Business Management Skills for the New Millennium[1]

Leonard Bauer[2] and Bob Burden[3]

[2] Professor Emeritus, Department of Rural Economy, University of Alberta, Edmonton, AB T6G 2P5 Canada Email: len.bauer@ualberta.ca. [3] Serecon Consulting Group, Suite 600, 10665 Jasper Ave., Edmonton, AB T5J 3S9 Canada Email: bburden@compusmart.ab.ca

Take Home Message

As dairy farms, along with other farm businesses move into the 3rd millennium they face the challenge of developing and enhancing managerial skills in ten important areas.

- Negotiating skills and legal awareness.
- Family and business dynamics skills.
- Economic and investment analytical skills.
- Employee relationship skills.
- People transition management.
- Information technology and information management skills.
- Communication and leadership skills.
- Environmental management skills.
- Food safety management skills.
- Agricultural technology management skills.

Introduction

Major trends are carrying us into the 21st century. Like it or not, farm businesses will be fewer in number and larger in size. They will be more specialized in the products they produce. They will be doing so using a rapidly

[1] The authors acknowledge their appreciation to Alberta Agriculture, Food and Rural Development for its permission to use major parts of its study "An Assessment of Business Management Skills Required by the Primary Agri-Industry in 2005" in which the authors played a major role.

evolving technology. They will be selling their production to highly educated and skeptical consumers. They will be operating in a globalized economic environment. They will be operating in the face of increasing concerns about the natural and social environments. They will be operating in a political climate in which they have less influence.

One of the distinguishing features of primary agriculture as we step into the third millennium will be the relationship between farm businesses and other businesses. As they grow in size and specialization, and as new technologies develop farm business will be operating in a much more integrated manor with those who hold proprietary rights. There may be more 'customized' products produced into target markets. For reasons of risk management and market opportunity closer relationships between farm businesses and input suppliers, and with processors are likely to develop.

What will be the farm management requirements as Alberta's Primary Agriculture expands into the 21st century? Probably the requirements will be not much different from those considered at least important, if not essential, during the latter decades of the 20th century. The consequences for ignoring these requirements may however be much more severe because of the greater involvement of capital and human resources.

▪ Management Issues

This paper raises four major management issues needing attention in anticipation of an expanding primary agricultural sector. The important issues are (1) the people transition issues, (2) the business development issues, (3) the business operation issues and (4) the human resource issues.

People Transition Management Issues

Invariably expansion brings with it the transition of people. Some farm businesses will grow in size. Others will remain as they are. Some will go out of business. There will also be newcomers into the industry.

Those leaving (or remaining at their status quo)

It is likely the enterprises leaving the industry are owned and managed by individuals who are older and nearing retirement. These are enterprises operating in a less than modern situation requiring modernizing injections of capital (machinery, equipment and technology) which the owners are unwilling or unable to make. Also included in this category are younger owner/managers who see the expansion and modernization too stressful for them to undertake. Stated positively, they see better opportunities off the farm. Some of the individuals leaving the farming industry as owners and managers may

Table 1. Present Alberta Dairy Situation – Spring 1998

Herd Size Category	Cows per Farm	Workers per Farm	Investment Per Cow	Total Farms	Total Cows	Total Workers	#Total Investment
0-25 Cows	18	1	17,000	116	2031	116	34.5
26-75 Cows	50	2	17,000	584	29372	1168	499.3
76-125 Cows	97	3	18,500	271	26361	813	487.7
126-225 Cows	166	4	20,000	95	15726	380	314.5
226-350 Cows	280	5	20,000	12	3361	60	67.2
351-500 Cows	371	6	20,000	2	741	12	14.8
501-1000 Cows	800	10	20,000	0	0	0	0.0
Total Provincial				1080	77592	2549	1418.1
Average per					71.8	2.4	1.3

in millions of dollars

nonetheless, become part of the skilled agricultural labour pool. Others may require retraining for alternative employment, or planning and counseling for retirement.

Those staying in farming (and expanding)

It is likely that the individuals seriously expanding their enterprises are younger than are those choosing to leave. These individuals are willing to invest in the required capital (machinery, equipment and technology). They may or may not have well-honed management skills. Planning the intergenerational business transfer and the associated financing will be continuing issues for this category, especially as related to non-farming children. This group may need management training and special managerial services. In the end of course, the survivors will be those who have developed the needed managerial capabilities.

Those entering farming

New entrants are likely younger and probably fairly well educated. They are quite willing to make the needed investment in capital (machinery, equipment and technology). They will likely have well-honed general management skills and may bring non-traditional capital and non-traditional values with them. Those entering from outside the mainstream of agriculture may be in need of technical agricultural knowledge. Some new entrants, as in the case of the dairy industry, may be from offshore.

As the new millennium approaches the dairy industry in Alberta faces major challenges by way of a changing structure. Estimates based on interviews of dairy industry representatives suggest an overall reduction of dairy enterprises in Alberta from a present level of 1080 farms to somewhere between 866 farms under scenario 1, the modest scenario, and 986 farms under the more aggressive scenario 2. (Tables 2a and 3a provide the details). Most of the farms leaving the industry (an estimated 175 farms to 373 farms) will be in the smaller size category of less than 75 head. These farms face the problems of winding up the business including retirement planning, investment of net sale proceeds, selecting tax management strategies and, in some cases, choosing an alternative career.

Most of the growth in dairy farm business numbers is expected in the 75 to 225 head categories (an estimated 73 to 138 farms) as a result of existing operations increasing their business size. The size category of over 225 head is also expected to grow by 7 to 21 farms. We might expect at least some of these to be new entrants into the industry. Regardless of whether growth comes from existing farm expansion or new entrants, these farms will face the challenges of business development.

Table 2. Scenario 1: Moderate Projections to 2005 – Alberta Dairy Situation

Herd Size Category	%Change In Farms	Total Farms	Total Cows	Total Workers	#Total Investment
0-25 Cows	-25.0%	87	1523	87	25.9
26-75 Cows	-25.0%	438	22029	876	374.5
76-125 Cows	20.0%	325	31633	976	585.2
126-225	20.0%	114	18871	456	377.4
226-350	20.0%	14	4033	72	80.7
351-500		2	741	12	14.8
501-1000		5	4000	50	80.0
Total Provincial		986	82831	2529	1538.5
Average per Farm			84.0	2.6	1.6

in millions of dollars

Table 2a. Scenario 1: Projected Change in Structure – 2005 vs. Present

Herd Size Category	Change in Farms		Change in Head		#Change in Investment		Change in Workers	
0-25	-29		-508		-8.6		-29	
26-75	-146	-175	-7,343	-7,851	-124.8	-133.5	-292	-321
76-125	54		5,272		97.5		163	
126-225	19	73	3,145	8,417	62.9	160.4	76	239
226-350	2		672		13.4		12	
351-500	0		0		0		0	
501-1000	5	7	4,000	4,672	80.0	93.4	50	62
Total		-94		5,239		120.4		-20

in millions of dollars

Table 3. Scenario 2: Aggressive Projections to 2005 – Alberta Dairy Situation

Herd Size Category	% Change In Farms	Total Farms	Total Cows	Total Workers	#Total Investment
0-25	-70.0%	35	609	35	10.4
26-75	-50.0%	292	14,686	584	249.7
76-125	35.0%	366	35,587	1098	658.4
126-225	45.0%	138	22,803	551	456.1
226-350	60.0%	19	5,378	96	107.6
351-500		6	2,223	36	44.5
501-1000		10	8,000	100	160.0
Total Provincial		866	89,286	2499	1686.5
Average per Farm			103.1	2.9	1.9

in millions of dollars

Table 3a. Scenario 2: Projected Change in Structure – 2005 vs. Present

Herd Size Category	Change in Farms		Change in Head		#Change in Investment		Change in Workers	
0-25	-81		-1,422		-24.2		-81	
26-75	-292	-373	-14,686	-16,108	-249.7	-273.8	-584	-665
76-125	95		9,226		170.7		285	
126-225	43	138	7,077	16,303	141.5	312.2	171	456
226-350	7		2,017		40.3		36	
351-500	4		1,482		29.6		24	
501-1000	10	21	8,000	11,499	160.0	230.0	100	160
Total		-214		11,694		268.4		-50

in millions of dollars

Business Development Issues

Opportunities invariably present themselves during the process of change, and it is entrepreneurs who identify these opportunities. Thus, entrepreneurial attitudes play a critical role in an expanding industry. Entrepreneurs are individuals with the aptitude, attitude and ability to create and build things of value. Entrepreneurial attitudes are probably innate, however attitudes and ability can be shaped by experience, education and training. Entrepreneurship is the process of creating or seizing an opportunity and pursuing it regardless of the resources currently controlled. Entrepreneurship involves the definition, creation and distribution of value and benefits to individuals, groups, organization and society. Entrepreneurship is very rarely a get-rich-quick proposition; rather, it is one of building long-term valuable and durable cash flow streams. Entrepreneurship is a central component of successful business development.

Business development presupposes “doing the right thing”. It makes little sense to develop a business that contemplates the production of goods and services lacking economic potential. Timmons, a student of new ventures at Harvard University, estimates that almost a quarter of the new business startups (23.7 %) failed within the first 2 years. Over half (51.3 %) failed within the first 4 years and nearly two-thirds (62.7 %) within the first 6 years. Economic factors account for almost half the failures (47.4 %) and financial problems for over one-third (38.4 %) more. Among the remaining reasons are inexperience (7.1 %), owner neglect (3.4 %) and other unspecified reasons (3.7 %). While Timmons’s percentage findings about new ventures cannot be directly generalized to farm businesses one must be cognizant of the potential of failure, i.e. of not doing the right things. Economic troubles are very much the result of being in a non-viable business. Financial troubles, not unrelated to economic difficulties, result from insufficient cash flow to pay the bills.

Within the context of business development business owners must be concerned with (1) the economic viability of the enterprise, (2) thinking and planning in a strategic sense, (3) setting and communicating business goals and (4) family and group dynamics.

Economic viability

Economic evaluation of the business’s potential is crucial. What are the likely cash flows? What are their timings? How risky are they? How will the business be financed? Businesses fail because of economics.

While vision, positive attitudes, enthusiasm and drive are important to business development; new business startups and existing business expansions require

thorough economic analysis. This is especially important in enterprises requiring large amounts of financial resources, which is the present case as agriculture moves into the coming millennium. Economic analysis of new and expanding enterprises requires the (1) estimation of likely cash flows, (2) selection of discount rates appropriately adjusted for risk and (3) calculation of net present values upon which sound decisions for investment can be based. Only those investment options promising positive net present values should be undertaken. And only those options passing this test should be candidates for attracting debt or equity financing. One needs only to think back to the 1980s and the so-called credit crisis. While some of the farm business failures of that era could be attributed to sharp rises in floating interest rates the majority of the failures were related to injudicious investments, i.e. investment in over-priced land and other resources. Economic analysis (investment analysis) is a specialized activity that needs to be better developed as a professional service provided to the agricultural community. This is especially the case as the agri-food industry contemplates its place in the next century.

The changing numbers of dairy farm businesses outlined above (again refer to Tables 1, 2 and 3) imply major amounts of potential capital investment and disinvestment. The farms expected to undergo expansion or new business startup will require a total of from 253.9 million (scenario 1) to 542.2 million dollars (scenario 2) with a sizable portion of the investment being for the acquisition of quota. The question to be asked by those contemplating expansion – or new entry – is whether the capital outlay is justified in terms of the anticipated revenue from dairy production. The answer requires considerable diligence in estimating the cash flows specific to the particular business and in choosing a discount rate that reasonably reflects the degree of risk inherent in dairy farming, especially in regard to international trade considerations.

The farms leaving the dairy industry will undergo disinvestment in agriculture to the tune of 133.5 million (scenario 1) to 273.8 million dollars (scenario 2). Business windup unless a forced windup is in itself an economic choice requiring much of the same analysis as does business expansion. In other words the value of capital to be recovered by winding up is greater than what that capital would be expected to earn in its present form, i.e. in dairy farming. The further challenge will be in finding good investment options for capital recovered from the liquidated dairy business.

Strategic thinking

Strategy refers to the positioning of the business so that opportunities can be seized upon when encountered and disasters avoided when problems arise. How is the business positioned to seize opportunities and to ward off threats? Obviously, strategic thinking is a key element in business development.

Farm businesses are no longer able to isolate themselves to only what goes on within the farm business itself, i.e. within the farm fence-lines[2]. Managing within the fence-lines is, of course, as important as ever - possibly even more so. But attention to industry trends and global economic events to keep the farm business competitive in the marketplace is of strategic importance.

Environmental sensitivity, whether real or perceived, is of particular concern in intensive agriculture and expanding farm businesses need to develop strategies to deal with issues that will inevitably arise. Similarly, consumers are health and food safety conscious and often skeptical of technological developments. Also it is important to recognize that various groups of consumers have different needs to be met, for example quality characteristics of pork and beef, suggesting opportunities for target marketing. Strategic thinking on the part of farm managers dealing with food safety issues is indicated, regardless of whether consumer concerns are justified or not. The argument for strategic awareness extends to other issues such as animal welfare, etc.

Not only is the requirement for being strategically aware of the business's position in the industry more critical, it may also be easier. It is easier because of the information age and the availability of information technology in virtually all jurisdictions of Canada and around the world. But the rapid and widespread availability of information is double-edged. Those who take advantage of the opportunity presented by the information technology have a competitive edge. Those who do not will find themselves lagging and not well positioned for success.

But the widespread availability of information technology raises the counter possibility of "information pollution". As has always been the case, the premium will be paid to businesses that are able to sort out relevant information from irrelevant noise.

Goal setting

Business owners are charged with the responsibility of setting the direction of the enterprise. Essentially this is expressed in the goals towards which management must work. Because of conflicts not all goals can be attained to the desired extent. Goals are a mix of profit, growth and survivability. Some people place greater emphasis on saving for the future, others have higher priority for current income[3]. Goals change with age. A young person just

[2] In truth, they have not been able to be isolated from the world around them for a long time, but the impact of the economic, social and natural environments at the turn of the century is increasingly intense.

[3] The conflict between current consumption and reinvestment in the business, to enjoy future consumption, is reflected in goals. Some people place high emphasis upon present consumption - the prodigal son as one extreme. Others care little for current consumption and reinvest for the

embarking on a career has a different set of priorities than someone considering retirement.

Multiple ownership brings in another layer of complication. A young family has a different need for consumable income than does a couple nearing retirement. A mix of family members at different life stages is bound to create tension. The presence of non-farming family members in the business ownership role can complicate things even further. Unless goals are mutually agreed to, and clearly articulated and understood this can be a recipe for disaster. Skill in dealing with family and the dynamics of the business is important.

Family and business dynamics

The main form of business ownership and operation in primary agriculture has been the family farm. Agricultural capital and managerial expertise reside within the families of the farming community. For this reason family businesses are likely to predominate into the foreseeable future. Whether the organization is a proprietorship, partnership, corporation or one of a multitude of other arrangements and combinations, it is the closeness of ownership and management in a family business that is significant. It is important for the owners to be informed on the issues and implications, and to be in general agreement if the business is to function harmoniously.

Proprietorships have been the main form of farm business ownership in the concluding century. This is the epitome of the rugged individualist, the sole decision-maker[4]. Will this form persist as we move forward into the future? Because of the required scale of business and the resulting capital and human resources required, we will probably see a decline in the proportion of farm businesses operating under this form of ownership.

The decision as to which ownership and operating form is most appropriate in a particular situation can become rather complex. This is especially so with diversity in the composition of the shareholder (stakeholder) body which may have non-active business participants in its membership. While the drafting of legal documents requires the processional help of lawyers and accountants the owners (stakeholders) themselves need to be well informed about the

future - the miser as the other extreme. Current consumption attributes may even be present in an investment activity. Consider the purchase of machinery or equipment to provide enjoyment or prestige beyond pure business requirements. The miser presumably gets some enjoyment, a form of psychic consumption, from his hoard of money.

[4] Observation suggests that a team causes the business to grow while the sole entrepreneur makes a living. (Timmons)

advantages, disadvantages and personal implications of the potential arrangements being considered[5].

Operating Relationships

The perspective of business development was to "do the right things". Business operations, as the complement to business development, must be concerned "with doing things right". Within the context of doing things right operations management must ensure (1) the presence of sound technical knowledge, (2) that appropriate operating arrangements are entered into (3) there is accountability to business owners, and (4) information management.

Sound technical knowledge

The expanding farming enterprises, whether in pork, beef, dairy, poultry, cereals and oilseeds or in horticulture, will be involved to varying degrees with hi-tech agriculture. The operations manager must first ensure that the particular piece of technology fits profitably into the operation. Secondly, he or she must ensure that the human and financial resources are adequate in its operation.

The structural change expected in the dairy industry means there will be fewer farms. Further more they will be larger. Currently farm size is about 72 cows. Under the moderate scenario (scenario 1) this is expected to grow to 84 cows. The aggressive scenario (scenario 2) would see 104 cows on the average dairy farm. Technology and mechanization are, at least in part, the driving forces behind the increase in herd size. As shown in Tables 2a and 3a, the growth comes about from small farms disappearing and medium to large sized farms expanding. It is estimated that Herd numbers will decline by as much as 7851 to 16108 head, depending upon the moderate or aggressive scenarios chosen. Medium sized farms will add in total from 8,417 (scenario 1) to 16,303 head (scenario 2). Larger sized farms, those with more than 225 head will add from 4,672 (scenario 1) to 11,499 head (scenario 2) In total a net increase of 5,239 to 11,694 head is expected in the Province of Alberta.

Appropriate Operating Arrangements

The advanced technology being applied in production agriculture is expensive and frequently involves proprietary rights. As a result we will likely see a larger proportion of production under contract arrangements with technology firms. Furthermore risk management strategies may require contractual arrangements with processing firms or marketing firms. As a consequence, negotiating skills will be important. The advice and services of professionals, i.e. lawyers, accountants and management consultants will play an increased role.

[5] Remember the old proverb: accountants can tell you what went wrong and lawyers can tell you who is to blame, but neither one should brought in too early in the planning of the enterprise.

Accountability

Movement from proprietorships to multi-owner business forms with some of the owners not actively involved in the operation of the business brings a new focus of accountability to stakeholders. This is additional to internal business technical and financial information the systems vital to managing the operation.

Information management

Information collection must be quick, streamlined and suited to the situation. Information may be internal to the business, such as financial accounting systems and electronic monitoring of production activities, [e.g. location specific crop yields or individual feeding in response to the animal's production potential]. Information may also be external to the business, such as market trends and price signals. An ability to collect, process and utilize relevant information will be an essential ingredient of effective management of the operation.

Employee Relationships

Managing the human resources of the enterprise needs to receive emphasis in terms of (1) skill, ability, leadership and motivation and (2) remuneration, regulation and benefits. The agricultural economy is part of the general economy, and so farm businesses will continue to be in competition with the rest of the economy regarding the supply of labour. This is particularly important in a reasonably buoyant economy.

Skill, ability, leadership and motivation

According to the Phase I report the overall number of workers in primary production is expected to decline as the industry modernizes and expands. The quality of the workforce and level of skills required can be expected to increase. The nature of farm businesses requires having employees with the ability to 'manage' themselves, as opposed to working on a production or assembly line. Leadership on the part of the business manager will be essential.

The requirement for a quality workforce, whether hired or family, is particularly important in light of the technological developments taking place across virtually all of facets of agricultural production. Skilled workers with self-management abilities generally have alternatives. If they are to be attracted and retained in the primary agricultural industry they will have to see a future for themselves and their families. The notion of a "hired man" who can't get a job elsewhere is no longer a suitable candidate for employment in production agriculture.

Remuneration, regulation and benefits

Remuneration in the primary agricultural sector must increasingly be competitive with other industries. Reasonable hours of work under safe working conditions and competitively rewarded will be the rule. Thus far farmers have been excluded from much of the legislation and regulation as they generally affect workers. This exclusion has been a mixed blessing to the industry. On the one hand production agriculture has not needed to deal with the restrictions that pervade the workplaces of other industries. On the other hand, it may become increasingly more difficult to attract and retain quality farm workers. This will become particularly acute in the high intensity segments of the industry.

Although the workforce actively employed in dairy production is expected to decline over the next decade, by as much as 20 (scenario 1) to 50 (scenario 2) person years, the skill levels required will increase. These net reductions are composed of a reduction of workers in the farms with 75 cows or less and an increase on those farms with more than 75 cows. Details of the projected changes are found in Tables 2 and 2a. The moderate scenario (scenario 1) anticipates a reduction of 321 person years in the smaller size category while under the aggressive scenario (scenario 2) this could be as many as 665 person years. These reductions in workers is offset by the addition, in the medium and large size categories, of 301 person years (scenario 1) to 616 person years (scenario 2). Of course skilled workers from dairy farms disappearing are likely candidates for employment in those expanding. Nevertheless it is important to bear in mind that the added workers will be more skilled and have other employment alternatives. This means dairy farms will need to compete with other industries in terms of remuneration, working conditions and benefits.

▪ Conclusions

Summary

The purpose of this study is to provide input into the process of anticipating management development needs required by the primary agri-food industry as it positions itself for the 21st century. This study is the second phase of the overall project, and as such builds on the first phase which examined likely structural changes in the primary sector.

Four major issues were identified; namely (1) transition issues, (2) business development issues, (3) business operation issues and (4) employee relationships.

Farm businesses will continue to undergo change as the new millennium approaches. Some will face the decision of whether to modernize and probably expand or to retire or seek an alternative career. Those who decide retirement or an alternative career face the challenges of an orderly business windup and re-establishment. Arriving at the decision to leave and the details of re-establishment or retirement will take considerable planning and will likely involve both economic and emotional dimensions.

Those deciding to modernize and expand their business or deciding to establish a new business in the industry will be faced with the challenges of developing the business. A critical and frequently neglected component of business development is that of fundamental investment analysis to ascertain the economic viability of the venture. Establishing and communicating business goals and developing a strategy for success within the dynamic interaction among the business stakeholders (family dynamics) will also need attention.

One of the distinguishing features of primary agriculture as the new millennium approaches will be the relationship between farm businesses and other businesses. As they grow in size and specialization, and as new technologies develop farm business will be operating in a much more integrated manner with those who hold proprietary rights. For reasons of risk management and market opportunity closer relationships between farm businesses and input suppliers, and between processors are likely to develop. The managerial requirement will be for farm businesses to negotiate beneficial arrangements with their partners in the broader agricultural industry.

While the number of persons employed in primary agricultural production is expected to decrease marginally, the skill level required of the workforce will be greater. At the same time farm businesses will be competing with other businesses in the economy for their workers. While wages are one dimension of attracting employees, so are working conditions, opportunities for career development and benefits. Compliance with health and safety regulations may become a necessity in the climate of competition.

The managerial requirements of the coming century are not dramatically different from those needed in the recent past. But because of size and complexity the opportunity for farm businesses to survive and flourish without strong business skills will be much more limited.

Considerations and Challenges

As we reflect on the major issues we identify a number of challenges facing the players in the agri-food industry, namely (1) the farm businesses, (2) the private sector and the public sectors of government, colleges and universities.

The major challenges facing farm businesses will be in the development and operation of viable and thriving entities. Farm managers will be continually challenged to develop and maintain well-honed skills both within themselves and within their employees. They will face challenges in forging operating relationships with others in the broader agricultural industry and perhaps in seeing themselves as part of the bigger picture.

The private sector has traditionally been involved in the farm community providing professional services in accounting, law, insurance and banking. In more recent times the private sector has also been involved in management consulting and training. Obviously, the opportunities for providing professional services will continue as we move into the next century. The private sector faces the continuing challenge of providing the traditional services particularly in the area of operating arrangements. Providing services in developing sound business plans for expanding and start-up farm businesses, including sound economic and investment analysis is an important area of concentration for the private sector.

A continuing challenge to farming businesses will be in deciding when to call in professional help, [e.g. the lawyer, the nutritionist or the economic analyst], and when to do have the required expertise within the business. This presents a challenge, as well to training agencies. Should they train farm managers in highly specialized infrequently used activities? Or should they provide training on the subject of when do you need professional help?

The proportion of public sector involvement compared to private sector involvement in professional farm management work has declined in the past decade. Nonetheless the public sector involvement, especially in farm management training and in coordination of farm management programs fulfills important needs. The challenge, especially to government, is to continue operating these programs efficiently and effectively.

The public sector has a long tradition of providing formal training and education, and research. As the number of people employed in primary agricultural production declines the challenge, especially to colleges, will be to train and educate the kinds of individuals with the appropriate skill sets. The challenge to universities is in graduating individuals with managerial and analytical skills to assume roles in providing private and public sector services and in some cases direct management of farming businesses.

The most important challenge is for the private and public sectors of government, colleges and universities to work together in healthy competition and alliances in providing relevant management services to the primary agricultural sector.

Discussion Points

A number of issues and challenges have been raised in the foregoing study. These are summarized below as a set of statements capturing the major discussion points. We invite readers to reflect on these points as they review this report.

Negotiating skills and legal awareness

Farm managers in the decade ahead will be involved in numerous contractual arrangements with input suppliers (e.g. genetics and biotechnology companies, chemical companies, banks, franchise holders) and product processors. This will require an upgrading of skills in evaluating potential arrangements and in negotiating favourable terms.

The challenge to the farm business is to enter into appropriate arrangements and to ensure that agreements are properly understood and written appropriately to mitigate potential problems and liabilities.

Family and business dynamics skills

In the decade ahead the majority of farm businesses will likely be controlled and operated as family businesses. These family businesses will also produce the majority of the agricultural production. Because of the amounts of capital involved not all of the family members with a financial (and perhaps an emotional) interest in the business will be actively involved in operating the business. Furthermore there will be intergenerational differences in business goals. These differences will invariably lead to stress within the family. This will require an upgrading of skills within farm businesses for dealing with family and group dynamics and conflict resolutions.

The challenge to farm businesses is to develop proper ownership structures to encourage smoothly functioning operations, and also to develop appreciation and skill managing within a family business environment.

Economic and investment analytical skills

Opportunities present themselves during periods of change, but so do the risks of failure. While vision and enthusiasm are important ingredients in business development sound economic and investment analysis is required before undertaking contemplated enterprise expansions.

The farm business challenge is to obtain sound economic and investment analysis as part of the business development and business planning process.

Employee relationship skills

Attracting and retaining a highly skilled labour force in primary agriculture will be an important challenge in the decade ahead. Potential employees in primary agriculture will have opportunities in other sectors, for example in oil and gas, in forestry or in manufacturing. Consequently, employers in primary agriculture will have to compete within the general economy on the basis of salary, working conditions, health and safety regulations, etc. Participation in programs such as Workers Compensation should be seen in the context of liability risk management.

The farm business challenge is to design competitive employee/employer relationships.

People transition management

As the primary agricultural sector continues to adjust there will be a transition of people. Some people will be leaving the industry, particularly those nearing retirement age or with better opportunities out of the industry. Others, with the capability and resources, will be increasing their size of enterprise. There will also be new entrants into the industry, especially into the intensive livestock sectors.

The challenge to the individual farm business is to determine its economic viability and future within the farming industry relative to other opportunities.

Information technology and information management

The ability to collect, process and utilize relevant information will continue to be an essential ingredient of effective management, for being strategically aware of the business' position in the industry. Strategic and operational management are facilitated by the information age, and the availability of information technology in virtually all jurisdictions around the world. Those that do not take advantage will find themselves lagging and not as well positioned for success. But the widespread availability of information technology raises the counter possibility, that of "information pollution". As has always been the case, the premium will be paid to those who are able to sort out relevant information from irrelevant noise.

The challenge to the individual farm business is to design efficient methods for managing information sources and requirements.

Communication and leadership skills

The ability to communicate and lead is essential for managers and obviously this will be even more important into the next century. Communication skills

are essential in providing leadership within the business, for the business to function within the industry and community, and for establishing working relationships with neighbors and the public.

The challenge to the individual farm business is to develop effective communication and leadership skills within the business, with associated businesses and with the public.

Environmental management skills

Concern for the environment has been a popular topic of the last decade and will receive continued and perhaps enhanced attention into the 21st century. Primary agricultural producers will be required to think strategically about environmental issues. This will be critical not only in the expanding intensive livestock sectors. It will also require attention in the crop production area, especially with the use of chemical fertilizers and pesticides and certain cultivation practices.

The individual farm business challenge is to develop, and be seen as having developed an economically viable and environmentally sustainable farming system.

Food safety management skills

Consumers are vitally concerned with food safety and often with the technology used to produce it. Consumer concern, sometimes real and sometimes only perceived, is not likely to diminish as we move into the next century. As with environmental issues, primary agricultural producers will be required to think strategically about food safety matters.

The individual farm business challenge is to develop and communicate, through its organizations, to consumers and others effective food safety strategies through compliance with regulations and participation in industry programs.

Agricultural technology management skills

An expanding primary agricultural industry is driven, to a considerable extent, by technology. Examples include advances in animal genetics, use of highly selective herbicides and the like. The technology is generally expensive and frequently conducive to larger scale production systems. Margins for error are narrow, i.e. specification for application are generally very precise.

The individual farm business challenge is to evaluate, and where warranted, adopt the technology. Adoption will often involve forming

proper legal contracts and arrangements, acquiring skilled workers and instituting appropriate monitoring systems.

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