	Decision
1. North Dinosaur Trail	P	G	F	P	G	G	P	P		F	G	G		L	H	H	Not Suitable
2. Co-Op Shopping Centre	P	G	F	P	G	G	F	G		G	F	F		L	H	H	Not Suitable
3. Highway 10 South	G	G	F	F	F	G	F	F		F	P	P		L	L	L	Accept-able
4. Elgin Hills Industrial Park	G	G	G	G	F	G	G	G		G	G	F		L	L	F	Best Choice
	Ratings: G: Good F: Fair P: Poor													L: Low F: Fair H: High			

The Elgin Hills Industrial Park site was selected as the best choice.

The North Dinosaur Trail location had initially seemed the best choice. It is large enough and has ample frontage on a major road. Its triangular shape allows a good deal of design freedom and the river frontage (directly across from Newcastle Beach) offers possibilities for recreational development. However, it turned out not to be available, having been designated as the site of a new hospital.[2] Further, it has drawbacks. Being on the north side of the river, it is close to neither the railway nor related agricultural services. Also, it is not large enough to support future industrial development growing from the Centre. Finally, the presence of the houses immediately to the east creates a potential for conflict because of noise, traffic or odours.

The Co-Op Shopping Centre site has an ideal location for visibility and access, at the intersection of the two major roads entering town. However, the site is not large enough to accommodate both the existing shopping centre and the Agri-Centre. Many of the businesses would have to be relocated. This is not realistic. Further, the problems noted above with the North Dinosaur Trail site apply here as well. There is no room for industrial development and the Centre could disturb people in the houses nearby.

The Highway 10 site would be acceptable by most criteria but outstanding by none. There is sufficient land for both the Centre and future developments, but some of the hills would likely have to be graded flat, and the proximity of the hills behind would force the future developments to string out along the highway rather than being closely associated with the Agri-Centre. This location is, of course, highly visible. However, the Centre would be some 3 to 4 km.

from the city centre and so would not play an active part in the life of the city.

The Elgin Hills Industrial park site seemed at first to be the least likely alternative. It is not an attractive place - an industrial wasteland tucked away in the back pocket of town, sandwiched uncomfortably between the railway tracks and a meandering line of bare badland hills. Further thought, however, reveals that it has many factors in its favour, not the least of which is that the City officials recommend it. The site, first of all, is available. It is owned by the City and officials are prepared to offer it to agricultural service and supply businesses at favourable rates.[3] The area between the tracks and the hills is large enough for the Agri-Centre and is classified Medium Industrial.[4] To the south of the hills is a tract of vacant land of about 50 acres which is classified Urban Transitional. The City Manager and the General Manager of the Drumheller Economic development Corporation have indicated that the City would look favourably on an application to allow light industrial use of this land.[5] Access to the site is good. South Railway Avenue is a major arterial road and the railway loading dock is nearby. The grain elevator, feed dealer and a number of fertilizer outlets are just down the road. The site is also very close to the central business district and to Newcastle Beach Park.

A serious drawback of this site is its lack of prominence. This will be offset partly by the nature of the Centre: all of the facilities will gain prominence by being together. Further, the Centre may be made more visible by the design of the structure itself and its surroundings (see Chapter 7). Finally, the initial lack of appeal of the site offers an opportunity. This can be turned from a forgotten leftover into an attractive, vibrant part of the city.

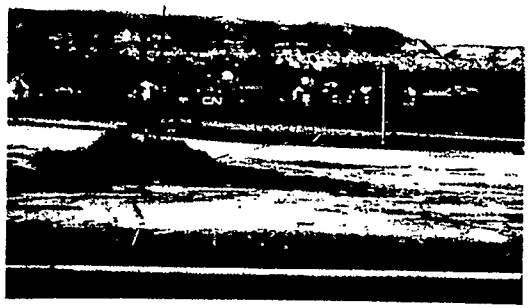
5.3 Site Analysis

The site was originally part of the Thomas Greentree ranch. It is about 1 km. southwest of the location of the original farmhouse.[6] Later, it was the site of a coal mine. There was a shaft toward the southeast corner and coal was mined at two levels.[7] The General Municipal Plan recommends engineering tests to determine whether there is a risk of subsidence on such a site.[8] This would certainly be necessary here. Over the years several people built houses in this area. However, they did so without title or municipal approval. Most of the houses have been removed and city officials are taking action to remove the rest.[9]

The site has an area of approximately 40 acres, being 700 m. long by 250 m. wide. As the Site Description map (Fig. 14) shows, there is a line of hills 10 to 12 m. high running roughly along the eastern side of the southern border of the site. Otherwise the ground is quite flat with a slope of about 4 m. up from west to east.

The land is all owned by the City of Drumheller.[10] The block to the north, next to the railway tracks, is classified Medium Industrial.[11] A reclassification would be required to allow the commercial and office uses of the Agri-Centre. Since such a variety of uses is contemplated, perhaps Direct Control would be the best designation. As mentioned before, city officials are considering establishing an Agri-Mart here and so would be willing to entertain an application for such a change. The larger block to the south beyond the line of hills is currently classified Urban Transitional.[12] The General Municipal Plan

Fig. 10. View of the site to the north from the top of the hill



identifies this block as a possible site for residential development[13], although city officials are considering a Light Industrial classification.[14]

The site is bounded on the north by the railway tracks and on the south by the line of hills mentioned above. To the east are more hills. Two bulk fertilizer dealers occupy land close to the railway tracks just east of the site, and a bulk fuel outlet sits opposite them to the south, under the hills. South Railway Avenue, leading from the junction of Highways 9 and 10, swings around these hills, giving drivers their first view of the site from the east. It then continues through the site, following the line of the hills. To the west is a small industrial park with a number of single story prefabricated metal buildings. There is a residential subdivision 250 m. southeast of the edge of the site, separated from it by the hills.

Very little of the site is in its virgin state. An air photograph shot in May, 1978 shows a network of automobile paths leading to the houses mentioned above. These are found on both sides and even on top of the hills, and appear to have been made simply by use. Comparison of this photograph with earlier ones also shows that a large area south of the hills has been graded flat.

Vegetation on the site is sparse. Besides a few lonely trees there is only a thin scattering of wild grass. However, the large trees on the other side of the river give some optimism about landscaping possibilities.

Fig. 11. View of the site to the east from the top of the hill

Fig. 12. View to the west

Fig. 13. View to the south

The Agri-Centre must be designed to take advantage of the weather so as to be comfortable and pleasant to visit all year round. The essential climatic data are shown at right.

Drumheller is hot in summer and cold in winter. Summer lasts 176 days, including the spring and summer "shoulders" during which passive outdoor activities such as picknicking and outdoor market shopping are just becoming popular.[15] An average of 95 days during this time are suitable for such passive activities (compared with 88 in Calgary).[16] Winter lasts 176 days,[17] slightly less than half the year.

There is a great deal of bright sunshine in Drumheller: an average of 8.5 hours per day from May 1 to September 30.[18] This gives good opportunities for daylighting in the Centre.

The mid-day sun reaches 62 degrees above the horizon in June and 15 degrees in December. The design must take this into account, giving protection from the sun in summer and allowing it to warm users in winter.[19]

As seen in the wind roses on the Site Analysis map, the winds are most often from the north and west, but these are not greatly predominant. They blow from other directions a significant proportion of the time.[20] Also, wind speeds from April to October are quite tolerable: 16-18 kph. They rise above an uncomfortable 25 kph. 10% of the time in July and 15% in April and October.[21] Therefore, there are good opportunities for outdoor activity in summer.

There is some possibility that activities in the Agri-Centre will disturb people in the houses to the southeast. Any such effect will likely be small, since the hills run between them. However, it is important to place any facilities that might generate noise or odours at the other end of the site.

DRUMHELLER CLIMATIC DATA

Seasonal Average Temperatures:[22]

January	-14.7 C
April:	5.3 C
July:	19.2 C
October:	5.8 C

Mean Daily Maximum Temperatures[23]

January	-8.3 C
April	10 C
July	26 C
October	13.3 C

Dates of Seasons:[24]

Spring shoulder:	May 10 - May 17
High summer:	May 18 - Sept. 15
Autumn shoulder:	Sept. 15 - Oct. 31
Winter:	Nov. 1 -April 25

Annual Precipitation: 32 cm.
Rain: 24 cm.; Snow: 90 cm.[25]

Average hours bright sunshine May 1 to Sept. 30: 1300 (8.5 per day)[26]

Frost-Free days: 113

Frequency of winds over 18 mph.:[27]

April:	15 %
July:	10 %
October:	15 %

Mean monthly wind speeds:[28]

January:	12
April:	12
July:	10
October:	12

NOTES

1. Personal communication with Mr. Laurie Reiffenstein, General Manager of the Drumheller Economic Development Corporation and Mr. Ray Romanetz, City Manager, September, 1988.

2. Personal communication with Mr. R. Romanetz, City Manager; City of Drumheller General Municipal Plan, Vol. 1, s. 10.1, p. 69; Figure 44, p. 72

3. Personal communication with Mr. Laurie Reiffenstein, September, 1988.

4. Land Use District Guide Map, Schedule 'A' to Drumheller Land Use ByLaw

5. Personal communication with Mr. Ray Romanetz and Mr. Laurie Reiffenstein, September, 1987.

6. The farmhouse was at the present intersection of Third Avenue and Second Street East. The Hills of Home, p. 205

7. Drumheller General Municipal Plan, Vol. 1, Figure 10, p. 19. The dates of the mining activity are unknown.

8. Ibid., Section 4.2 (b), p. 18

9. Personal communication with Mr. Laurie Reiffenstein.

10. Personal communication with Mr. Laurie Reiffenstein. No Land Titles search was done to confirm this.

11. Land Use District Map Guide, Schedule 'A' to Drumheller Land Use ByLaw

12. Ibid.

13. City of Drumheller General Municipal Plan, Volume 1: Background Study, s. 5.2 (3), p. 27, Figur 18, p. 30.

14. Personal communication with Mr. Laurie Reiffenstein.

15. Masterton, J. M.; Crowe, R. B.; Baker, W. M., The Tourism and Outdoor Recreation Climate of the Prairie Provinces, Toronto, Environment Canada, 1976, p. 78-80. See Note 24 for definitions of the terms "spring shoulder," "high summer" and "autumn shoulder."

16. Ibid., p. 161

17. Ibid., p. 78

18. Ibid., p. 211

19. Sun path chart for 52 degrees north latitude published in Ramsay, Sleeper, Architectural Graphic Standards, 7th Ed., New York, The American Institute of Architects, 1981, p. 81

20. Klivokiotis, P.; Thomson, R. B., The Climate of Calgary, Ottawa, The Canadian Climate Programme, Environment Canada, 1986, pp. 12, 17, 23, 27.

21. Masterton, J.M.; Crowe, R. B.; Baker, W. M., The Tourism and Outdoor Recreation Climate of the Prairie Provinces, Toronto, Environment Canada, 1976, p. 216-218.

22. Alberta Community Profile: Drumheller, Edmonton, Alberta Economic Development and Trade, November 1, 1988

23. Masterton, J.M., Crowe, R.B. and Baker, W.M., The Tourism and Outdoor Recreation Climate of the Prairie Provinces, Toronto, Environment Canada, 1976, p. 197-208.

24. Ibid., "Spring shoulder" is defined as the 15 days following the median date of the last one-inch snow cover. "High summer" begins when the mean daily maximum temperature rises above 65 F. and ends when the mean daily maximum temperature falls below 65 F. "Autumn shoulder" is the time between the end of high summer and the median date of the first one-inch snow cover.

25. Alberta Community Profile: Drumheller, Edmonton, Alberta Economic Development and Trade, p. 1

26. Masterton, J. M.; Crowe, R. B. and Baker, W. M., The Tourism and Outdoor Recreation Climate of the Prairie Provinces, Toronto, Environment Canada, 1976, p.211

27. Ibid., pp. 216-218

28. Ibid., p. 212 -215

6. DESIGN SOURCES

The discussion of the facility concept has brought to mind a number of images: farmers bargaining for new tractors or meeting with their local government representative, tourists dropping in for a look at the old and the new in farm machinery, people square dancing or having a chat over lunch. Now a building or group of buildings must be formed around these activities. How to begin? Some constraints were examined in Chapters 4 (Programme) and 5 (Site). It is time now to look at the opportunities. This chapter will deal with the sources that may be used as starting points for the design.

6.1 Historical Survey

There is no direct precedent for an Agricultural Centre such as the one proposed here. It is a new type of facility. Therefore, there is no "tried and true" building form that can be fitted around the programme with minor alterations. However, history records some buildings which have been analogous in function, at least to a certain extent, and it is valuable to look at the ways in which these were organized.

There are two reasons for looking at historical building types. The first is practical. In the building types that have evolved over the centuries there is a wealth of practical experience in which forms work well and which do not. Of course, these types have changed over time with changes in technology and architectural style, but the basic spatial relationships have remained the same as long as the essential functions and human activities have remained the same. What is important is to understand why the building type works for its function. It is not a matter of blindly mimicking a type of building because it has a stamp of historical approval. Rather, one must see if the function of a modern building is essentially the same as that of a line of older ones. If so, then the designer can use the basic form and update it to fit the modern programme.

The second reason is less tangible. It has to do with memory. A sense of our past is an important part in defining our identity. Our sense of who we are now is partly defined by who we have been: our memories of growing up and our knowledge of our ancestors' lives. When a person says, "I am a prairie farmer," he does not mean simply that he earns his living from tilling the soil.

He is referring to a whole way of life and a whole set of values and memories. Farmers are proud of the fact that their grandfathers or great grandfathers homesteaded on the bald prairie, persevered through the difficult years and succeeded. To take a broader view, we Canadians are the beneficiaries of great and ancient cultures. Our social traditions form part of our thoughts, and add greatly to the richness of our lives. In a sense, our history is a part of us. We cannot leave it behind; nor should we try, because to do so would cut away an important dimension of our experiences. This is not to argue against change or growth. History has never stood still and never will, because the need to grow is also an essential human quality. The point is only that we must recognize the importance of tradition. T. S. Eliot speaks of the value of tradition and the "historical sense" in literature:

> "... the historical sense involves perception, not only of the pastness of the past, but of its presence. This historical sense ... is a sense of the timeless as well as of the temporal and of the timeless and the temporal together ..."[1]

This applies to architecture as well as to other aspects of culture. Everyone has memories of the buildings of their childhood: the magic of a hay barn, the quiet grandeur of the town library or the cosiness of a dormer in the bedroom of a house. We never lose these memories. They enrich our experience of buildings throughout our lives. The same is true at a larger scale. The traditional forms of buildings form part of our collective memory. When we use or look at old buildings or when new buildings draw on traditional forms they can connect us with our past. Some will feel the connection more strongly than others, of course, depending on their knowledge and their particular experiences, but the

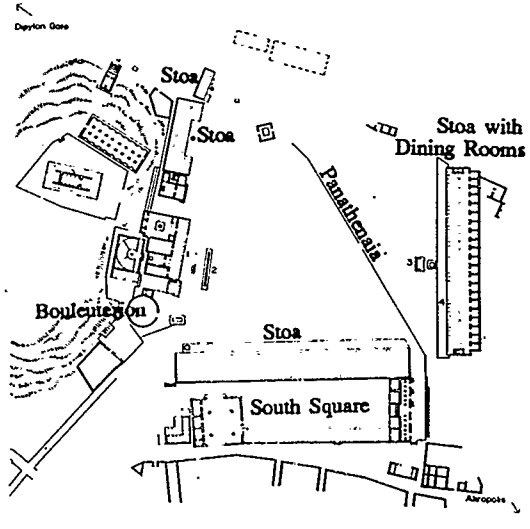
connection is there to be discovered. The shapes of buildings will always change to accommodate new needs, circumstances and technologies. This newness shows how we have grown and changed. But buildings should also display a sense of tradition to remind us of what has not changed, of what remains the same.

What, then, does history offer as an appropriate model, at least a partial model, for an agricultural centre? As mentioned in the Context chapter, the original idea was for an "Agri-Mart," a farm supply market. In a sense, through all of the additions, it remains a market still. Now it is a place for the exchange of information and ideas as well as goods and services. In addition, it is a place for social activities, which markets have traditionally been.

Markets go back a long way in history; as far back, in fact, as human commerce. They have taken various forms: the oriental bazaar, the town square and the market hall. They have in common the same essential elements: a central space, used for gatherings or circulation or both, and a number of smaller spaces opening onto it.

In classical Athens the market was held in the agora. This was a large open space (some 200 m. on a side) at a convergence of a number of roads. The most important, the Panathenaia, cut diagonally through the space and led to the Acropolis. Located around the open space of the agora was a loose grouping of buildings for various purposes. In fact, the agora was much more than simply a marketplace: it was the heart of the political and social life of the city. The structures include the council chamber (bouleuterion), a dining hall for councillors and officials, a temple, a number of shops and houses and four stoas.

Fig. 15
The Agora at Athens, 100 B.C.



These latter were long, narrow buildings with peaked roofs and a continuous colonnade along one side opening onto the agora. They were used for many purposes: commerce, public meetings, court sessions, art displays and informal gatherings. Some had a row of dining rooms against the back wall. (Fig. 15)

Over time the buildings around the agora were reorganized along more formal lines. By 100 B.C. there was a fine new stoa closing in the east side (which had been occupied by shops and houses) and there were two southern stoas defining a separate square which was probably used for the market.[2]

This model is useful in thinking of an organization for the Agri-Centre. Like the agora, it will serve many diverse activities in a single complex. (This may be a presumptuous comparison. The Agri-Centre certainly will not carry the same political or judicial (or historical) weight of the agora, but it is certainly intended to be an important commercial, social and administrative centre for the town and region.) In this model the activities are housed in many buildings of different sizes and shapes all grouped around a central space or, in the later plan, two interlinked spaces each serving a different function.

Early medieval builders continued the tradition of combining civic and commercial functions in a single building or complex. In the earliest examples, such as the Palazzo del Broletto at Como in northern Italy, the building consisted of an open, arcaded ground floor with a single large room above, used as a law court. The open ground floor was used as an extension of the neighbouring open air market.[3] (Fig. 16) The type developed by the addition of side and rear wings to form an interior courtyard, still accessible through the ground floor arcades. Again, the central space was used as a market. In Thorn,

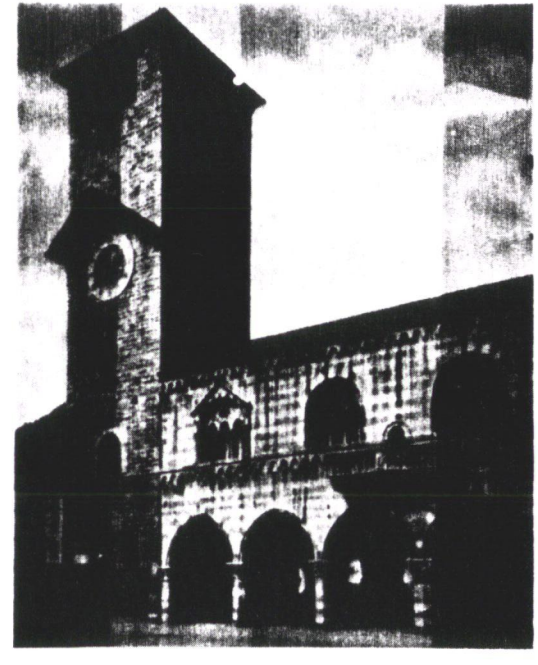
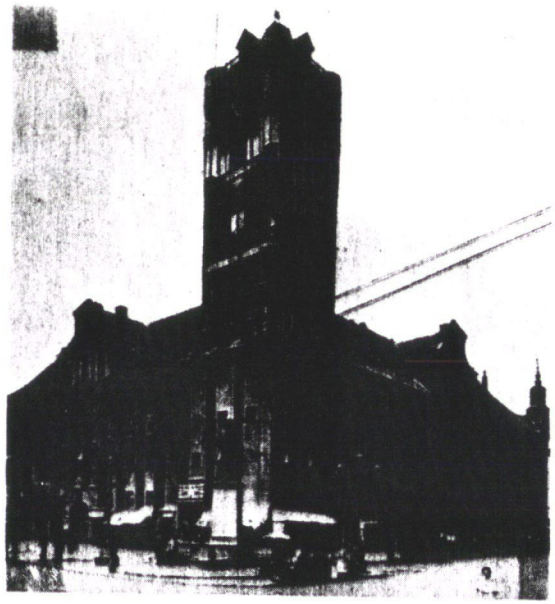


Fig. 16
Palazzo del Broletto, Como, 1215



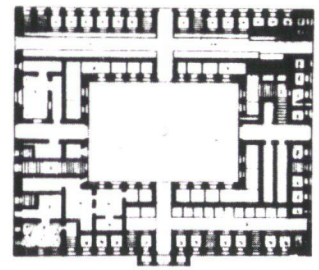


Fig. 17
Town Hall, Thorn
Exterior, Plan

now in Poland, the town hall (begun c. 1250) took this form. On the arcaded ground floor were shops for retailers and tradesmen, and on the upper floors were the town hall, law courts and other rooms.[4] (Fig. 17) After this time new town halls were built without market spaces. Markets moved into separate buildings, and a new line of architectural development began.

In the later middle ages the wealthy guilds, particularly the cloth makers, erected their own halls for administration and trading. These were large, elaborate buildings, befitting the importance of the guilds; in fact, they often overshadowed the town halls.[5] Again, they were often multi-purpose buildings. The "old hall" at Bruges (begun 1240) (Fig. 18), for example, with its absurdly large tower, had a hall for meetings on the upper floor in addition to spaces for the mercers, spicers and butchers on the ground floor. Similarly, the great Cloth

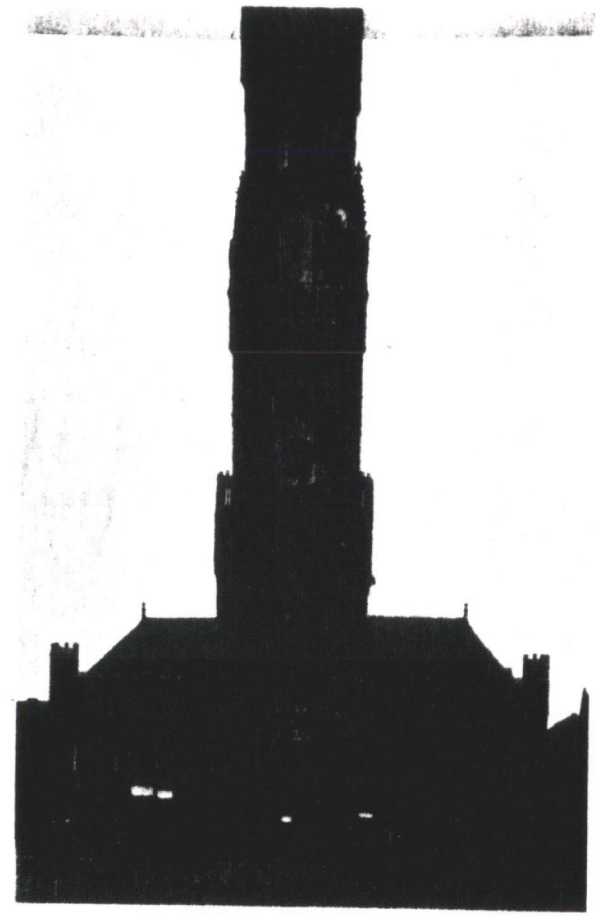


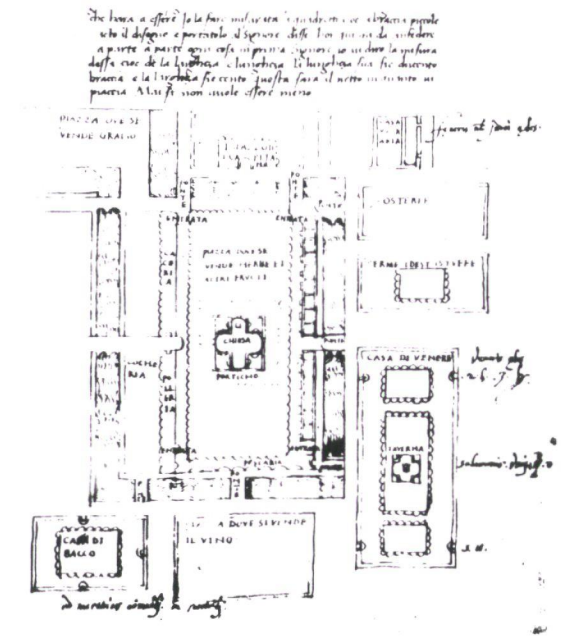
Fig. 18
Old Hall, Bruges

Hall at Ypres (Begun c. 1200) functioned partly as a town hall, law court, prison and chapel.[6] These buildings followed the plan of wings surrounding an open courtyard.

Other markets were simply open spaces surrounded by arcaded cloisters which sheltered the shops.[7] Filarete proposed such a market in his Treatise of about 1460. The open central space was for temporary stands and booths. The surrounding arcades were used for more permanent shops. Beyond the arcade but nearby are other services such as inns, a tavern and brothel. (Fig. 19)[8]

As commerce grew and became more complex there was a need for specialized exchanges for the trading of particular commodities. The form of these was established by the Antwerp Exchange (a monetary exchange) of 1608-11: an open courtyard surounded by arcaded walkways. (Fig. 20) This basic pattern was followed, with changes in architectural style, in numerous exchange buildings over the next 300 years, including the London Royal Exchange of 1566 (Fig. 21) and the Amsterdam Exchange of 1608-11. (Fig. 22)

Fig. 19
Filarete, Design for a Market
From his *Treatise*, early 1460's.



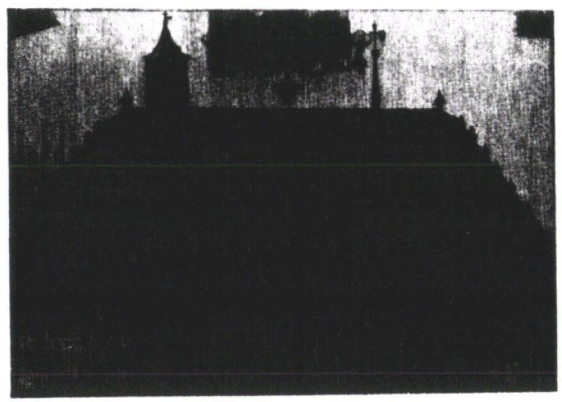


Fig. 20
Antwerp Exchange, 1608-11

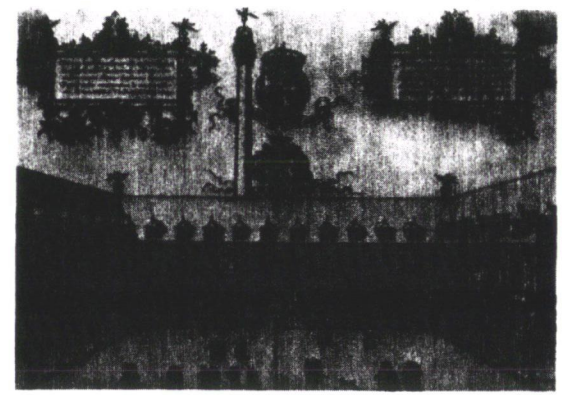


Fig. 21
London Royal Exchange, 1566

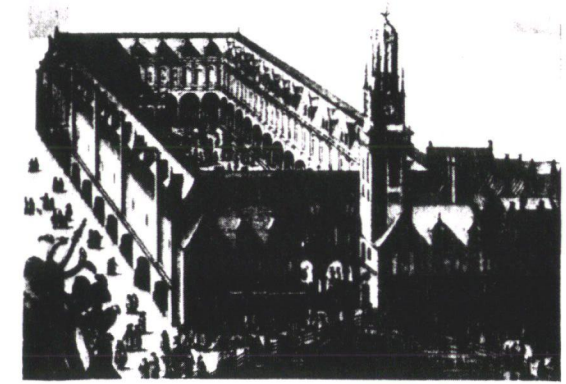


Fig. 22
Amsterdam Exchange, 1608-11

A remarkable innovation was introduced in the Halle au Ble in Paris (1763-8). (Fig. 23) The plan was circular. Arched openings all around the building gave access to the ground floor space and the central courtyard. The upper floor consisted of a circular gallery with windows on both sides. Some 40 years later the open court was covered by an elegant iron and glass dome, another notable innovation.[9]

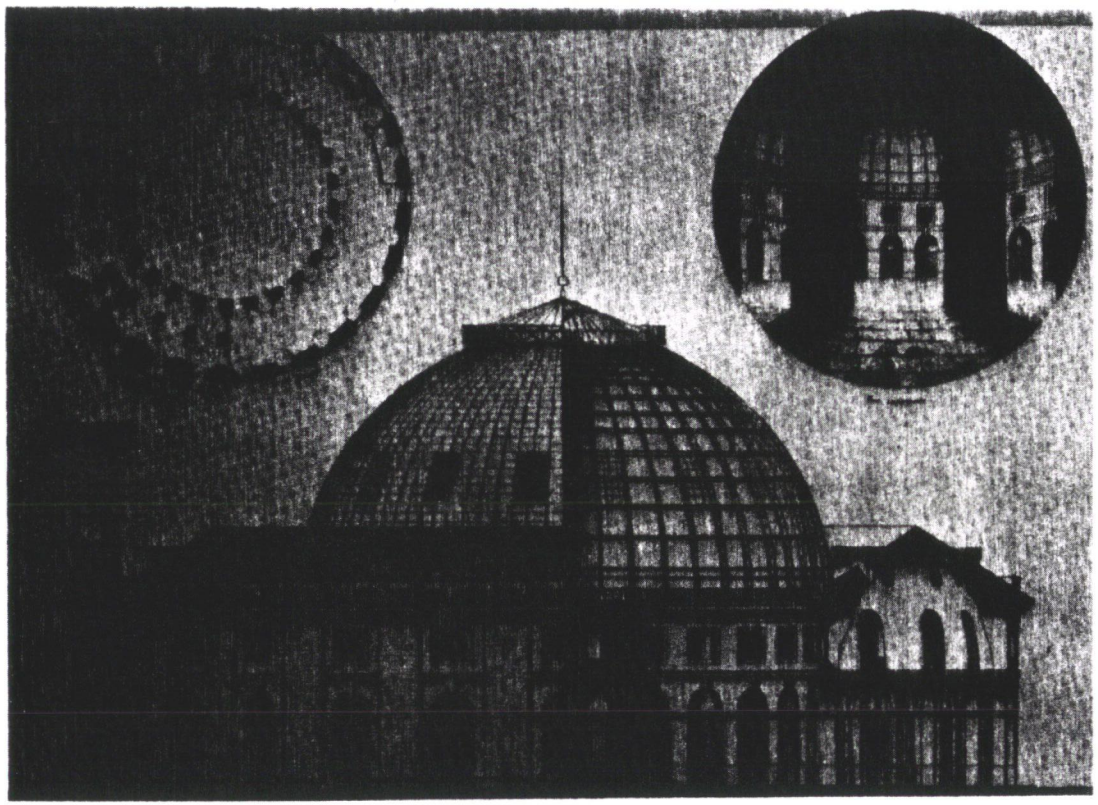


Fig. 23: Halle au Ble, Paris, 1763-8; Dome 1808-13

The Halle au Ble inspired two other exchanges, the circular London Coal Exchange (1846-49) and the Leeds Corn Exchange (1861-63) (Figures 24 and 25). Both had upper balconies and iron and glass roofs.[10]

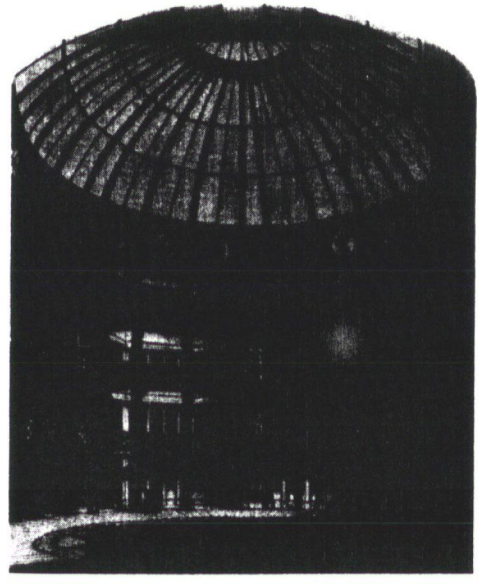


Fig. 24
London Coal Exchange, 1846-49

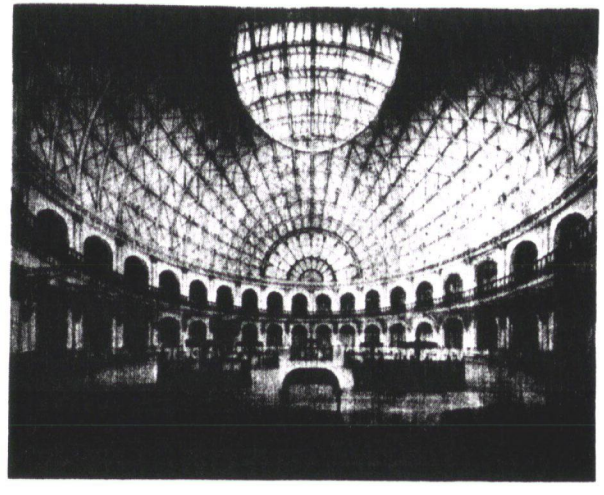


Fig. 25
Leeds Corn Exchange, 1861-63

In all of these examples the basic form is the same. The large central space can be used for many different temporary activities, while the surrounding covered spaces provide shelter for more private or permanent functions.

Another model of market buildings has its origins in Trajan's markets of Rome (Fig. 26) and in oriental bazaars, and can be traced through to the modern shopping mall. Again, the shops all open onto a common space, but here that space is a corridor or street. It is intended primarily for circulation, and does

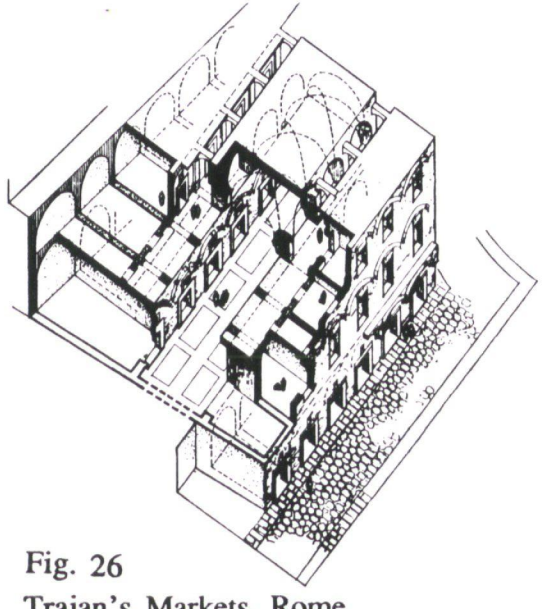


Fig. 26
Trajan's Markets, Rome

not have the flexibility to be used for other activities such as social gatherings, meetings or exhibitions. This makes it unsuitable as a model for the Agricultural Centre.

6.2 Prairie Vernacular: The Farmstead

The landscape of the prairies has a distinct and unmistakable character. No Albertan would confuse the countryside of Ontario or Quebec for the plains of home. To a newcomer Alberta presents a delightfully new panorama to be explored and appreciated. The terrain, the houses and barns, the trees and the fields all have a particular look. Even the colours have their own special quality. It is important for a designer to know and understand this landscape - what it looks like and why - because then he can decide how a new building should relate to the existing landscape and design accordingly (the new may be sympathetic to the existing or may contrast with it, depending on the context and the nature of the facility).

The farmstead is a familiar feature of the Alberta landscape. Each is different, but there are some features that are common to most. The patterns of their layout, the forms and technology of their buildings and the types of planting around them are all valuable in considering the design of the Agri-Centre.

The first observation is not about farmsteads themselves, but about views of them from the road. It is a pleasant surprise to an easterner to discover that the Alberta prairie is not flat. It is, rather, gently rolling and punctuated by valleys

and stands of trees. Also, the road does not always follow the survey grid, but sometimes curves away to follow the terrain. A driver is thus presented with a rich variety of views, alternating between long vistas and the more intimate views of the valleys. This rolling terrain also gives varied views of farmsteads. They are usually seen first from far away, but as one approaches they disappear behind hills and reappear once or twice, so that their details are revealed in stages.

At first glance different farmsteads appear to follow no common pattern. They seem to be loose collections of small buildings laid out according to the preferences of the individual farmers. However, closer examination reveals organizational principles which they share.[11] Primarily, there is a clear distinction between the living area and the working area. The house is set in a yard planted with grass and decorated with flowers and shrubs. Beside or behind the house is the vegetable garden. Also, there are usually a garage and one or two storage sheds. The working farm buildings are close to these but are clearly distinct. There is a broad road leading from the house back through the farmyard and on into the fields. The barn, animal sheds and storage garages are loosely grouped around this. There are also usually side paths which give access to other buildings and animal pens. The farmyards have an informal, "add-a-piece" look, having grown in an *ad hoc* fashion over a number of generations.[12]

There is great variety among farm buildings. The houses seem to follow the fashions of their day. There are some of one story and some of two. Some are clad in wood and others in stucco or aluminum siding. Roofs may be hipped or gable-ended, with or without dormers. Barns show equal variety. Many are of

the English type, with a hay loft above the main floor and a single pitched roof. There may be lean-to additions on one or both sides. Others had double-pitched roofs. There are also some central plan barns to be found across the prairies: square, round or polygonal.[13] Many of the barns and sheds, especially those for animals, have cupolas on the roof which serve as vents. Equipment buildings may be quonset huts or prefabricated "Butler" type buildings of various sizes and shapes. The older buildings, mostly of wood, were often built by the farmers. They are usually brightly coloured and have a charm that the pre-fab structures lack. Among all of the buildings throughout the farmyard there is usually a liberal scattering of farm machinery, both new and old.

Finally, one of the distinguishing characteristics of farmsteads is their rows of trees: their shelterbelts. This is often their most prominent feature, making them visible from many kilometres away. The trees were planted by farmers to provide shelter from the wind, shade and a pleasant relief from the monotony of vast expanses of bare prairie. Both the federal and provincial governments promoted the planting of shelterbelts,[14] and many of the trees were provided free of charge through the Dominion Experimental Farms beginning in the first decade of the century.[15] Government promotional literature encouraged the careful planning of shelterbelts with both evergreen and deciduous trees in a sequence to provide the proper protection, particularly on the north and west sides.

6.3 Prairie Vernacular: The Alberta Town

As with farmsteads, prairie towns have distinctive characteristics and, again, these are useful in considering the design of the Agri-Centre.

Typically, prairie towns had two major streets, one parallel to the railway tracks and one perpendicular. The railway station was often located at the intersection so that, looking along the main street one saw the station in one direction and the open prairie in the other. A grid of streets spread out beyond. Major commercial buildings such as the general store, restaurant and bank lined up along the main street perpendicular to the tracks. They were built close together, with flat fronts that formed a continuous wall. Beyond this street was a grid of streets that accommodated the houses. Toward the edges of town, along the main roads were the equipment dealers, machine shops, fuel dealers and other farm supply businesses. In contrast to the linear, ordered quality of the main street, these areas had a loose, informal organization. Buildings were of various shapes, but all had a rough-and-ready, utilitarian character: wood frame structures at first, and later prefabricated, off-the shelf buildings of steel.
Each town is different, of course, but all have this strong distinction between core and outskirts. Drumheller is true to form. Although it is larger than other towns and has been shaped by the unusual geography of its site, it has the same tight, linear main street and spacious, loosely organized outskirts. This pattern should be recognized in the Agri-Centre design. The ways in which this may be done will be discussed in the next chapter.

NOTES

1. Eliot, T. S., Selected Essays, 1917 - 1932, New York, Harcourt, Brace & Co., 1932, pp. 3-4; Quoted in Venturi, Robert, Complexity and Contradiction in Architecture, 2nd ed., New York, The Museum of Modern Art, 1977, p. 13

2. Kostof, Spiro, A History of Architecture, New York, Oxford University Press, 1985, pp. 143-4, 146-7, 149-50, 175-6;
Lawrence, A. W., Greek Architecture, 4th ed., Harmondworth, Middlesex, England, Penguin, 1983, pp. 337-9

3. Pevsner, Nikolaus, A History of Building Types, Princeton, N. J., Princeton University Press, 1976, p. 27

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5. Kostof, Spiro, A History of Architecture, New York, Oxford University Press, 1985, p. 359

6. Pevsner, Nikolaus, A History of Building Types, Princeton, N. J., Princeton University Press, 1976, p. 236

7. Ibid, pp. 236-7

8. Ibid, p. 237

9. Ibid., p. 203

10. Ibid., p. 206-7

11. Personal observation; explained in detail in the unpublished paper The Prairie Farmstead, prepared for EVDS 681 (The North American Landscape)

12. Personal communication with Mr. J. Bain, Mr. L. Stewart and Mrs. Ancell, farmers near Strathmore, Alberta

13. Arthur, Eric and Witney, Dudley, The Barn, Publisher's location unknown A & W Visual Library,, 1972, pp. 147-151, 155

14. For example, the booklet Farmstead Planning and Beautifying the Home Grounds, published by the Alberta Department of Agriculture, 1943

15. MacEwan, Grant, Illustrated History of Western Canadian Agriculture, Saskatoon, Western Producer Prairie Books, 1980, p. 93

7. DESIGN

In this chapter the Agricultural Centre will take on a definite shape. To this point it has been only a series of fragments: images of various activities, of historical buildings and of the site. Now these must be knit together into a coherent whole. The design must, to begin with, meet the requirements of the programme. But it must be more. The Centre must fit into the town sympathetically but with presence. Further, it must have vitality and integrity. The goal is what Louis Kahn called the "immeasurable," a building with a life of its own.

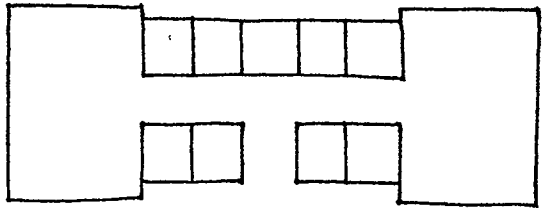
7.1 Alternative Design Concepts

In the preliminary stage, three alternative design concepts were explored to see how they could meet the various requirements of the Centre. Each was evaluated to see whether it could accommodate all of the activities in the programme and ensure the proper relationships among them, as well as meet the needs of access and circulation. Also, possibilities for massing and organization on the site were explored. Finally, they were tested to see how they could handle social gatherings. This was crucial. From the outset the Agri-Centre was conceived as a town-country meeting place, and the design concept had to facilitate this.

The first concept was the "mall." This idea originated with planning officials in Drumheller. They envisaged the Agri-Mart as a building similar to a suburban shopping mall, with the farm equipment dealers as anchor tenants and other suppliers such as hardware stores strung out along a central corridor between them. This concept would certainly work for a commercial centre, but was found to be too restrictive for the expanded Agri-Centre with its offices, museum and display spaces. Most importantly, it could not properly accommodate social activities. As noted in the last chapter, the corridors of shopping malls are designed to deliver shoppers to the stores rather than to serve as meeting places.

The second concept was the "village". This scheme would have buildings of various forms located on a grid of streets. The equipment dealerships would be located at the outer edges of the complex, accessible by car. The inner streets

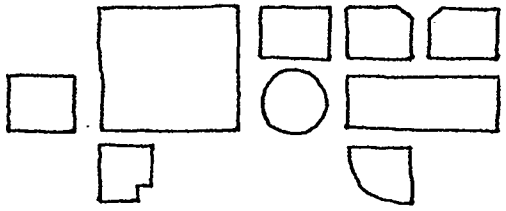
Concept 1: the Mall



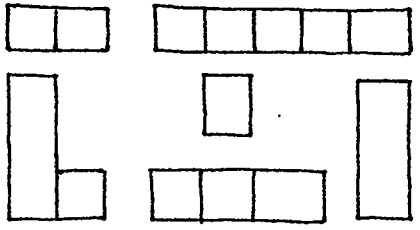
would be for pedestrian use and could be covered to give protection from the weather. The complex would be analogous to a new town. This concept could accommodate the various spaces required and offered flexibility and logical patterns for phasing and growth (by simply expanding the grid). It also gave interesting possibilities for massing. However, again, it was not suitable for the "meeting place" function. The interior streets, designed for circulation, would not be large enough for many of the events contemplated for the Agri-Centre.

In the last concept, the "squares and streets" model, buildings would be grouped around one or more squares or courtyards, linked by streets. This worked on all counts and was developed into the final design. During this process a number of versions were tried (one of which was a hybrid of the "village" concept, with one of the streets widened to form a public meeting space), but all were based on a series of linked squares or courtyards.

Concept 2: The Village



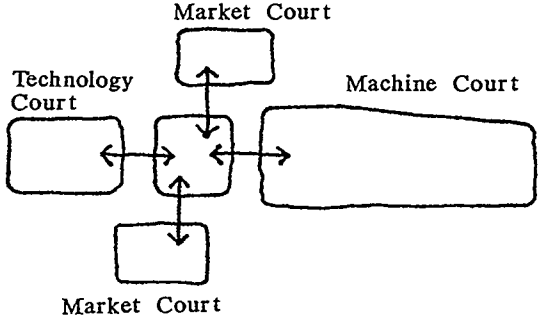
Concept 3: Squares and Streets



7.2 Linked Courtyards

The Centre is organized around five courtyards, each with a different function: the Central Court, the Machine Court to the east, the Technology Court opposite it to the west and two Market Courts to the north and south. All of the other programme spaces are placed around these courts.

At the heart is the enclosed Central Court. This is the focus of the entire complex, linking together all of the other spaces. Here is the place where town and country will meet. There will be markets, public meetings, livestock shows and harvest festivals. In the evening there can be square dances and music



jamborees. Alberta Agriculture could set up displays on farm technology, and the equipment dealers and the museum could show the best of their machines.

The space is 30 m. square. It has entrances 10 m. wide opening onto the Machine Court to the east and the Market Court to the north. This will allow access to large machines for display and, if necessary, trucks for delivery.[1] There are corridors 3.5 m. wide leading out the other two sides to the other two courts. Fronting on the Central Court are a number of retail stores, the restaurant, the museum, the government offices and the business incubator. These form a ring, so that each opens both into the Central Court and also to the outside.

To the east is the largest of the courts: the Machine Court. This is where the practical, day-to-day farm service business will take place. Along the north side are the four farm equipment dealers, each with a building and outdoor display space for machines. The parts supply counters of the dealerships face the Machine Court. On the opposite side of the court is the repair shop which is shared by all of the dealers. There is also space for a hardware store and other farm supply shops such as tire stores. The general supply store, which is part of the central building, opens onto the Machine Court on the west side, and an opening beside it, at a corner of the court, leads to the lumber yard.

As mentioned in Chapter 5 (Site), the grain elevator, feed and fertilizer dealers and other farm service businesses are located along South Railway Avenue. The Machine Court has been placed at the east end of the site so as to be close to these. Thus, farmers will be able to get all of their supplies in one place; if not at the Agricultural Centre itself, then just down the road.

The Technology Court takes its name from the activities around it. On one side is the Homestead Museum, with its collection of the ingenious machines that revolutionized agriculture in the past. On the other side are the shops of the Business Incubator, where the best of modern technology is being exploited. Both have large doors opening onto the court so that the old and new machines can be driven out and displayed together. This is an example of one of the themes of the Agri-Centre: historical continuity. On the east side of the court are the Alberta Agriculture offices, where farmers can learn about the latest in research and techniques. To the west the court opens onto the large fields which will be used for crop tests and demonstrations. The Technology Court is intended as a quiet yard, in contrast to the busy Machine Court. It will be well supplied with benches.

In summer many of the markets, festivals and dances will move out into the Market Courts. There are two of these, one on each side of the Central Court. The one on the north side, which faces South Railway Avenue and downtown, will likely be used the most, but the southern one may become more popular in the late fall, to take advantage of the sun. The Market Courts will have fittings set into the paving for fabric canopies, which can be put up on market days to provide some shade and to give a festive look to the square.

The Market Court and Machine Court meet at the corner. This is to allow some access and views between them while still maintaining them as separate spaces. This is important. There will be times, particularly during harvest in the fall, when farmers will be in a hurry. They will not want to be delayed by an event (perhaps a fruit festival) going on at the same time. The separation of

the courts allows them to go about their business, and the corner connection allows visitors to see the activity.

In Chapter 6 the pattern of traditional markets was described, with shops located around a central space. In the later Agora there were two spaces, each with a separate function. The organization of the Agri-Centre follows this pattern, but with five spaces: one central one and four others around it.

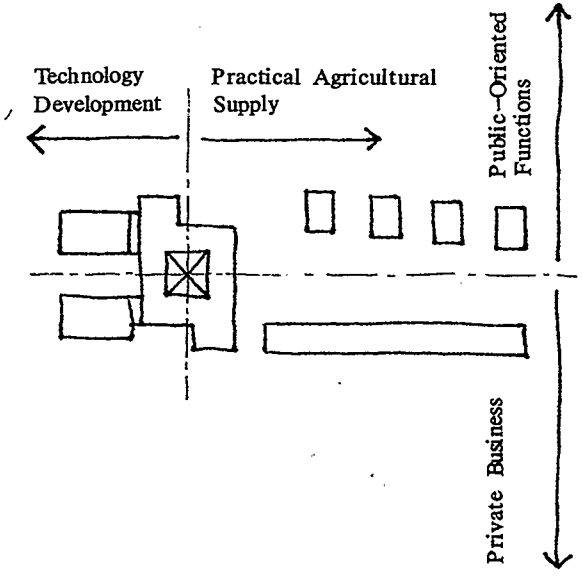
The form of the central building follows the model of the exchange buildings, with an enclosed central space ringed by a number of smaller spaces which open into it.

The overall design also has been influenced by farmstead layout, in the clear separation of functions and the grouping of buildings around distinct yards.

7.3 Functional Divisions

Two major axes run through the complex, crossing at right angles in the central court. These mark the functional divisions of the Centre.

The east - west axis divides the public-oriented functions from the more specialized, business development functions. On the north side, fronting on South Railway Avenue, are the farm equipment dealerships with their rows of colourful machines, the Homestead Museum with its antique machinery contrasting with the new models opposite, and the Market Court. The restaurant opens onto this court as well as a number of shops which will be of general interest such as a bakery or farm crafts store. On the south side of the Centre are the business incubator, hardware stores, consultants' offices, bank, repair shop and the specialized farm supply businesses. The government offices



straddle the axis, with the library (in which the public will be welcome) on the north side.

The north - south axis divides the day-to-day business activities from the high-tech agricultural development ones. On the east is the practical Machine Court. On the west are Alberta Agriculture, the incubator, the museum (the high-tech of the past) and the test and demonstration plots.

7.4 Response to the Site

The Agri-Centre design responds to the site in a number of ways. To begin with, it is long and narrow. Also, it has been planned so as to use the only remarkable feature of the site, the long line of hills along the south side. The Machine Court is located in front of these hills so that they form a back wall. This will define the court, especially before this side is filled in with shops. The dealers' common repair shop, which will be the first and largest of the buildings on this side, is tucked into a notch in one of the hills. It will be necessary to remove some 50 metres of the hill at the west end because of the size of the central building. It is proposed to use this material to fill in a gap in the line of hills behind the Machine Court so as to form a continuous wall.

South Railway Avenue has been realigned beginning at the eastern end of the Centre. Instead of following the line of hills, it has been swung to the north to run parallel to the railway tracks at a distance of 40 metres. This has two advantages. First, it provides room for the implement dealerships. Second, it gives a sight line into the Agri-Centre. The east - west axis of the Centre is

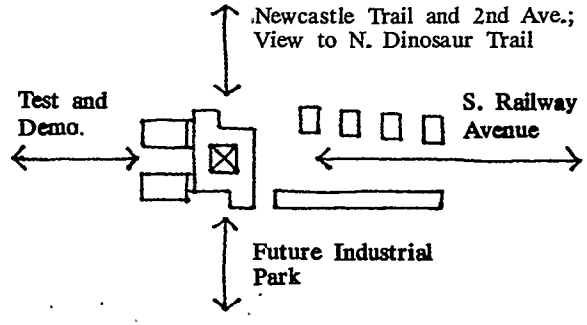
aligned with South Railway Avenue where it swings around the group of hills to the east of the site. Thus, a person driving along this road will get a view directly through the Machine Court at the east face of the main building just after rounding the hills. He will then swing away to the north and pass by the line of dealerships. As noted in Chapter 6, this is a common experience on the prairie. Where the road swings away from the grid one gets changing views of buildings, now directly on and later from the side.

It is also proposed to build a new road across the tracks from the intersection of Newcastle Trail and 2nd Avenue. This is an important intersection and the new road would provide good access to the Centre. Also, the north - south axis of the Centre is lined up with this proposed road. There is another road across the river on this same line, leading to the heavily travelled North Dinosaur Trail, so that this alignment gives another important sight line.

Locating the Agri-Centre along the lines of existing roads integrates it into the geometry of the city, so that it becomes part of the urban fabric. Also, using the sight lines in this way helps to give it a strong presence. As noted in Chapter 5, this site is not highly prominent. Location of the Centre on sight lines will make it stand out.

The space between the realigned South Railway Avenue and the tracks can be used by the dealerships for storage of their machines. This can work to their advantage in two ways. First, it can provide good advertising, since there will be machines on both sides of the road (it will also be an attractive sight: a landscape with tractors and combines). Second, it could save them money. City

Access/Views



officials have indicated that they are willing to sell land to the dealers at favourable rates. The dealers could agree to buy the land for the building and surrounding yard at market price, but pay less for the storage yard by the railway tracks (the larger parcel). Finally, separation of the main storage yard and the repair shop from the dealership building will allow them to put together much tidier displays than the usual.

The crop testing and demonstration plots are located in the large vacant field at the west of the site. This area could also be used for storing and displaying livestock by the 4-H Club or producers' associations. This location will keep the odours of such activities away from the houses to the southeast of the site.

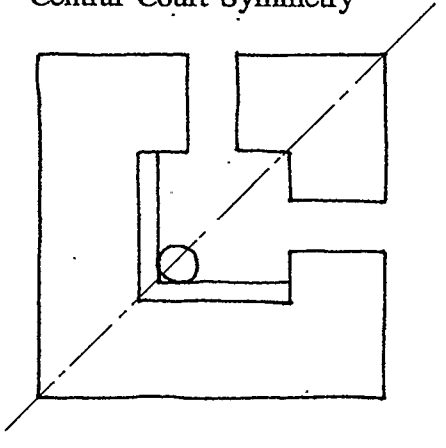
Finally, the major north-south axis of the Centre leads to the large tract of vacant land to the south, which may be used for light industrial purposes in future. A road leading south into this area from the Agri-Centre could serve as the central street of the industrial development, so that the Centre could be the focus for the new development.

7.5 Geometry

The Central Court is square in plan. In this it is unique. All other spaces are rectangular. The use of a square for this space emphasizes its importance as the focus of the Agri-Centre, because it is a primary shape and because it is the only such shape in the complex.

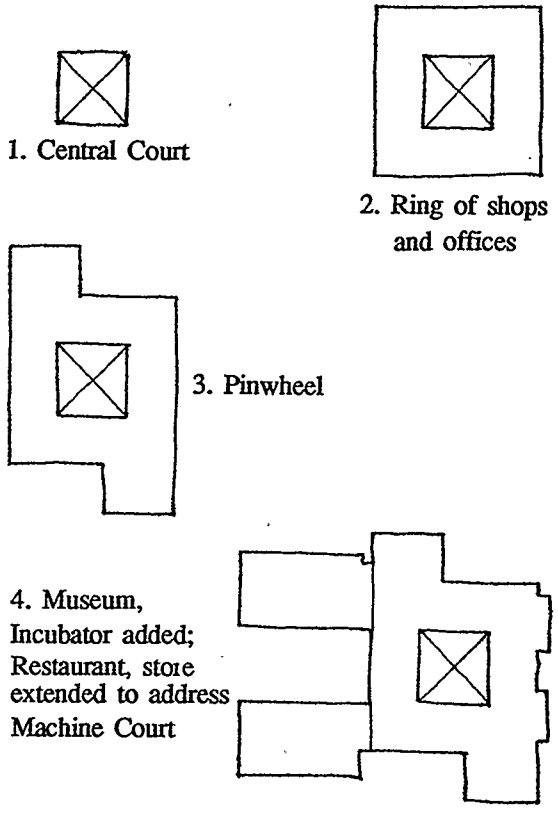
Within this square the plan is symmetrical about the diagonal axis. The major entrances (each 10 m. wide) are centred in the north and east sides,

Central Court Symmetry



opening on to the Market Court and Machine Court respectively. The smaller entrances open through the corners on the south and west sides, leading to the south Market Court and the Technology Court. Balconies run along the south and west sides only to give access to the second floor office and meeting spaces. The circular staircase and elevator are in the corner between them. This diagonal symmetry is intended to give the space a dynamic quality.

The commercial and office spaces are added around this court so as to develop the other courtyards. First, a 20 m. wide space is added around the square. This is then extended at the northwest and southeast corners to form a pinwheel shape which defines two edges of the Market Courts. The museum and incubator workshops are extended to the west to form the Technology Court and, finally, two spaces are extended from the east side to address the Machine Court.



Central Building Plan Geometry

7.6 Building Forms

All of the structures are based on traditional prairie farm buildings. The roof over the central square was inspired by a particularly elegant square barn near Red Deer.[2] It is the tallest building in the Centre, as befits its importance. Also, this roof with its glass-sided lantern, rises over the crossing of the axes of the Centre, so the sight lines discussed above lead to it. At night the lantern will act as a beacon, visible from many parts of town.

The stores, offices and restaurant are housed in sheds which slope away from the central roof below a strip of clerestory windows. The shed shape is

extended to the north for the housewares section of the Homestead Museum and to the south for the bank. Lower sheds again meet these to form additional commercial space. Around the perimeter these roofs overhang to form shaded pedestrian walkways.

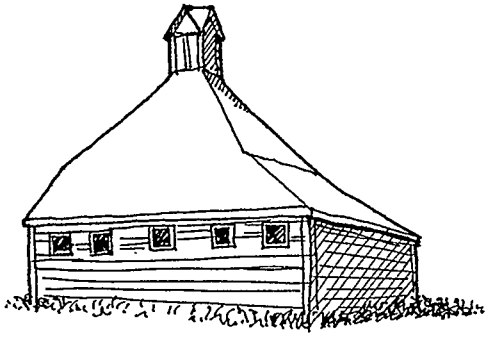
The business incubator shops and the farm equipment displays of the museum are in sheds of the same shape. In each case the sheds have been placed opposite one another, with an enclosed central space. Again, this space is lit by clerestory windows.

The farm equipment dealerships take the shape of gabled barns, with lower roofs around the south and west sides (facing the Machine Court and machinery display areas) for shade.

All buildings have been designed to be built from readily available, off-the-shelf components.

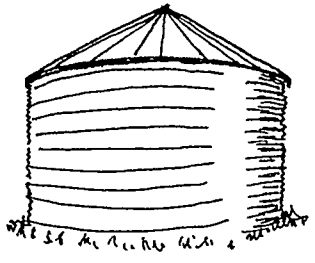
The materials will be typical of those found on farms. They will have standing seam steel roofs. The walls will be of high quality tongue and groove wood siding manufactured so that the joints between boards are revealed by a narrow groove.

Because it is composed of vernacular forms and built of typical materials, the Agricultural Centre will be at home in Drumheller, and particularly in this part of Drumheller.



Barn near Red Deer

Gabled Barn with shed



Grain Bin

7.7 Building Plans

The individual facilities all have easy access to the Central Court and to the

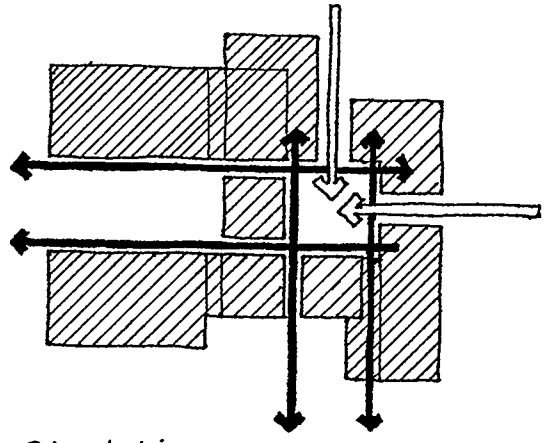
outdoor courts.

The restaurant looks out on the Market Court and the Machine Court so that patrons can watch the activities there. It also opens into the Central Court and the main corridor to the east. Tables can be set up outdoors in summer and in the Central Court in winter. The kitchen is set in the middle of this block so as to be unobtrusive.

The government office block is intended to welcome visitors. The library, with a seating area, faces out onto the public court. The offices are set around the perimeter, leaving the centre free. This space continues the east - west axis through to the Technology Court. The laboratory has a glass wall so that visitors can see the work going on there.

The Business Incubator has offices for both the permanent staff and fledgling enterprises. These are in different areas linked by a corridor. The new businesses have a separate entrance from the south Market Court, which faces toward the future industrial park.

The Business Incubator shops and farm machinery sheds of the museum both have a 10 m. wide central corridor and subsidiary spaces beside (see Drawing No. 4, Floor Plan). In the incubator shops the side spaces can be subdivided. The corridor will remain open for deliveries and circulation. In the museum this space can be used for display. Also, machines may be driven out through the corridor into the Technology Court.



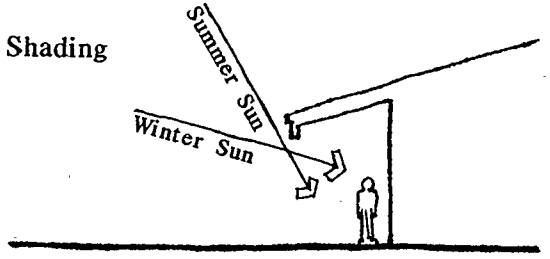
7.8 Response to the Climate

Drumheller is hot in the summer. The Agri-Centre has been designed to help visitors to stay cool. For people outside, the overhanging roofs will provide shade, as well as shelter in the case of rain. Also, the Central Court allows natural ventilation. This space has corridors on all four sides leading to the outside. The two large ones have 7.5 m. wide doors which can be left open in summer to let in the breeze. The lantern above has glass louvres, so that hot air will escape, drawing in cooler air through the doors.

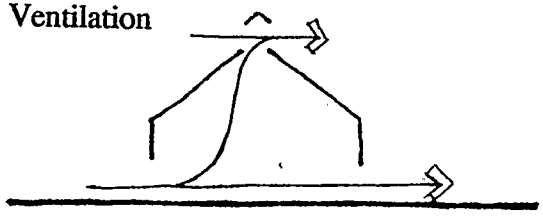
In winter people can stay warm because all of the facilities open into the Central Court, with the exception of the shops around the Machine Court. During the design stage a number of more dis-aggregated schemes were considered. It was decided, however, that this was not the proper approach in a place where winter takes up half of the year (and also because the central space would not work as well as a meeting place).

It is important to take advantage of the sunshine in Drumheller. Natural light is brought in through clerestory windows all around the central building and in the bank, museum and incubator workshop buildings. The restaurant has a glazed gable facing east to catch the morning sun.

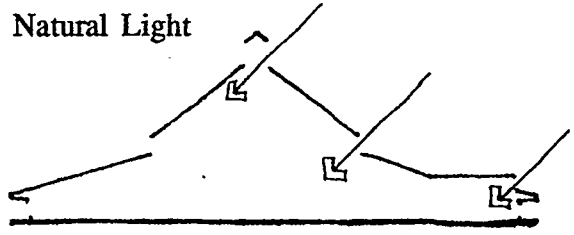
Shading



Natural Ventilation



Natural Light



7.9 Landscape Design

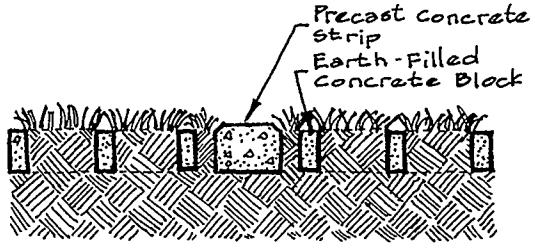
Trees will be planted along the driveways into the Machine, Market and Technology Courts and all around the test plot fields to the west. These will help to define the spaces and provide shelter from the wind, like traditional

shelterbelts. Smaller trees will be planted along the edge of the south Market Court for shade. Lines of shrubs will define the yards of the farm equipment dealers and flowering shrubs can add colour to the Technology Court.

The surfaces of the Market Courts will be of brick set into a grid of concrete strips, representing the prairie grid. This will be tough enough to last under the traffic of people, trucks and farm machines. The grid pattern will be extended to the sidewalks all around the building and along the Machine Court. In the Central Court the material will be the same, again to stand up to heavy use, but the concrete strips will form a radial pattern.

Each equipment dealership has a paved area of plain brick beside the building for the display of tractors (it will hold seven or eight of various sizes). In front of this is a grass lawn for larger machines such as combines, swathers or seeders.

The Technology Court will also have a grid of concrete strips. Between them, open concrete blocks will be set into the ground and filled with earth so that grass can grow. This gives a surface that is green and pleasant to walk on but firm enough to support the heavy machines that will drive on it, especially the steel-wheeled steam tractors from the museum.



7.10 Structure

The structure is not complicated. In the central court steel columns in the walls and 3.5 m. out extend to beams at the underside of the roof. Steel trusses carry the roof decking and transfer the weight of the lantern to the columns.

The shed roofs to the sides are supported by beams fixed to the beams of the central structure. The sheds for the museum and incubator shops have a simple column and beam structure.

7.11 Mechanical Systems

There will be rooftop HVAC units on the south and west office blocks. Ceiling plenum spaces on both floors will carry the supply ducts and the return air. Diffusers in the wall of the Central Court can also supply that space.

On the other sides units will be set into spaces above the kitchen of the restaurant and the hardware store. Fresh air will be drawn in through louvres in the roof.

Washrooms have been located along the corridors leading from the northwest and southeast corners of the Central Court. This gives users the proper degree of privacy and allows all of the supply and waste pipes to be located in a single wall in each case.

7.12 Phasing

The businesses comprising the original Agri-Mart will be built first around the Machine Court: the four dealerships with their repair shop and whichever other agricultural supply businesses choose to do so.

In the next step, it is proposed that the Central Court be built as a free-standing unit with a paved surface below. This would be used for community

gatherings such as markets, fairs and dances. To make it more flexible, pull-down awnings would be attached around the sides so that there could be separate activities under the big roof and the awnings. As more and more events took place the Centre would become popular. The roof would give a physical presence to the Centre. It would be identified with the facility from the start, and the pull-down awnings would hint at future development. Thus, with a minimum of expense, the city could establish a market and a distinct identity for the Agri-Centre. The permanent facilities would then be built around the central square as the demand increased. There would be little risk because the market would be established before the major expense was incurred. As the permanent sheds were built around the central roof their form would carry a memory of the original awnings.

NOTES

1. The driving of trucks into this enclosed space should be kept to a minimum, however, to avoid the obvious air pollution problem.

2. This barn is found about 20 km. south of Red Deer just west of Highway No. 2.

8. SUMMARY AND CONCLUSIONS

It is said that people find solutions to problems according to what they know. Take a problem to a doctor and you will get a prescription for medicine. Take the same problem to a lawyer and you will get a contract or a lawsuit. This architecture student encountered a community in difficulty and prescribed a building as a remedy. Was this the proper approach? The answer lies in the understanding that buildings can be fully appreciated only in the context of the human activities that take place in them. The Agricultural Centre was conceived from the outset as the home of many aspects of farm life, both business and

social, in the Drumheller region. That life is rich and varied, and it led to the concept of a facility with many diverse activities. The programme is intended to address the particular needs and opportunities of the Drumheller area, with a memory of the past and a view to the future.

Drumheller is a community in transition. The pressures of the modern world are forcing changes here, as in farm communities all across the prairies. New technology offers the promise of great productivity, but at the same time financial stresses and international market forces beyond farmers' control are making agriculture a riskier business than ever. On top of this, some of the prairie social traditions are in decline as people leave the farm for the city.

The Agricultural Centre proposed here is intended to help. The services and information available will enable farmers to take advantage of the best of modern techniques in their farm operations. Further, with the advice of the experts they may be able to devise marketing strategies of their own to avoid some of the risks and capitalize on new trends. On the other hand, the Centre will provide a place for both farm and townsfolk to preserve and celebrate the parts of their way of life that have not changed.

The design is intended to ensure that the Centre will carry out all of its purposes. It embodies the concept of a town - country meeting place. It is located in the city close to the central business district and a major park. Further, it is laid out on the site so as to become part of the urban fabric. However, its forms speak of the country. The use of prairie vernacular building forms symbolizes the agricultural nature of the Centre. Thus, it is part of both city and country. Most importantly, at the heart of the Centre is the great

public space. Here is where they will meet. It is hoped that the Drumheller Agricultural Centre could thus become a vital part of the life of the entire community, urban and rural.

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