

Implementation of Strategic Planning on Farm Businesses: Lessons from Danish projects

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The article contains a survey and review of the Danish projects directed the development and implementation of strategic management on farm firms. The aim of strategic management in agriculture, formulation and implementation of the long-term farm strategy and the functioning of research, consultancy and learning are the key issues addressed in the article

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1. Introduction

In the recent decades we have been working with the development and implementation of strategic planning in Danish agricultural research and consultancy. In this article we will evaluate the obtained experiences and draw some important lessons. The content of the article focus on the questions:

- What is the aim of strategic management in agriculture
- How to develop the vision and long-term strategy on business farms
- How to implement the formulated business strategy
- How can research assists in the development and implementation of strategic planning
- How can the advisory service deliver strategic consultancy to farm managers

- What is the function of learning in strategic management

The article is organised as follows; firstly, we shortly describe the content of the strategy projects carried out in Danish agriculture during the last 20 years; secondly, we explain how each of the above questions actually has been handled in the projects; and thirdly, we deduce the lessons that can be revealed from the Danish strategy projects. Our writings have been encouraged by the very fact that other agricultural participants involved in the strategic management game may learn something from these Danish experiences.

2. The Danish strategy projects in agriculture

The first strategy project was initiated in 1984 by the Danish Research Institute of Food Economics (FOI) and carried out in cooperation with a local agricultural consultancy centre at the Island of Bornholm (Christensen & Pedersen, 1987). The project was part of a larger advisory programme as shown in figure 1, which was implemented during the years from 1982 to 1986. The activities included in the strategic planning exercise, as shown in the right of figure 1, can be summarized as 1) Description of the farm development so far and the associated environmental conditions; 2) Setting objectives through a GAB-analysis; 3) Formulating alternative strategies; 4) Evaluating alternative strategies for the farm; and 6) Drawing up the plans needed to implement the strategy. In total did 60 primarily younger farmers with an above average production participate in the advisory programme and nearly all of these farmers went through the strategic planning exercise.

This strategy project will be called the FOI project in the rest of the paper.

In the late eighties the Danish Agricultural Advisory Centre (DAAC), a national advisory centre for agriculture, started to develop its own strategic consultancy tools to farm families. The first project was Modular Strategic Planning that was build up by a number of modules whereas the majority were considered optional (Jeppesen, 1990). In the early nineties Modular Strategic Planning has been fundamentally changed by DAAC. In cooperation with local advisers and farmers a new planning system – called the long-term farm management advisory programme – was developed as shown in figure 2 (Jensen et al., 1993 and Sejersen & Kristensen, 1993). The model, which has farm management as its centre, should illustrate that long-term planning is an ongoing process.

The boxes in figure 2 indicate the activities where a separate report to the farm family has to be completed by the local advisers. It was recommended that the structure of the report was the same for each of the considered activity, whereas the content and size of the individual report should depend on the specific situation and needs. The

Current activities (Short-term planning)		Yearly activities (Tactical planning)	Ad hoc activities (Strategic planning)
Anno (n-1)		Budgeting (n) - yearly - quarterly	* Description and analyses of the farm up the present
4 th quarter			* Description and analyses of environmental conditions
Anno (n)	- Status 4 th budget control	Annual accounts (n-1)	* Long-term survey of financial yields and expenses
1 st quarter			* Planning of the replacements for the next 5-year period
2 nd quarter	- 1 st budget control	Budget (n+1) - yearly - quarterly	* Goal-seeking regarding interests, earnings, liquidity position and flexibility
	- 2 nd budget control		
3 rd quarter	- 3 rd budget control		* An overall budget for the economic development based on a passive forecast (Gap Analysis)
	- 4 th budget control		* Development and description of alternative strategies
4 th quarter	- Status 4 th budget control	Annual accounts (n)	* Calculation and evaluation of the profitability of the different strategies for rearrangement and development
Anno (n+1)			* Long-term budgets for the alternative strategies developed, flexibility and preparedness
1 st quarter	- 1 st budget control ↓		

Figure 1. The developed framework for economic and strategic planning

Source: Christensen & Pedersen (1987).

“objectives” box includes two tasks; one where the visions of the farm family is revealed and one where a more formal statement of separate objectives are formulated by use of words and figures. Activities considered in the “Farm analysis” box consist

of a description of the farm family and a SWOT-analysis, i.e. the Strong and Weak points of the farm and the Opportunities and Threats of the surroundings. The box “Alternatives” included in fact three decision tasks; firstly to formulate alternative plans; secondly to evaluate the different plans; and thirdly to choose the plan that fulfils the stated objectives in the best possible way. The objective of the “plan” box is to formulate an action plan based on the selected alternative. By stating who is doing what, how and when the action plan was supposed to be very concrete. The last box “Evaluation” contained the preparation of a status report describing the obtained farm results during the last 12 months. The evaluation report was assumed to be a new starting point for the next journey through the long-term planning process.

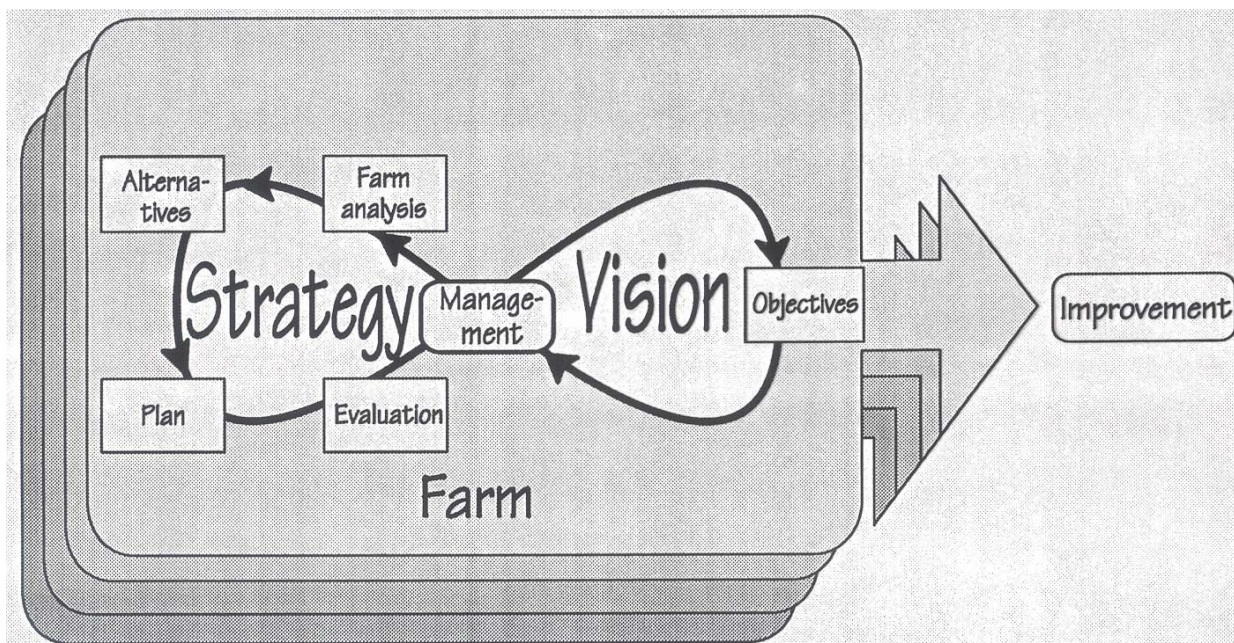


Figure 2. Model of the long-term farm management advisory programme

Source: Sejersen & Kristensen (1993).

Implementation of the “long-term farm management advisory programme” started in the spring 1991 on nine local advisory centres. Consultants from each of the centres adopted the programme in consulting about 10 farm families. During the following years more advisory centres and more farmers were included in the programme. Furthermore, a large proportion of the involved consultants and participating farm families were interviewed to collect the obtained experiences. These experiences have been utilized in making project status reports and preparing support material by DAAC to be used by the local advisors. Several courses concerning e.g. guidance psychology and conversation techniques were also offered by DAAC to the local advisors.

This long-term farm management advisory programme will be referred to as the AAC strategy project in what follows.

In 1996 FOI and DAAC decided to initiate a joined project in order to improve the delivery of strategic decision support to Danish farm managers. The primary aim of the research and development activities carried out was to develop practising consultants' learning abilities so that their strategic competences can continually be improved, see Lund & Larsen (2002). The established project group consisted of two researchers from FOI, four development consultants from DAAC and two practising consultants from each of five different local advisory centres. Between FOI, DAAC and the local advisory centres there were major differences in tasks performed, methods adopted, leadership, shared culture and behavioural norms and in underlying paradigms on how to understand the world. The division of the task between the participants in the project is illustrated in figure 3.

Team working and consultancy processes are the two main working activities considered in this project. Teamwork by a number of participants with different perspectives was seen as the main route to innovate. The idea of self-organizing was furthermore adopted in the project group in order to promote innovation and learning. This implied that the group didn't formulate any clear operational objectives in advance and that there was no formal authority among the members of the group.

The consulting processes in the project contained the more or less experimental activities performed primarily by the local consultants in the group aiming at delivering improved strategic assistance to practical farm managers. In the project, the consultancy process has been divided into three phases – "Understanding", "Analysis" and "Decision support". In the phase of understanding the consultant is supposed to acquire knowledge of the farm and the farm family. Thus, the consultant should know e.g. the budget, the financial situation and the efficiency level of the production. Furthermore, the consultant has to learn about the farmer's objectives, strategic opportunities and conditions by listening, asking questions and make interpretations. In the next phase of analysis the consultant was supposed to make both some quantitative and qualitative calculations and assessments. The quantitative analyses consist of traditional investment calculations, break-even analyses for critical parameters and pay-back period, preparations of financial budgets, analysis of labor demand for the investment and so on. In order to make these calculations less time-consuming several spreadsheet programs have been developed in the project. In the qualitative analyses the consultant is supposed to compare the alternatives with the farmer's values and stated objectives. In order to formalize this task the SWOT-scheme was adopted.

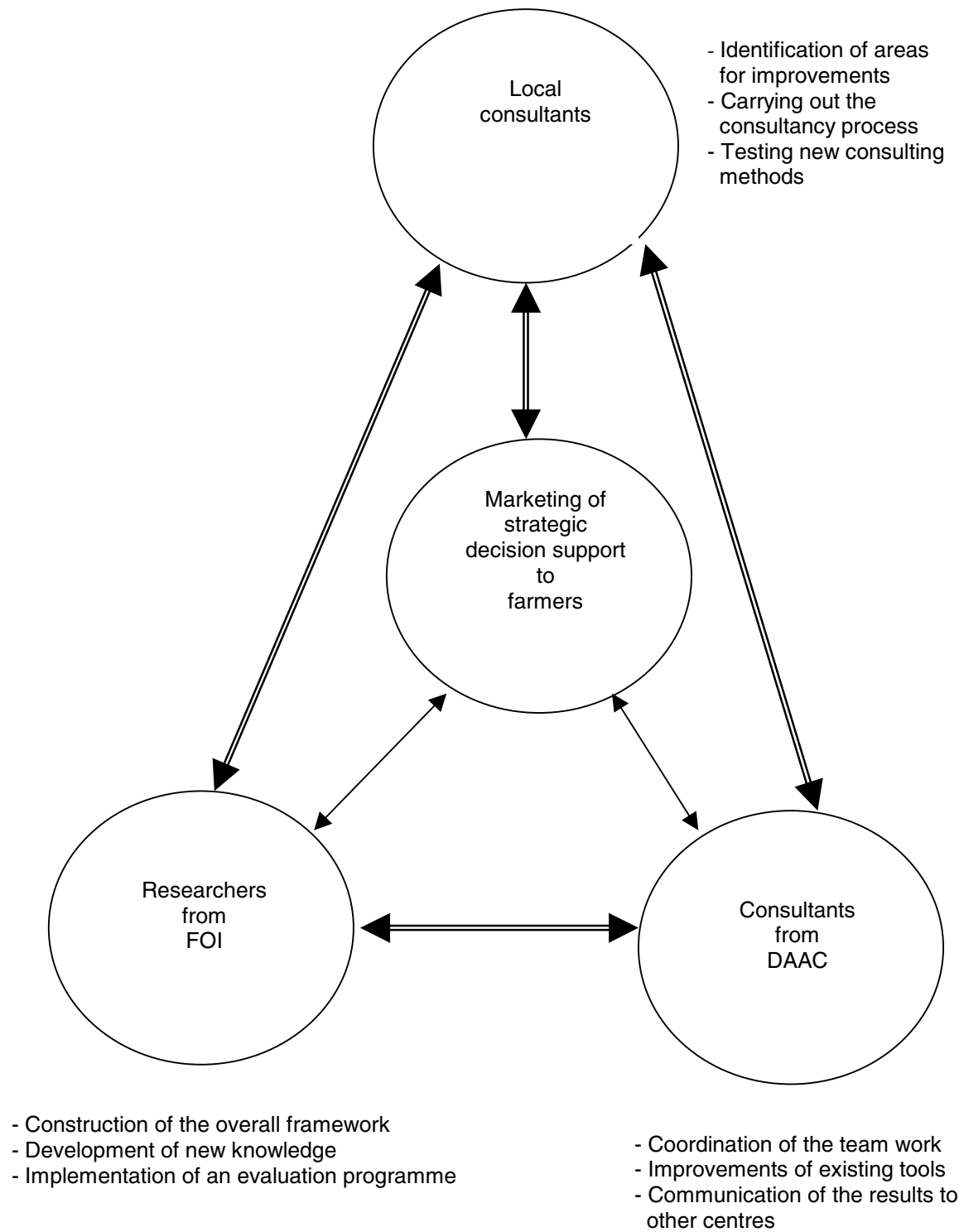


Figure 3. Involved participants and their tasks in the development and marketing of strategic consultancy

Source: Lund & Larsen (2002).

In the last phase, containing decision support, the consultant's written report should be communicated and discussed with the farmer. Thus, the third step in the consultancy process was also divided into two sub-steps. Firstly, the consultant was expected to complete a written decision report. Secondly, the consultant should have a final meeting with the farmer in order to have a dialogue concerning the formulated recommendations. The content of the decision report to the farmer has been divided into the five following parts; 1) *Conclusions* (the consultant's recommendations); 2) *Description* (containing a short description of the evaluated strategic alternatives); 3) *Assumptions* (description of the most important general and specific assumptions used in the analyses); 4) *Results* (only key results from the economic calculations should be included in the report); 5) *What is going to happen next?* (the consultant should point out specific issues that the farmer should be aware of, e.g. deadlines for the application of financial support to investments).

This strategic competence development project is shortly described as the SCD project in the following.

In 2002 a new Danish interdisciplinary project has been initiated with the purpose to improve the economic and managerial performance on business farms. An important part of the project is to develop the concept of Balanced Scorecard (BSC) in a manner that it can be applied on Danish dairy farms. Shortly described, the main idea of the BSC framework is to transform the long-term goals and strategies stepwise into daily operational working routines with emphasis on measurable input and output indicators. The transformation should be performed in a balanced manner by focusing on a number of different business perspectives, which in general include the economic perspective, the consumer perspective, the internal perspective and the growth and learning perspective. The BSC concept was originally developed by Kaplan and Norton in the early nineties and has since been utilized by many large business companies (Kaplan & Norton, 1996a).

In order to transform the BSC concept into an agricultural context FOI and DAAC are working together with four local consultancy centres. The agreed development activities consist in principle of (Lund, 2003):

1. Formulation of the vision and long-term strategy for the farm
2. Identification and prioritising of specific areas of focus
3. Selection of key indicators and targets
4. Formulation of action plans
5. Evaluation of targets and action plans

where the first step is just included in the case that the farmer and his family have not a prior formulated vision and long-term strategy.

At this point we have only fully completed the development of a Balanced Scorecard for one dairy farmer. The scorecard for this case farmer has been completed in cooperation with a dairy and an economic consultant from one of the participating local consultancy centre. The developed scorecard consists of two interrelated parts. The first part is the management circle as illustrated in figure 4.

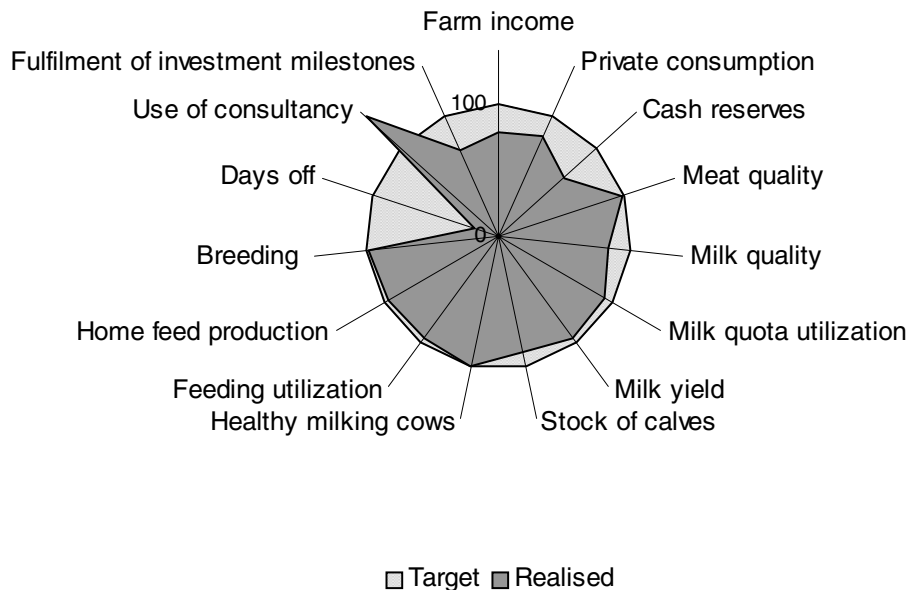


Figure 4. The Management Circle

Source: Lund (2003).

In this farm case the circle consists basically of 15 rays, one for each measure (also called an indicator) included in the scorecard. All the rays have been scaled in a way that the target formulated for each of the indicators is placed on the edge of the circle. For example, the target for the measure of milk yield is set to 7,000 kg per cow. Thus, this is the point where the milk yield ray crosses the edge of the circle. The latest results for all of the indicators are furthermore shown in the circle as an irregular star. By construction the fulfilment of each target is getting better as the realized result of the indicator is moving towards the edge of the circle or even cross the edge. The idea of the management circle is to give the farmer a balanced, holistic picture of the actual business performance in his farm operation. It is especially suitable to identify the strong and weak points in the business: realised results of an indicator close to or above the edge of the circle should be interpreted as a strong point, whereas indicator results close to the circle centre should be regarded as weak points in the current way of doing business.

One important limitation of the management circle is its static nature. Therefore, an indicator progress diagram has been included as the other half of the developed scorecard. The diagram is illustrated in figure 5.

In the diagram, it can be seen that there is a “horizontal” column for each of the included indicators in the scorecard. The length of the column measures the percentage change in the realised result for each indicator from the last measurement to the newest update of the diagram. If there has been a positive improvement in the result, the column is shown on the right side in the diagram, and the opposite is the case if there has been a decline in the results from last measurement of the indicator. Thus, the progress in performance can be negative by definition! However, what cannot be seen from the diagram is that many of the columns should be coloured either as green, yellow or red. The actual colour of the column is determined by some critical control levels (CCL), which describe the points where the realised results are reaching unacceptable levels. The interpretation of each colour is:

Green: No actual reason to be concerned

Yellow: The aspect should be kept under surveillance

Red: The aspect should be given high priority in the efforts to make substantial improvements

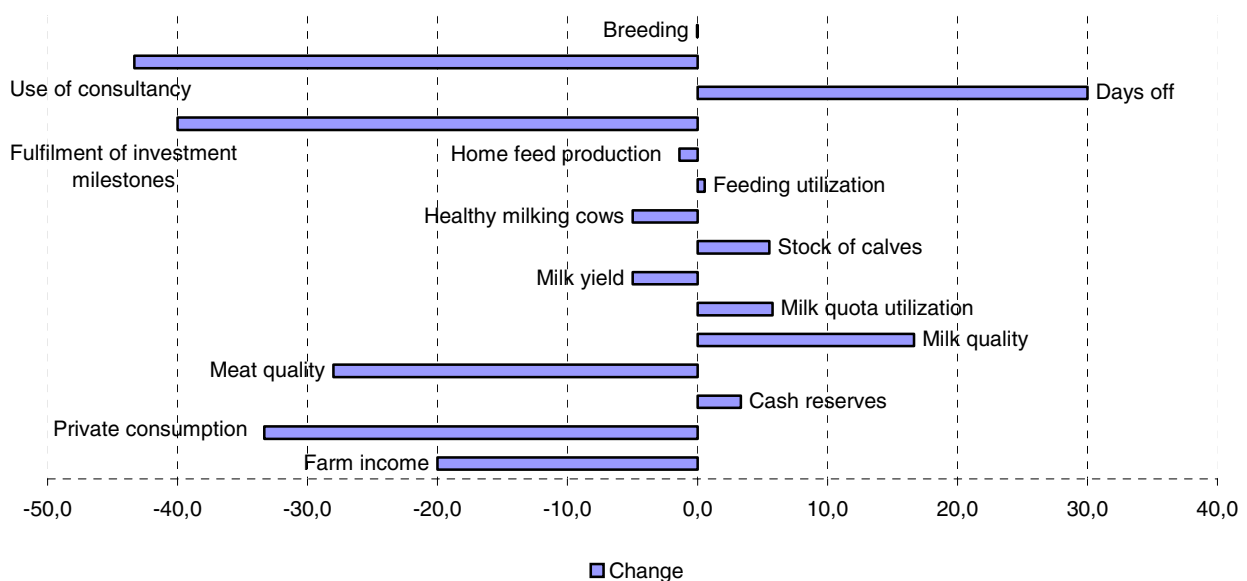


Figure 5. The Indicator Progress Diagram

Source: Lund (2003).

This project is referred to in what follows as the BSC project.

3. What is the aim of strategic management in agriculture

The first question we will address is the aim of strategic management in agriculture. Our basic frame of reference in doing this is the aims of the Danish strategy projects as shown in table 1.

Table 1. The overall aim of the Danish strategy projects

Project	Aim of project
FOI	Due to the growing uncertainty in environmental conditions the main purpose is to identify and initiate strategic changes on the farm
AAC	Development of a coordinated approach of long-term planning for farming families
SCD	Development of practising consultants strategic competences
BSC	Implementation of the long-term strategic planning on farms

One very common feature of all the Danish strategy projects is that strategic management is understood as a mean to improve the economic efficiency on real farms. Therefore, economic tools like accounting statements, budgeting techniques and investment calculation methods play a dominant role in all the projects.

Another rather general feature of all the strategy projects are that they see the need for strategic management in agriculture as a response to a more and more uncertain environment. Prior too the start of introducing strategic management in Danish agriculture the belief was that this uncertainty gave rise to fluctuating yield levels, prices etc. However, it has been realised that farmers increasingly are facing rather unique and exceptional decision situations. Although much has been written about the future influence on farming of the new bio- and information technologies, increasing ethical and environmental concerns and the internationalisation of agricultural markets, perhaps the most important observation to make is that farm based production seems to be replaced by networking farming where on-farm activities are integrated with those of input suppliers, other farmers, processors, marketers and consumers. In the light of these challenges, the typical farm firm can properly not any longer be understood as something, which is in a state of equilibrium.

The methodology adopted to deal with these changing environmental conditions has furthermore been quite similar in the Danish strategy projects. The main paradigm underlying both the FOI and ACC projects was to see the farm firm as an open system that could be monitored despite the system was disturbed by external factors. The

dominant tool adopted in order to evaluate and select the business strategy - and thus monitor the overall economic progress of the farm business - was long-term budgeting over a five years planning period. External disturbances on the other hand were handled through building action, organisational and financial preparedness. In the past there has been an especially emphasise on estimating and using the financial preparedness as a strategic risk management tool.

What can be learned from these lessons is that the farming environment is not only uncertain; even more importantly is it to realise and understand that it is complex. One of first to address the challenges of complexity in the context of strategic management is Ralph Stacey (Stacey, 1993). His study enquires the traditional wisdom of long-term planning: Can the long-run future position and performance of firms in any intentional sense be planned? What we furthermore have learned from the science of complexity so far is that complexity is not the same as stochastic uncertainty. Traditionally, uncertainty has been interpreted as random events, but now it is known that unpredictability can also emerge in circumstances governed by completely deterministic laws. The most important consequence is that our existing risk management tools applied in strategic management properly are at best insufficient.

4. How to develop the vision and long-term strategy on business farms

Table 2 indicates the importance of vision and strategy formulation in each of the Danish projects.

Table 2. The development of the vision and long-term strategy in the Danish strategy projects

Project	Vision and strategy planning
FOI	No explicit emphasis on formulation of the vision. The future business strategy was formulated by budget evaluations of alternative plans, including continuous of existing business activities
AAC	High priority on formulating the vision of the farm family. Strategy formulation seen as traditional evaluations of alternatives
SCD	Vision formulation draw on previously obtained experiences, whereas strategy planning and evaluation was improved by enhanced consultancy competences
BSC	Seen as a precondition for the implementation of the long-term strategic plan

The importance of the overall qualitative goal statements were already recognised in the FOI project, but no concrete activities were initiated in order to reveal the vision of the farm family in this project. Instead major efforts were undertaken in the FOI project to estimate the minimum income target to the future economic performance of the farm firm. The income requirement was seen as a function of whether the farm is going to follow a depletion, maintenance or development strategy. The theoretical foundation for this perspective was the behavioural theory of the firm (Cyert & March, 1963). The theory postulate that a firm can be looked upon as a coalition of different stakeholders, where each stakeholder is required to receive some inducements in return for the provided contributions. Thus, it is most likely that there will exist conflicts between different sub-goals. In the behavioural theory, the resolution of these conflicts are assumed to emerge by satisfying behaviour, where an acceptable solution is obtained by meeting certain aspiration levels. No doubt that the approach to goal formation in the FOI project, and to some extent in the ACC project, has been heavily influenced by the behavioural theory of the firm.

Formulating the vision of the farm family was first considered in depth in the ACC project. In an agricultural context the vision can be defined as a qualitative statement explaining in broad terms the kind of life the farm family wishes to realise (Lund, 1998). The vision should – together with the mission statement – guide the future position and performance of the firm and the farm life although its realisation cannot be controlled by any ordinary means.

The purpose of strategy formulation is to identify the most appropriate means to fulfil the stated vision (and mission). In the FOI project a strategy was defined as a long-term decision frame containing a number of interrelated sub-decisions, which taken together describe how the farm should be developed, whereas no formal distinction was made between a strategy and e.g. an alternative in the ACC strategy project. Thus, it may be fair to say that the ACC project did not make any substantial contributions to the theoretical understanding of strategy formulation in farm firms. In relationship to the distinction between a competitive strategy (i.e. how should the single business unit compete) and a corporate strategy (i.e. how to make a portfolio of business activities) in the strategic literature, all the Danish strategy projects as shown in table 2 have been concentrated on the latter type of strategies. It should, however, be noticed that the choice of competitive strategy in primary agricultural firms has been theoretically investigated in a Danish study by Rasmussen (1990). By adopting Porter's five forces model (Porter, 1980), Rasmussen found that the potential rivalry among farms is so high that in reality it doesn't exist. This observation might be part of the explanation why the choice of competitive strategies for the individual farm firms so far has been neglected. It has been assumed that costs minimization was the only possible competition strategy.

The adopted portfolio approach in the FOI project was to divide the whole farm business strategy into four sub-strategies as shown in table 3. Thus, in the formulation and evaluation of alternative business strategies a number of considerations were expected to be taken into account. One such consideration was the identification of synergy effects, which is argued to be realized when it is more advantageous to combine two or more activities than perform them separately (Christensen & Pedersen, 1997). Profitability, liquidity and risk considerations were other important strategy attributes. The evaluation of these and other attributes was in the FOI (and the ACC) project supposed to be done in a multi-decision criteria framework.

Table 3. The content of the Farm Business Strategy

Farm Business Strategy			
Capacity strategy	Activity strategy	Financial strategy	Organisational strategy
Expansion	Specialization	Debt ratio	Form of ownership
Maintenance	Diversification	Degree of self-financing	Organisation
Depletion	Product innovations	Taxation policy	Management style
	Off-farm income	Financial preparedness	Information systems

Although the question has been raised whether a business strategy really can be planned in any meaningful sense, when the environmental conditions are getting still more complex (see e.g. Stacey, 1993), we are still today using the same basic procedures for strategy formulation and evaluation in Danish agriculture as developed in the FOI project. This does, however, not imply that we have not learned anything about strategy in the last nearly twenty years. What we have realised is that strategy development and implementation is depending on a set of hypotheses, which are guiding the cause-and-effects embedded in every business strategy utilized in practice. Our recognition of this feature is first published in Lund (1998) and has since then been utilized in the SCD project. In this project, the consultant was instructed to explicitly state the most general as well as specific assumptions applied in the strategy formulation process (Lund & Larsen, 2002). Now, after we have started the BSC project, we have realised that the acknowledgement of theoretical hypotheses and models has been appreciated in the BSC literature quite a number of years before we received this enlightenment. The most important lesson from this experience is that postponed enlightenment is better than no enlightenment at all!

5. How to implement the formulated business strategy

In this section we will consider our adopted approaches to strategy implementation and what we have learned from these experiences. Table 4 summarize how the formulated business strategy was implemented in each of the Danish projects.

Table 4. Implementation approach adopted in the Danish strategy projects

Project	Adopted implementation approach
FOI	No explicit consideration with respect to strategy implementation. The chosen strategy was assumed to be implemented through the annual and short- term planning carried out on the farm
AAC	Formulation of action plans. Furthermore, once every year a consulting team should meet with the family make plan evaluation and/or Farm Report
SCD	Emphasis was put on the implementation of improved strategic competences of consultants, whereas strategy implementation is not explicit considered
BSC	Exclusively focus on the implementation of the long-term strategic plan

As stated in table 4 it was assumed in the FOI project that the formulated business strategy might be implemented through the annual and day-to-day planning on the farm. Thus, the underlying assumption was that sub-decisions included in the strategy should be specified and transformed into detailed production and financial plans at the tactical and operational farm level. Furthermore, the task of controlling the performance of the chosen strategy was considered to be part of the budgeting system in which the realised economic results was compared to budgeted targets. Because no formal evaluation of the participating farmers' experiences with the use of strategies in their managerial monitoring was undertaken, we are not capable of giving any objective judgement of the pros and cons of this implementation strategy. However, from the strategic literature there are overwhelming reasons to believe that this approach to strategy implementation cannot be taken for granted. According to Stacey (1993) some of the implementation barriers may be the culture and power structure of the firm, lacking attention to the question of control and conflicting short- and long-term objectives. Another important barrier stressed by Kaplan & Norton (1996a) may be the missing links between strategy planning and, on the other hand, the need for action programmes and matching mechanisms for resource allocation.

As shown in figure 2 and previous explained action planning was explicitly considered in the ACC project. The formulated action plan should state “who do what, how and when” (Sejersen & Kristensen, 1993). However, other Danish project experiences indicate that even action plans are formulated and also are clearly communicated to the farmer, there is no guarantee that such plans will be followed in practice (Henneberg et al., 1990) and (Henneberg, 1991). Thus, there is always a real risk that no changes in behaviour will occur. Important reasons may be that so much human behaviour are embedded in working routines that are stored in the minds of people as what is now known as “tacit knowledge”, see e.g. Nelson & Winter (1982). Typically, existing working routines has been build up during an extended time period implying that people are getting used to them and therefore they are difficult to change. Like other people, farmers are thus not inclined to change their existing ways of doing things although they are assumed to do so according to the formulated action plans; and because of the tacit knowledge nature of these routines, most farmers have a hard time in explaining their programmed patterns of behaviour.

The influence of tacit knowledge on implementing new behavioural patterns was an important part of the SCD project dealing with the enhancement of consultants’ strategic competences (Lund & Larsen, 2002). In the project we adopted a main characteristic of tacit knowledge expressing that it is very difficult to articulate or communicate the utilized skills. Therefore, in order to enhance the likelihood of transferring knowledge creation into improved strategic behaviour four different types knowledge transformations were considered: *Creation*: Knowledge transformation from explicit to explicit where new articulated knowledge is combined with existing knowledge. *Integration*: Knowledge transformation from explicit to tacit where new knowledge is internalised into cognitive and practical skills. *Delivery*: Knowledge transformation from tacit to tacit where individuals through practice adapt and share tacit knowledge. *Reflection*: Knowledge transformation from tacit to explicit where tacit knowledge is articulated into explicit statements such as obtained experiences, other ideas, new hypotheses, etc.

As shown in table 4, strategy implementation is the main objective of the BSC project, which was established in 2002 (Lund, 2003). The motivation for investigation the usefulness of the Balanced Scorecard concept in primary agriculture is that it has already proven its success to transform the strategy into measurable indicators and action plans in many commercial companies and non-profit organisations. We are especially curious to learn more about whether the BSC concept is applicable in firms characterised as rather small, the firm is also the home, biological production processes and a major part of the labour input is provided by the farm family (Noell & Lund, 2003; Rasmussen, 1990). Furthermore, the BSC concept seems for us to be the logical next step following the SCD project. Here we were explicitly dealing with the identification of the underlying assumptions in farm business strategy formulation,

but we didn't have any procedures for giving farmers feedback on their planned strategy and thus test the hypotheses that the strategy is build on. The BSC concept seems indeed promising to fulfil these requirements. The concept, however, doesn't addresses the implementation barriers rising from the existence of working routines and tacit knowledge.

In summary, we consider our lack of understanding of the real nature of working routines and tacit knowledge as major barriers for strategy implementation; and we firmly believe that these issues need to be more seriously addressed if the adaptation of strategic management in agriculture should lead to any observable effects on the future position and performance of farm firms.

6. How can research assists in the development and implementation of strategic planning

In agriculture the individual farm firm is typically too small in size to initiate and carry out independent research and development (R & D) activities. Thus, it might be expected that agricultural research institutions should play a more dominant role in the development and implementation of strategic planning compared to the case in many other industries (Lund, 1998 & 2003).

Table 5 describes the role of research in the Danish projects dealing with strategic management in an agricultural context.

Table 5. The role of research in the Danish strategy projects

Project	The role of research
FOI	The advisory programme, including the strategic planning approach, was exclusively developed by FOI
AAC	No research institutions or formally trained researchers were included in project
SCD	Economic researchers from FOI collaborated with consultants from DAAC and local economic consultants
BSC	Economic researchers from FOI collaborate with other agricultural scientists, consultants from DAAC, local consultants and practising farmers

It is acknowledged from table 5 that while the development of the strategic planning programme was solely undertaken by FOI – an applied agricultural economics re-

search institute -, have all the other Danish projects been carried out by utilising some form of collaborative and participatory approach. In the ACC and the SCD projects this collaborative and participatory approach is directly stated to be Action Research, see Jensen et al. (1993, p. 170) and Lund & Larsen (2002, p. 409).

Action research is in general seen as an approach to dismiss the gap between theory and practice in the development of new action possibilities to people. The rising theory-practice gap in agriculture is according to Cameron (1997) a natural consequence of the increasing appreciation of reductionistic science that is producing more and more fragmented knowledge that is becoming lesser accessible for farm managers, who on the other hand are getting still more disenchantment with the research and extension services.

In some dimensions the ACC and the SCD project shared the same methodological understanding in the adaptation of the Action Research approach (Jensen et al., 1993; Lund & Larsen, 2002). The use of system thinking is one such example. The ideas in system thinking were however already included in the FOI project as previously noted. The use of organisation theory is another common feature of both these projects. The emphasis on participatory problem solving, innovation and learning could furthermore be seen as general features included in both projects although the interpretations and applications of these concepts were not similar.

One major difference between the ACC and the SCD project is, however, that the former did not include any formal trained researchers. In the ACC project consultants from DAAC were presumably intended to play the role of scientists in making Action Research. However, by excluding scientific educated participants there is a high risk that the real benefits of an Action Research approach are not obtained. One of these potential benefits is to initiate a real dialectic interrelationship between theory and practice aiming at giving farmers new action opportunities in accordance with their real interests. Hereby we are not arguing that researchers always should participate in user-oriented projects, or for that sake claiming that practitioners should always be included in research activities. What we are saying is that true Action Research requires collaboration between real scientists and real practitioners, whether these practitioners are consultants, farmers or somebody else.

To summarize, the Danish experiences with Action Research indicate that there should be established a close relationship between research, consultancy and eventually farm communities if the one wish to obtain the real benefits of an Action Research approach. One of the most important reasons for utilizing this approach is that strategic problems emerge from practice, but their real solutions require theoretical answers. In an agricultural context the dialectic functioning of Action Research can be explained as follows: During their practice consultants (and farmers) will continuously be confronted with new problems which cannot be solved with their existing knowledge; the solution of these problems therefore require some modifications of

the existing theories or construction of totally new theories; and it is, of course, the research institutions which should have the main responsibility for these theoretical developments.

7. How can the advisory service deliver strategic consultancy to farm managers

From experiences obtained in the Danish projects we have realised that the necessary competences of practising consultants dealing with strategic management are very different from the skills needed to deliver accounting information and other services to farm managers. One important personal requirement is the ability to get into a dialogue with the farm family. In this context a dialogue can be defined as a discourse where the farmer and his wife explain their perception of the actual situation and where they express their wishes to the future development of the farm. The role of the consultant in the conversation is to inquire, to listen and to encourage the farmer to reflect over his situation, his opportunities and his personal interests. The major role consultants have occupied in the Danish strategy projects are indicated in table 6.

Table 6. The role of consultants in the delivery of strategic management to farmers

Project	The role of consultants
FOI	The strategy consultant was assumed to be a process catalyst and sparring partner for the farmer
AAC	The consultant should not just be an expert, but he should also be a sparring partner for the farmer
SCD	The strategy consultant is assumed to provide strategic decision support to the farmer
BSC	The precise role of the consultant has to be defined and specified

In the FOI and ACC projects the role of farm consultancy were nearly exclusively defined and understood as processes. The need of process understanding is explicitly stated in Christensen & Pedersen (1987, p. 1) as “*Strategic planning can be defined as the process where the manager: Revises the ideas and objectives of the farm business; evaluates where the enterprise is positioned today; and determines the actions necessary to attain the desired objectives*”. The emphasis on processes is clearly continued in the ACC project as noticed in Sejersen & Kristensen (1993, p. 220): *This model [as depicted in figure 1] shows that it is an ongoing process. In order to final-*

ize the [long-term farm management advisory] programme you have to go through the whole process. In the citation, the text in [...] is included by us. It might be asked, whether the process of strategic management in real firms is or always should be as neatly structured as shown in figure 1 and 2. Investigations of actual management processes show that this by far is not always the case. According to Stacey (1993) the ambiguities, uncertainties, surprises and irrationalities are in fact more the general case than the exception in the processes of strategic management.

In the SCD project we have for the first time acknowledged that although understanding of the strategic processes are necessary, it is not a sufficient condition for the rational delivery of strategic management to farmers. Equal important is to consider the content of strategic management. While strategic processes deal by which strategies come into being, then content aspects focus on the substantive matters of these strategies. The relationship between the process and content in the SCD project can be explained by use of the so-called development matrix as shown in figure 6.

		Knowledge themes					
Working tasks		Business values	Business sector analysis		Management	Image	Marketing
Investments in buildings							
Generational change							
Partnership							
Service check							

Figure 6. The development matrix

Source: Lund & Larsen (2002).

The figure contains a distinction between working tasks and knowledge themes. The working tasks was supposed to describe the subject matters that practising consultants are working with in their strategy consultancy to farm managers. Thus, from these consultants we learned that they are primarily dealing with investment planning, gen-

erational exchange, partnership and service check. By partnership is meant machinery co-operation and other types of collaboration between farmers, whereas service check is another word for benchmarking of the technical and financial performance of the farm firm (Lund & Ørum, 1997). The knowledge themes, on the other hand, illustrate the new subject matters that should enhance the quality of strategy work carried out by the consultant. These subjects, which were also identified by the practising consultants, were supposed to be embedded in the existing work routines. In the SCD project major efforts was put on the development of handbooks, calculation tools etc. in order to promote the dissemination of these new knowledge themes to consultants working with strategic management.

The most significant lesson to learn from these Danish experiences is that if agricultural extension organisations and practising consultants should be able to market highly relevant and quality strategic management to farmers, it is of greatest importance that we receive a better understanding and appreciation of the complex interrelationships between the process and content of strategic management. Although one promising clue might be a better understanding of the adopted assumptions in strategy formulation, the conclusion stated by Douma and Schreuder seems still to be valid: *A fully integrated content and process model of organizational behavior and development is still beyond our reach* (Douma & Schreuder, 1991, p. 215).

8. What is the function of learning in strategic management

In this last question we will discuss the issue of learning in the delivery of strategic management to farmers. We have two motives for addressing this question. Firstly, we firmly believe that in order to cope with the increasing complexity, farmers have a real need for life-long learning. Secondly, we are convinced that strategic management have something to offer with respect to competence enhancement. The included learning activities directed farmers in the Danish strategy projects are summarized in table 7.

From the writings of Jensen et al. (1993) it becomes evident that the learning of the participating farmers had the highest priority in the AAC project. Action Research was here seen as the general approach to facilitate learning. We are not in a position that makes us capable of evaluating their learning strategy. Either the FOI or the SCD project had formulated a direct strategy for ensuring any kind of learning among the participating farmers. Indirectly, these projects make learning possible although in different ways. Learning by experiences was a possibility in the FOI project by the repeating use of the same accounting and budgeting tools. In the SCD project, on the other hand, farmers were given the opportunity of reflective learning by the explicit description of the adopted strategy assumptions. Thus, the individual farmer was given the opportunity to ask "What-if" questions.

Table 7. Farmers' learning in the Danish strategy projects

Project	Adopted learning approach
FOI	No explicit learning approach was adopted, but it was implicitly assumed that farmers were learning by gaining experiences
AAC	The approach was to understand the farmer as an active learner by adaptation of several methodologies in the field of Action Research
SCD	No explicit learning approach towards farmers were adopted, but it was implicitly assumed that farmers were learning by reflecting on the embedded strategy hypotheses
BSC	Dual learning is facilitated by using double loop learning mechanisms

From the BSC project we have recognised new methodologies to improve the competences of the farmer and eventually other important stakeholders of the farm firm. In fact, by adaptation of the BSC framework an increased level of the farmer's competences can happen in two dimensions, which by nature are very different.

The first dimension is what we will call ordinary management competences. It is named ordinary as the competence improvements are supposed to come from considering the deviations between the targets of the indicators and their realized results. By doing this comparison, it might - as earlier mentioned - be possible to identify the strong and weak points of the actual business operation. Furthermore, by the comparison the farmer is able to recognise if the action plans are leading to the expected progress in business performance; and if not, he can, eventually together with his consultants, make the necessary revisions of the plans. This sought of monitoring is quite similar to the art of financial budgeting control, where planned revenues and costs are compared and evaluated according to the realised revenues and costs. The only, but important, difference is that in a Balanced Scorecard is not just the monetary flows controlled, but also the production, marketing and the learning/growth perspectives of the firm.

The second dimension of competence development is much more complex and might therefore be called the strategic management competences. In order to understand this type of competence development it should be remembered that the real aim of using Balanced Scorecards in agriculture is to realize the overall values and strategic plans formulated by the farm family. Thus, a relevant scorecard should reflect the way that the farm business is managed and how the values and business strategy will be converted into reality. In fact, the strategic competences are supposed to be improved when the farmer, again presumable in cooperation with his consultants, are question-

ing the hypotheses concerning these cause-and-effect relationships embedded in the scorecard and thus consider whether they are true or false. They may be false either because of mistaken or incomplete knowledge of the real cause-and-effect linkages governing the business performance or because the values and the strategy formulated by the farmer and his family have been changed. While it always has been the core of strategic management to consider such questions, the farmer is now offered a “tool” to learn more about the answers to these complex questions. This kind of learning is explained in e.g. Stacey (1993) and Lund (1997).

9. Concluding remarks

In our final remarks we would like to stress that our survey and review of the Danish projects dealing with the application of strategic management towards farm businesses have not taken any account of the fact that the projects have been carried out in different time periods. Thus, the first strategic knowledge gained in the FOI project during the years from 1984 to about 1986 was more or less included in the ACC project initiated in the late eighties; and the same subsequent inclusion happened first in the SCD project and most recently again in the BSC project. That is, an accumulation of knowledge with respect to the theory and practice of strategic management in Danish agricultural research and consultancy has taken place. The main implication is that it is not meaningful to compare the strategy projects against each other.

Although we would appreciate if others may learn something from our revealed Danish lessons, we are also aware that this should not be the case without questioning of the underlying assumptions. At least it has been shown that the successful development and implementation of business strategies on farm firms require a balanced understanding of e.g. the contributions from many different disciplines, the dialectics between theory and practice, the process and content and the balance between development and implementation of a business strategy. In conclusion, either no simple or universal solutions can be offered to farm managers.

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