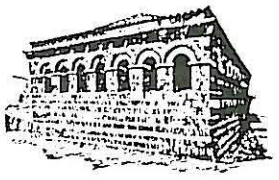
MARIETA AMÉLIA MARTINS DE CARVALHO

ACÇÃO DE FORMAÇÃO EM GESTÃO TÉCNICO-FINANCEIRA DE EXPLORAÇÕES LEITEIRAS NAS AREAS CENTRO E NORTE

Edição

INSTITUTO POLITÉCNICO DE BRAGANÇA

ESCOLA SUPERIOR AGRÁRIA



SÉRIE

"ESTUDOS"

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BRAGANÇA –1988

Titulo: Acção de Formação em Gestão Técnico-Finaceira de Explorações Leiteiras nas Áreas Centro e Norte

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Esta acção de formação foi levada a cabo pela Unidade de Investigação e Serviços de Epidemiologia Económica (U I S E E) do Departamento de Técnologia e Saúde Animal (D E T S A) da Escola Superior de Medicina Veterinária de Lisboa com o apoio do British Counsil.

Teve a participação de dois docentes da Universidade de Trás-os-Montes e Alto Douro, dois docentes da Escola Superior Agrária de Coimbra e um docente da Escola Superior Agrária de Bragança.

Índice

Nota prévia

O presente trabalho tem como objectivo fazer um resumo de uma acção de formação em Gestão Técnico-Financeira de explorações leiteiras, nas áreas Centro e Norte levada a cabo pela Unidade de Investigação e Serviços de Epidemiologia Económica (UISEE) do Departamento de Técnologia e Saúde Animal (DETSA) da Escola Superior de Medicina Veterinária de Lisboa com o apoio do British Council.

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Nesta acção de formação, realizada em condições de produção reais, foram analizadas 5 explorações leiteiras e preparados os correspondentes estudos de caso.

Agradecimentos

À Comissão Instaladora da Escola Superior Agrária do Instituto Politécnico de Bragança o meu reconhecido agradecimento pela possibilidade proporcionada de assistir a uma acção de formação em Gestão Técnico-Financeira de Explorações Leiteiras, nas áreas Centro e Norte levada a cabo pela Unidade de Investigação e Serviços de Epidemiologia Económica (UISEE) do Departamento de Técnologia e Saúde Animal (DETSA) da Escola Superior de Medicina Veterinária de Lisboa com o apoio do British Council.

Ao Exmº Sr. Professor Doutor Joaquim Lima Pereira muito agradeço a preciosa orientação cientifica, a bibliografia cedida e aconselhada, com vista à minha preparação académica no domínio da Engenharia Zootécnica.

Ao Exmº Sr. Presidente da Comissão Instaladora da Escola Superior Agrária de Coimbra e ao Exmº Sr. Director da Cooperativa Proleite em Oliveira de Azemeis, muito obrigado pela forma como nos receberam.

Aos agricultores que responderam aos inquéritos e pela sua gentil hospitalidade, queremos deixar o nosso profundo agradecimento.

Às Exmas. Senhoras Maria da Conceição Prada Ferreira, Inês Escaleira Pires Maldonado e ao Exmo. Sr. José Lopes, pela boa vontade com que dactilografaram o manuscrito original, e aos funcionários dos Serviços Gráficos do Instituto Politécnico de Bragança, pelos trabalhos prestados, muito obrigado.

1. Actividades Desenvolvidas

As actividades desenvolvidas durante a estadia em Coimbra desde o dia 7 a 10 de Março de 1988 foram as seguintes:

- dia 07/03/88 – Assistência a palestras proferidas pelo Sr. Engº Zootécnico Peter Van Zeller (Consultor de Explorações Agrícolas, "Farm Management Consultant" em Inglaterra desde à 50 anos) na Escola Superior Agrária de Coimbra.
- dia 08 e 09 /03/88 – Fizeram-se visitas a 5 explorações produtoras de leite e inquéritos aos seus gestores orientados pelo Sr. Engº Peter Van Zeller.
- dia 10/03/88 – Fez-se os cálculos contabilísticos e interpretação dos resultados obtidos através dos dados colhidos nos inquéritos.

2 . Palestras

As palestras foram alusivas ao tema "An Introduction to Farm Business Management" proferidas pelo Exmº Sr. Engº Peter Van Zeller que a seguir se transcrevem:

"A full course in this subject probably takes 500 hours, so what I can offer in one hour is strictly limited. My main purpose is to emphasise in the strongest possible way the need for the immediate implementation of farm management systems, from the theoretical teaching in colleges and schools to the practical application on farms.

The economic problems and changes in tax law in Portugal are recent, whereas your neighbour has had 50 yeares experience. Both countries are now members of the EEC but you have a substantial transitional period of which you must make maximúm use. During this time you will benefit from subsidies to increase some enterprises and to reduce others. However the hard times come when you are subjected to quotas.

In the U.K. milk quotas were suedenly imposed and without due warning. Farmers who were engaged on an expansion programme were told to reduce output by 9%. Although there was an appeal system, many farmers suffered financial losses and were forced to sell the ferm. In England and wales there were 39.287 registered producers. Since then 5,000 have given up. There is no doubt that a farm with 100 cows and no borrowed capital can be a thriving business, but those who have a substantial commitment with the bank are in a different state.

Regardless of the mixture of enterprises, there will be 3 main objects to consider.

1) Alternative enterprises to replace those which are discouraged by the EEC.

2) The effect of quotas.

3) The overall management of the farm under these new influences.

If there is time I will show an example of an actual case where quotas had a far reaching effect on an expanding farm.

There are innumerable problems awaiting the unwary. It is no longer sufficient to be technically able. If the financial strupture is wrong, efficiency may not be enough to overcome the problem. In the past banks were very eager to lend money without demanding such things as budgets and cash flows. Money was lent on trust and the obvious value of a property. During the last three years we have seen land values fall by 50% or more, so banks who have lent imprudently are aware that if they forced the farmer to sell there wpuld be insufficient funds to pay the loan. As there have been many cases of this type, banks now demand budgets and cash flows from farmers and in may cases they also demand that such information is drawn up by professional farm consultants. I have experience of this. Frequently when a farmer asks for this service he is unable to provide the necessary records and details to enable plans to be drawn up and so must wait for at least one year before making his application for funds.

FARM ORGANISATION AND MANAGEMENT

The funcion of management is decision making, both at the level of husbandry and overall business. These decisions must be made in the short term (day to day) management and in the long term (future policy).

Many decisions have to be made with incomplete information, because of the unknown variations in the climate from year to year. The decisions made in the farm office can often go awry when put into practice, e.g. the winter housing period for dairy cattle may last for a month longer that planned, so the silage does not last and this incurs extra expense which has not been allowed for.

THE FARMER AND HIS MANAGEMENT FUNCTIONS

There are situations where, regardless of the efficiency of the farmer in the production of crops and livestock, his business fails. If the basic financial structure is inadequate, then no amount of technical skill can generate sufficient income to offset the cost of borrowed money.

Farm management must be accepted that although planned on business lines, unlike other industries, where physical imputs guarantee definite outputs or units of producion, the very nature or biolgical forces on agriculture together with inherent variability and uncertainty require decisions to be taken on incomplete information and various changes and recalculations to be made during the year. Because of these influences which cannot be predicted there are many who are of the opinion that "Book Planning" has no function in Agriculture, but I hope to illustrate that that is a completely wrong attitude.

THE PROCESS OF MANAGEMENT

Each farmer has objectives for his business, which has thrse primary sources – Capital, Land and Labour – these are also known as the Subjects of Management. The primary object, however will be to provide an adequate standard of living after paying all the costs of production.

So, having defined his objectives, the next step is to organise his recources into a workable plan. Then the plan must be put into operation. Following this the results must be recorded.These are then analysed and appraised to find what they indicate. In the extreme this would mean the complete replanning of the whole farm.

Other factors affecting the planning are environmental and under this heading are, physical, economic, political and sociological.

To run the business effectively, an additional process must be added. This is forecasting the subjects of management and the influence of the environement.

Thus there are five main processes involved:

1) Forecasting.

2) Planning.

3) Implementation (Operation).

4) Recording.

5) Controlling.

PLANNING

Long term strategic planning and day-to-day tactical planning are both necessary. It must be decided what produts and quantities of each will be produced. Then, when the plan is in operation, tactical decisions must be made – the timing of the operation e.g. sowing in relation to soil conditions, time of year, then fertiliser levels or concentrate useage. Also adjustment to production processes e.g. if the price one type of pork grops – should you keep the pigs until a greater weight is achieved?, what is the ratio of the price per kg. of each type?

FINANCING

At the planning stage, all sources of capital must be examined to decide how much is required, when it will be needed, which source to use and how it will be repaid.

The capital has to be deployed in accordance with plan and allocated to those activities which are most beneficial to the business.

It is necessary to ensure that money is available to meet the demands of continuing production, sufficient for living expenses taxation and also interest and the repayment of capital. At the same time the future need for capital for developement must be considered.

All this requires a great deal os skill in the timing of production and marketing to ensure that money is available when required.

MARKETING

Successful marketing, both buying and selling is one of the key functions of management. At the planning stage it is essential to ensure that the markets are available and will remain so. Also at this time the quantity and quality of the products must be considered. So must the timing of sales.

Every opportunity must be taken for the best advantage. It may be advis able to negotiate contrac sales. Produce has to be selected for sale and presented in the right condition, when it is in demand, and at the right market.

There are, of course, very specialised produts where many of the influences of marketing do not apply. The production of wine is one, but here emphasis is on quality which must be the best under the climatic conditions prevailing.

SOURCE OF MANAGEMENT

Who is going to plan the farm? ensure that the operations are carried out efficiently and at the correct time? The success of management is very much determined by the quality of judgement in relation to the decisions that have to be taken. It is this factor which separates the successful farmers from the others if the circumstances are the same.

STAFFING.

The quality of the labour is all important. The typical old fashioned land owner who leaves everything to an old fashioned "feitor" will not be able to exist under EEC conditions and competition unless he is very rich and does not rely on normal agriculture for his way of life. I do not consider this situation under the heading of "Business Farm Management". Either the farmer or his manager must have both the businesess acumen and the technical ability and must be able to do any job on the farm better than the labourer. How otherwise can constructive criticism be made?

If you cannot set a plough or do not understand the working of a milking machine, you are unable to decide if there is a case for rightful criticism. I recall returning from Lisboa and still "bem Vestido" going to see a new tractor driver ploughing. Seeing that the plough was wrongly set, I called the man to stop and made several adjustments until it was correct. After my demonstration he asked for the money owing to him as he wanted to leave. when I asked him why, he said "you know too much"!

In a situation of mixed farming on a large scale, the employees must be sufficiently skilled to carry out their duties efficiently and to be accurate in their use of fertilisers, chemicals and feeding stuffs and to be able to record accurately how much is used. Also to be able to assess amounts needed during the following 4-8 weeks so that supplies can be maintained. The same principle apolies to oil, gasoline and spare parts. Lack of resources may mean a good market or harvest is missed and over ordering means that money is locked up in a non productive situation.

The real significance of management depends very much on personal experience for the formulation of sound judgement. It should be regarded as a skill which utilises a wide range of abilities but depends principally on the efforts and ability of the individual to utilise his experience and to fully analyse and interpret the situations.

ENVIRONMENTAL FACTORS.

Under this heading we have

1. The background to trade.

The farm cannot operate in isolation and is subjected to supply and demand and nationally a balance must be found. Current y milk is under produced in Portugal, but once full integration with the EEC is reached this country will be subjected to the quota system. Before quotas were imposed in 1984, the U.K. was 90% self sufficient. Logically the fermers expected that a quota would only be effective after 100% was reached. No, we are part of EEC and immediately the dairy more farmers were each cut by 9%. Since then they have been reduced by 3%. There was an appeal system for those who could prove exceptional hardship, but there were many who were unable to present a sufficiently strong case and who are now suffering financial hardship.

2. Substitution

When the price of barley or other feed is high, farmers look for an alternative. When the price of potatoes is high in the market, housewives buy "massa" or rice or whatever there is they consider better value.

3. Comparative advantage

Products tend to be produced where there are more suitable conditions.

But, if the prices rise, then the area spreads to what previously was considered unsuitable due to lower yields, until the prices fall, and then some farmers are in financial difficulty because they have made high capital investment and the current price does not service the loan.

4. Import control measures

The CAP of the EEC was drawn up to level outputs within the member states and to impose a tarrif on goods produced elsewhere. Politics have an over ruling influence on such matters and there is a continual battle within the EEC with each menber trying to put a case for preference. In west Germany and France about 30% of the electorate are farmers, whereas the figure in tye U.K. is 2%, so those members have a far greater influence on where money should be spent that the British farmers. However the quota system is here to stay and Portugal will be subjected to restrictions which many will consider to be unfair. It also means that there will be intense competition for quality and farm management skills will be even more important.

FARM BUSINESS RECORDS

Farm recording follows the implementation of the plan, but is also part of it. The corret use of farm records is an essential part of good management. They can be employed to monitor the performance of a plan and be used to diagnose weaknesses and to highlight strengths. They can also assist in cash control and in the long term assist in obtaining credit and loans.

In fact, no bank or other source of capital in the U.K. will enter a negotation without adequate records of past physical and financial performance plus forward budgets and cash flows to illustrate that the money can be repaid without undue stress and will on completion, will improve the standard of living and the value of the farm.

Physical Records

1) **Livestock Reconciliation Statement.**

   Stock numbers and type are noted at the beginning of the financial year and all births, deaths purchases and sales are noted during the year so that there is an accurate knowledge of what has happened. This should be kept on a monthly basis and is used to adjust the valuation at the end of each year.

   The greatest cost in an intensive livestock enterprise is feed and details (monthly) of stock numbers and feed available is essential for efficiency of production. A sudden shortage of an essential feed ingredient for a week can mean the difference of profit and loss with an intensive system. Stock rations must also be accurate in quantity and mixture and there is need for the "manager" to understand rationing thoroughly to obtain the best results. There are many reassons for discrepancies in rationing and care must be exercised to eliminate as many as possible.

2) **Field Records.**

   All imputs in quantity for each field should be recorded together with details of harvest from each field, so that comparisons can be made, both physical and financial. The major cost incurred with crop growing is fertiliser and applications must be kept accurately.

3) **Financial Records.**

There is a vast number of financial recording sistems, but the basis of any useful farm system must enable the farmer to know the overall profit of the business, but even more important is the method of recording the events and processes. You need to know the cost of producing a litre of milk or wine, a fat pig, a lamb or beef animal. The allocation of receipts is simple, but of expenses very complicated. For example, some costs are common to all enterprises and allocating them will make no difference to efficiency of profit PROVIDED that basic principles are adhered to, e,g, Labour. The farmer must know the minimum number required, although an analysis of the situation frequently demonstrates that there are too many. In many countries there are management books which have tables of labour requirement inder the conditions prevailing.

The system known as "Gross Margins" are useful to make comparisons of similar enterprises, where the sales minus the direct inputs are recorded. However, in the U.K. during the last 15 years or so there has been an increasinf rise in what we call "Fixed Costs", over which there has bean little control. The two main ones are labour and machinery.

The information used has been taken from farms recorded by the Farm Management Service of the Milk Marketing Board during the years quoted. Without adequate record keeping these comparisons would not be available for other farmers to use when they need a basis for comparison.

To enable financial decisions to be made it is necessary to have a detailed cash analysis system, whereby both receipts and expenses are allocated under appropriate headings. Many farmers only record those transactions which have been through the bank and do not keep records of cash deals. This is done to avoid paying tax. However, in order to analyse the business so that policy decisions can be made with confidence, all transactions must be recorded, analysed and categorised if the business is to progress.

At the end of the financial tear a Balance Sheet must be drawn up. This presents a statement of the business's financial position on one particular day. It consists of details of liabilities i.e., money owed and unpaid bills, loans from the bank or any other source. On the other side, the assets, which are made up of the valuations of livestock, produce in store, value of seed and fertilisers in the ground, machinery, cash, and money owed to the farmer and the value of the farm. The difference is the business's "Net Worth".

VALUATIONS

The valuations referred to above are necessary to get an overall picture of production. Crops and animals will have grown during the year and it is not sufficient to consider sales alone because some of the produce resulting from the year's work may still be on the farm. Also, some of the produce may have been fed to stock and not sold, but the cost of production and the sale value must be recorded. There may be fertilisers, sprays and animal feed which have been bought but not by

used by the end of the financial year. The end of the year valuation is, of course, the opening valuation for the following year.

DEPRECIATION

Both buildings and machinery are depreciated annually and this figure is shown as an expense on the Profit and Loss Account. This is allowed for by the Government Tax Department and reduces the liability for the payment of tax. There are several methods ofdepreciation which are accepted by the Tax Dep. but having elected to use one you cannot change it from year to year to your advantage.

THE GROSS MARGIN CONCEPT

This system was introduced to simplify the comparing of enterprises. E.g. a tractor, slurry tanker and labour are used to remove manure from cows and pigs and it is spread on land for wheat and barley. How are the costs and benefits to be allocated? The system of recording would be very complicated, time consumeing and probably grossly inaecurate, and to what purpose?

The slurry has to be removed, the tractor and labour are already on the farm for all enterprises and so they are termed "Fixed or Common Costs".

The Gross Margin applied to crops equals sales plus the valuation of any unsold, minus the seed, fertilisers and sprays actually used plus any extra labour brought in for that crop., e.g. for harvesting olives. With livestock, the sales of say, milk, calves, old cows plus the value of any youg animals kept as replacements minus purchased feed, replacement stock, veterinary costs and crops used as feed.

COMPUTER ACCOUNTING

There are many accouting companies and consultancy agencies which now use computers for farm accounts. Either a member of the company visits the farm on a regular basis to collect the data, or the farmer has forms to complete itemising all the transactions. These are sent into the company for computer recording and allocation. At the end of the year, Profit and Loss accounts, Gross Margin statements and comparisons of actual results and budgeted data can be made.

Obviously great care must be taken when recording details. The key to success with mechanised accounting systems lies in the coding of thew items.

Large farms are instaling their own computers for accounting as well as for physical records, breeding programmes, feed rationing and many other activities.

At the end of the year an appraisal and analysis of the farm business will be made and the future policy will be planned using the data collected. Decisions can be made considering the performance of the various enterprises and the effects of environmental influences of politics and economics. The performance of the dairy herd, beef, sheep, crops etc. compared with previous years and accepted standards for the region.

The very extreme of such analysis and appraisal may be the question – Do I continue in this business or sell completely?

In recent years the Fixed Costs have risen disproportionately to the value of sales, mainly Labour and Machinery and these must be controlled and balanced so that there is a minimum wastage of power and wages. Machinery is getting more and more expensive and many machines like the combine harvester have only short working periods during the year. There are alternatives – co–operation between farmers or the use of contractors. – Tractors can no longer be regarded as a status symbol and a new and bigger one must not be purchased only to impress the neighour! Obviously tractor power must match the machines it operates, but instead of having enormous power to be used for very short periods, it is more prudent to hire one as necessary. Maintain the minimum amount of machinery and labour that can be employed continually. Obviously the milking plant and the milker come into this category.

As far as possible the crop enterprises should be planned so that there is a minimum of peak demands on labour. What is known as "Man Management" is of vital importance. Are you as the farmer regarded as a rich, idle, ignorant landowner who can afford to support excess labour and machinery, or as a person whom the employees see as hard working, knowledgeable, practical and understanding for whom they will work hard and diligently and to whom they are loyal?

THE ANALYSES OF ENTERPRISES

Factors affecting profitability.

The Dairy Herd.

1) Labour and other Fixed Costs.
2) Yield per cow.
3) Milk quality, therefore the price.
4) Calving Index.
5) Feed Costs.
6) Quality and quantity of forage.
7) Health.
8) Body condition.
9) Cost of replacements – to rear or buy?–
10) Stocking Density.

Beef.

There are many similar factores, but the emphasis is on.

1) Rearing technique.
2) Buying calves.
3) Buying Stores.
4) Feed costs.
5) Quality of forage.
6) Age of finished beasts.
7) Season for selling.

Sheep

Are they for milk. or lamb, or both? If for milk and lamb, consider rearing the lambs artificially and fattening them in buildings on a controlled diet, having weaned them at 24 hours of age. It is most important to remember that the comsumer is becoming more demanding in the quality of lamb and they want well fleshed lambs with tender meat, rather than the tradicional tough stringy type with a low ratio of meat to bone. Fat lamb from New Zealand has already been on offer in the supermarkets, and although the size of carcass is too big for Portuguese preference, if tender and good value, preferences will change. It is also well to remember that to get best return from milk, the ewes should have access to good pasture and hay.

Crops

1) Are all the types and varieties really suited to your soil and climate?
2) Are you using the most prolific varieties?
3) What is the quality of the seed?
4) Is the sowing density optimal?
5) Is fertiliser application corret and of the correct type?
6) Are soil conditions good enough?
7) Is the timimg of sowing and cultivations correct?
8) How good is weed control?
9) Is the timing and affectiveness of harvesting satisfactory – what are the harvesting losses?
10) Is the sample offered clean, uniform and representative of the remainder?
11) Is the storage suitable?
12) What research has been made regarding marketing?

PLANNING AND BUDGETING.

When a change in plan is anticipated a partial budget can be used to assess the likely effects. Frequently there will be no change to the fixed costs. However, the effects of change can be considerable on management. E.g., the farmer may decide to increase potatoes in place of sheep. But the extra autumn labour requirement may mean delaying sowing the winter wheat, which will then have a lower yield and so affect the gain from the extra potatoes. There are many factores to be considered.

The simple formula for a change in plan is

BUDGET

COST SIDE	INCOME SIDE
INCOME LOST +	INCOME GAINED +
NEW COSTS INCURRED	FORMER COSTS SAVED

Example.

A dairy herd can be increased by 10 cows by increasing fertiliser costs by £400 and keeping extra heifers. It is presumed that milk yield remains the same. The value of the cows is £490 each. Interest is charged at 16%.

Interest is worked out on the extra capital of £ 4 900 plus the average variable costs. As the milk cheque is paid in every month, the average monthly variable costs is found by dividing by 2, because at the beginning of the month (if the bills are paid momthly) the variable costs are £o.

Extra income could also be possibly be gained by a change in the feed pattern.

1) Improved silage quality, thus reducing the concentrates or.

2) Increase the concentrates per litre or.

3) Buying indiviual concentrates and mixing them on the farm.

WHOLE FARM BUDGETING.

The use of the G.M. system for this exercise is.

1) Increase G.M.'s with the same fixed costs – better techniques, better seed or more fertilisers, improved quality, better marketing.

2) Increase G.M.'s with higher fixed costs – erect new buildings to increase the dairy herd and intensify management, or perhaps a bigger combine harvervester or deilling machine to improve the timing of operation.

3) Maintain present G.M.'s and lower fixed costs. – Increase mechanisation and have less labour or decrease both mechanisation and labour and use contractors.

4) Lower G.M.'s and fixed costs – eliminate a higly mechanised and labour intensive crop like potatoes and substitute cereals, making more efficient use of remaining mechanisation and labour.

There is a proceedure for G.M. planning and all aspects of the factors involved must be critically examined to come to the correct decision.

1) Define the objectives for the future and establish if there is a need for a full farm lpan.

2) Establish the recources available – land, buildings, capital and labour.

3) Establish the enterprises feasible for the farm. These will encompass the farmer's interest, knowledge and the experience of himself and the labour, their willingness to learn, the demand and the marketing of the products.

4) Normalise the G.M.'s of the existing enterprises and examine for possible improvements e.g, reseeding. irrigation.

5) Calculate the fixed costs for the new plan and subtract from the total G.M.'s to establisg a profit margin.

6) Produce a Capital Budget to see if the Cash Flow will support it.

Programme planning by hand is a long and tedious business but the use of computers is making this aspect of management much more available to farmers by consultants who carry with them a portable computer and a variety of programmes.

1) CASH FLOWS

To find out if a new plan is financially viable, apart from the final figure of profit, a cash flow must be made to ascertain if the timing of receits and expenses are such that the Bank Loan or overdraf is not exceeded inany one month. It also enables the farmer to maintain this budgetary control whether or not he is going to replan the farm policy.

By using this method of forecasting produce could be sold sooner than anticipated or a purchase delayed to keep within the limit of borrowing. When planning with a cash flow for the next twelve months there are many calculations to make. To change a figure in the first month involves a vast number of arithmetical alterations. A computer does this with immediate effect.

2) PREDICTION OF MILK YIELD.

With regional milk (lactation) curves and knowledge of previous and future calving patterns and milk yield an accurate monthly forecast of milk production can be made, which is essential for a cash flow.

3) PROGRAMME CHANGES.

Known as "What if", these programmes offer immediate recalculations.

4) QUOTA CONTROL.

Using the restraints of quota, predictions and alterations to a plan can be produced.

5) RATIONS FOR LIVESTOCK

Both technical formulations and least cost rations can be made. The former can be desingned for milk yield or weight increase depending on the class of livestock.

6) BREEDING RECORDS AND HEALTH

This is already being done here. Farmers whose business is big enough have their own computers and formulate their own rations. Some have full accounting programmes for their own information and also for the Bank and the Accountant.

THE FUTURE

Farm Financial Management will become increasingly important in the future. The Second World War taught Europe about food production, particularly those countries which previously depended on food imports form other parts of the world. The losses of men, ships and products was appalling. We learnt to produce greater quantities at home. New varieties with far greater yield potential e.g. wheat rose from 2.5t. per Ha./to 9 or 10, with an average of 6 for the U.K. New fertiliser types and usage, weed control, machinery, storage of crops etc. New grass varieties and silage making. Milk yields have risen from 3,000 L/cow to 7,000 L/cow, with an average of 5,000 for 3,000,000 cows. All this has created food surpluses and caused the need for quota systems. Within the constraints of quotas the emphasis must be on efficiency of production, quality control and marketing. Farmers will come under greater pressure than ever to maintain their viability in business as well as their standard of living. This can only be accomplished by achieving a high standard of management. We are lucky in the U.K., we already have en established farm management industry. Many of our young farmers go to college and university and university to learn the theory to reinforce their practical experience, and I must emphasise most strongly PRATICAL experience. There are graduates like myself who have worked for management companies to help farmers with their planning, both technical and financial. We work with banke and accountants and help farmers to present plans to justify loans for new enterprises or to increase and improve existing ones.

Portugal is not yet subjected to the full impact of the EEC control system, but there is no time to loose in building up your knowledge of FARM BUSINESS MANAGEMENT."

TRADING ACCOUNT as at 31 MARCH 1985

	£		£
OPENING VALUATION	69 392		
EXPENSES		**RECEIPTS**	
Livestock purchases	1 913	Livestock sales	39 319
Purchased feed	16 887	Milk sales	47 694
Purchased seed	575	Livestock produce sales	232
Fertiliser & lime	10 318	Crop sales	
Purchased sprays	262	Subsidies	
Veterinary & Medicine	1 200	Other receipts	
Wages	12 101	**CONTRACT WORK**	287
Power & machinery	14 976	**RENT RECEIVABLE**	55
Sundries	9 016	**SUNDRIES**	328
Property charges:			
Rents & rates	1 256		
Rented Keep			
Repairs	1 786		
Bank charges & interest	1 426		
Other interest	389		
Other expenses			
CONTRACT REARING	280	**CLOSING VALUATION**	60 352
PROFIT (Before depreciation)	6 490	**LOSS** (Before depreciation)	
	148 267		148 267
DEPRECIATION Machinery	6 333		
Tenant fixtures	330		
Landlord fixtures			
PROFIT		**LOSS**	173

DISPOSAL OF FUNDS

	Actual £	Budget £	Update £
PROFIT (Before depreciation)	6488		
Decrease in valuation	9040		
Increase in creditors	1913		
Decrease in debtors	617		
Capital sales	129		
Capital grants			
Capital introductions	173		
Private income			
Transfers from reserves			
VAT income	4701		
Decrease cash balance & profit on land sale			
TOTAL (A)	21 148		
LOSS (Before depreciation)			
Increase in valuation			
Decrease in creditors	2 162		
Increase in debtors			
Machinery purchases	960		
Other capital purchases			
Loan repayment	173		
Capital withdrawals			
Private expenditure	9769		
Tax	1 142		
Transfers to reserves			
VAT payments	4386		
Increase cash balance & loss on land sale			
TOTAL (B)	18592		
SURPLUS (A - B)	2556		
OVERDRAFT Opening Bank Balance	-9495		
OVERDRAFT Closing Bank Balance	-6937		

BALANCE SHEET as at 31 MARCH 1985

Previous year £	FIXED ASSETS	Plus purchases	less sales & grants	less depreciation	£
331 500	Freehold of Farm				331 500
	Landlord fixtures				
2 200	Tenant fixtures			330	1 870
24 500	Machinery	960	129	6 333	18 998
28 010	Breeding Livestock Valuation				29 890
386 210	**TOTAL FIXED ASSETS**				382 258
	CURRENT ASSETS				
5 312	Debtors				4 695
34 170	Other livestock valuation				25 880
5 105	Crops & Stores valuation				4 582
2 107	Tillages valuation				
	Bank balance & deposits				
	Reserves & cash in hand				
46 694	**TOTAL CURRENT ASSETS**				35 157
432 904	**TOTAL ASSETS**				417 415
	CURRENT LIABILITIES				
6 759	Creditors				4 597
9 495	Bank overdraft				6 937
16 254	**TOTAL CURRENT LIABILITIES**				11 534
	DEFERRED LIABILITIES				
	Mortgages				
	Hire purchase loans				
7 000	Private loans				7 000
	Bank account loans				
	Deferred payment loans (MMB)				
7 000	**TOTAL DEFERRED LIABILITIES**				7 000
23 254	**TOTAL LIABILITIES**				18 534
409 650	**NET WORTH**				398 831
432 904					417 415

DAIRY HERD PAGE 1

RETURNS		Herd £	Per Cow £	Budget £
Milk sold	316989 Litres	47694		
Milk retained	2532 Litres	381		
TOTAL MILK	319521 Litres	48075	809.3	
Calves sold	4	228		
Calves retained	60	3600		
TOTAL CALVES	68 – 4 Died.	3828	64.4	
TOTAL RETURNS		51903	873.8	
VARIABLE COSTS Purchased concs.	62.89 Tonnes	8682	146.2	
Home grown concs.	9.72 Tonnes	1166	19.6	
Roughages		1275	21.5	
Veterinary & Medicine		934	15.7	
Office expenses		2		
Home grown straw		4	0.1	
Herd replacement cost		2561	43.1	
Miscellaneous		1635	27.5	
TOTAL VARIABLE COSTS		16259	273.7	
MARGIN		35644	600.1	

KEY FIGURES		Budget
Average number	59.4	
Yield per cow (litres)	5379	
@ pence per litre	15.05	
@ £ per calf (sold)	57	
@ £ per calf (retained)	60	
kg concs/cow	1222	
@ £ per tonne	135.6	
Marg/cons (£/cow)	643.5	
Margall feed (£/cow)	622	

Replacement rate %	31
Summer milk %	50
Dry cow %	13
Calving %	
Kg/Litre-winter	
Kg/Litre-summer	
Kg/Litre-year	0.23

DAIRY HERD Page 2

Cow Numbers	Calvings	Milk Produced (litres)	Month
61	1	26 640	APL
59	5	30 412	MAY
59		27 203	JUN
57	7	26 832	JUL
59	5	26 403	AUG
60	5	22 608	SEP
57	7	25 402	OCT
57	10	26 500	NOV
60	6	28 771	DEC
62	8	27 386	JAN
62	5	25 269	FEB
60	8	26 095	MAR

Cow Numbers Budget			
IN Purch	Trans	OUT	No. at end of month

Average	Totals	
59.4	67	319 521

Totals			Average

Dairy herd stock account (inc. Bulls)	No.	£/head	Value £
Opening valuation	61	400.0	24 400
Purchases			
Transfers in	20	500.0	10 000
TOTAL	81		34 400
Closing valuation	63	400.0	25 200
Sales	17	390.5	6 639
Deaths	1		
Transfers out			
TOTAL	81		31 839
HERD REPLACEMENT COST			2 561

	BUDGET	
No.	£/head	Value £

LIVESTOCK Replacements 1

		Total £	£/head	Budget £	At £ per head Actual	At £ per head Budget
Closing Valuation		10550				
Stock sales	6	2094			349.0	
Subsidies/produce sales						
Transfers out	20	10000			500.0	
SUB TOTAL		22644	369.4			
Opening Valuation		10925				
Stock Purchases						
Transfers in	9	540			60.0	
Transfers in of milk						
SUB TOTAL		11465	187.0			
GROSS OUTPUT		11179	182.4			
VARIABLE COSTS					Kg/head	
Purchased concs	12.84 T	2160	35.2		209.5	
Home grown concs	T				£/tonne	
Roughages		347	5.7		168.3	
Veterinary & Medicine		37	0.6			
Office expenses						
Home grown Straw		7	0.1			
Miscellaneous		127	2.1			
TOTAL VARIABLE COSTS		2678	43.7			
MARGIN		8501	138.7			
Average Number	61.3					

Age in Months	Opening Valuation			Closing Valuation			Budget Closing Valuation		
	Number	£/head	Value £	Number	£/head	Value £	Number	£/head	Value £
Bulls									
Over 23	6	400	2400	5	400.0	2000			
18-23	8	300	2400	8	300.0	2400			
12-17	17	200	3400	26	200.0	5200			
9-11	4	150	600	2	150.0	300			
6-8	4	100	400	5	100.0	500			
3-5	17	75	1275	2	75.0	150			
0-2	9	50	450						
TOTAL	65		10925	48		10550			

LIVESTOCK BEEF 1

		Total £	£/head	Budget £	At £ per head Actual	At £ per head Budget
Closing Valuation		15330				
Stock sales	61	24972			409.0	
Subsidies/produce sales						
Transfers out						
SUB TOTAL		40302	510.2			
Opening Valuation		23245				
Stock Purchases						
Transfers in	51	3060			60.0	
Transfers in of milk						
SUB TOTAL		26305	333.0			
GROSS OUTPUT		13997	177.2			
VARIABLE COSTS					Kg/head	
Purchased concs	12.60 T	2021	25.6		159.5	
Home grown concs	T				£/tonne	
Roughages		842	10.7		160.4	
Veterinary & Medicine		37	0.5			
Office expenses						
Home grown straw		7	0.1			
Miscellaneous		722	9.1			
TOTAL VARIABLE COSTS		3629	45.9			
MARGIN		10368	131.2			
Average Number	79.0					

Age in Months	Opening Valuation			Closing Valuation			Budget Closing Valuation		
	Number	£/head	Value £	Number	£/head	Value £	Number	£/head	Value £
Bulls									
Over 23	15	425.0	6375	6	425.0	2550			
18-23	17	380.0	6460	15	380.0	5700			
12-17	21	300.0	6300	7	300.0	2100			
9-11	4	200.0	800	3	200.0	600			
6-8	11	150.0	1650	10	150.0	1500			
3-5	10	100.0	1000	18	100.0	1800			
0-2	11	60.0	660	18	60.0	1080			
TOTAL	89		23245	77		15330			

BREEDING LAYER POULTRY

RETURNS		Total £	£/head	Budget £	At £ per head Actual	At £ per head Budget
Change in value of						
TOTAL RETURNS						
VARIABLE COSTS					Kg concs/head	
Purchased concs.	1.18 T	277				
Home grown concs	T				£/tonne	
Roughages					236.2	
Veterinary & Medicine						
Office expenses						
Home grown straw						
FLOCK Replacement cost						
Miscellaneous costs						
TOTAL VARIABLE COSTS		277				
MARGIN		-277				
Average number						

STOCK ACCOUNT	Number	£/head	Total £	BUDGET Number	BUDGET £/head	BUDGET Total £
Opening Valuation	20	2.0	40			
Purchases						
Transfers in						
TOTAL	20		40			
Closing Valuation	20	2.0	40			
Sales						
Deaths						
Transfers out						
TOTAL	20		40			
FLOCK Replacement cost						
Opening valuation						
Closing valuation						
Change in valuation						

BREEDING EWES

RETURNS		Total £	£/head	Budget £	At £ per head Actual	At £ per head Budget
LAMBS SOLD	131	4 570			34.9	
LAMBES RETAINED	10	345			34.5	
WOOL SALES/SUBSIDIES		232				
Change in value of LAMBS		520				
TOTAL RETURNS		5 667	59.9			
VARIABLE COSTS					Kg concs/head	
Purchased concs.	4.43 T	606	6.4		49.9	
Home grown concs	0.29 T	34	0.4		£/tonne	
Roughages		65	0.7		135.9	
Veterinary & Medicine		191	2.0			
Office expense						
Home grown straw					REP. RATE %	
FLOCK Replacement cost		783	8.3		36.2	
Miscellaneous costs		495	5.2		MORTALITY %	
TOTAL VARIABLE COSTS		2 174	23.0		0.9	
MARGIN		3 493	36.9			
Average number		94.6				

STOCK ACCOUNT	Number	£/head	Total £	BUDGET Number	BUDGET £/head	BUDGET Total £
Opening Valuation	93	36.5	3 390			
Purchases	45	42.5	1 913			
Transfers in	6	40.8	245			
TOTAL	144		5 548			
Closing Valuation	109	36.2	3 950			
Sales	27	30.2	815			
Deaths	8					
Transfers out						
TOTAL	144		4 765			
FLOCK Replacement cost			783			
LAMB ACCOUNT						
Opening valuation	18	10.0	180			
Closing valuation	70	10.0	700			
Change in valuation	52		520			

GRASS & FORAGE CROPS KALE FORAGE

	Total £	Budget £	Total £	Budget £
Sales				
Let Keep				
Change in valuation				
CROP OUTPUT				
VARIABLE COSTS Fertilisers				
Seeds	96			
Sprays	157			
Casual labour				
Contract & Hire	94			
Rented Keep				
Miscellaneous				
TOTAL VARIABLE COSTS	347			
NET FORAGE COSTS	347			
Hectares	3.4			
N Kg/Ha				
P Kg/Ha				
K Kg/Ha				
Opening valuation				
Closing valuation				
Valuation Change				
Opening tillage				
Closing tillage				
Tillage change				

LIVESTOCK UNITS	Total	Budget	FORAGE HECTARES	Total	Budget
Dairy cows			Grassland		
Dairy replacements			Other forage crops		
Other grazing cattle			Rough grazing equivalent		
Sheep			+ Rented Keep		
			- Let Keep		
			ADJUSTED FORAGE AREA		
TOTAL LIVESTOCK UNITS					
STOCKING DENSITY LSU/ha					

GRASS & FORAGE CROPS GRASS

	Total £	Budget £	Total £	Budget £
Sales				
Let Keep				
Change in valuation	300			
CROP OUTPUT	300			
VARIABLE COSTS Fertilisers	12 197			
Seeds	721			
Sprays	103			
Casual labour				
Contract & Hire	281			
Rented Keep				
Miscellaneous	478			
TOTAL VARIABLE COSTS	13 780			
NET FORAGE COSTS	13 480			
Hectares	80.5			
N Kg/Ha	313.4			
P Kg/Ha	64.5			
K Kg/Ha	90.9			
Opening valuation	1 160			
Closing valuation	1 460			
Valuation Change	300			
Opening tillage	2 107			
Closing tillage				
Tillage change	-2 107			

LIVESTOCK UNITS	Total	Budget	FORAGE HECTARES	Total	Budget
Dairy cows	59.4		Grassland	80.5	
Dairy replacements	33.4		Other forage crops	3.4	
Other grazing cattle	41.9		Rough grazing equivalent		
Shep	15.5		+ Rented Keep		
			- Let Keep		
			ADJUSTED FORAGE AREA	83.9	
TOTAL LIVESTOCK UNITS	150.2				
STOCKING DENSITY LSU/ha	1.79				

BUDGET WORK SHEET

	Current	Budget	Update	Notes
OVERHEAD COSTS				
Regular Wages	12060			
Casual Wages				
Machinery repairs	2891			
Leasing	2212			
Fuel	3527			
Electricity	2825			
Contrac	1864			
Tax & insurance	810			
Water	705			
Insurance	1420			
Office	3381			
Lime	170			
Sundries	879			
Rent	360			
Rented Keep				
Rates	896			
Property repairs	1786			
H.P.				
A.M.C.				
Other	1815			

VALUATION CHANGE			
Cows			
Cattle			
Arable crops			
Forage crops			
Stores			
Tillages			
NET CHANGE (±)			

PRIVATE EXPENDITURE			

CAPITAL REPAYMENTS			

CAPITAL EXPENDITURE	Current	Budget	Update

CAPITAL SALES/GRANTS			

FORWARD BUDGET

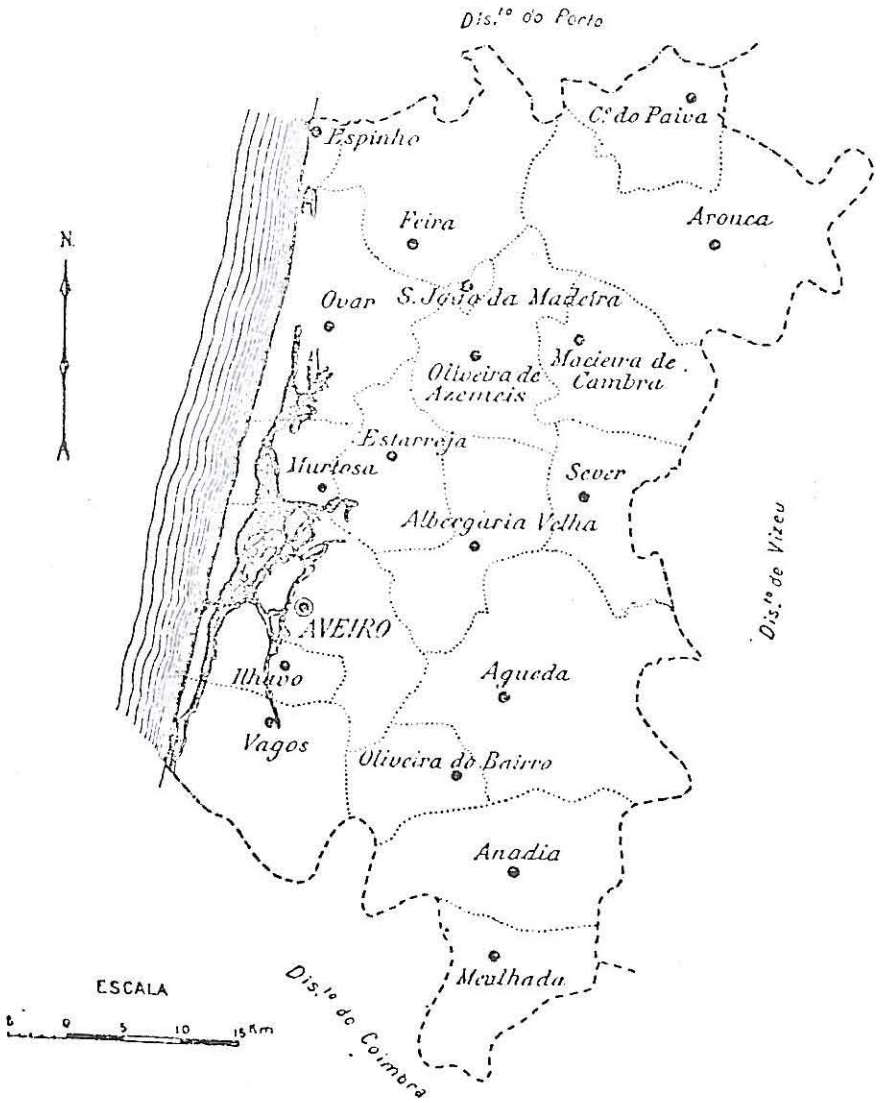
ENTERPRISE	No.	Gross Margin	Total £	No.	Gross Margin	Total £
DAIRY COWS 1	59.4	600.0	35644			
REPLACEMENTS 1	61.3	138.6	8500			
BEEF 1	79.0	131.2	10367			
EWES	94.6	36.9	3493			
LAYER POULTRY			-277			
Less Forage Costs			13827			
Other receipts			670			
Adjustment			-418			
INCOME less Variable Costs			44152			
Wages			12124			
Power & Machinery			14129			
Sundries			6554			
Property Changes			3042			
Bank charges & interest			1426			
Other interest			389			
TOTAL OVERHEAD COSTS			37664			
PROFIT (Before depreciation)			6488			

3 – Inquéritos e localização das explorações visitadas

As explorações visitadas fazem parte dos concelhos de Oliveira de Azemeis e Murtosa do distrito de Aveiro pertencente à Beira Litoral (mapa 1)

MAPA 1

Distrito de Aveiro com os seus concelhos



O distrito de Aveiro tem 19 concelhos: Arouca, Castelo de Paiva, Espinho e Feira, que pertencem à província do Douro Litoral, Águeda, Albergaria – a – Velha, Anadia, Aveiro, Estarreja, Ilhavo, Mealhada, Murtosa, Oliveira de Azemeis, Oliveira do Bairro, Ovar, S.João da Madeira, Sever do Vouga, Vagos e Vale de Cambra, que pertencem à província da Beira Litoral.

Da rede hidrográfica deste distrito fazem parte o rio Vouga e seus afluentes e o rio Paiva.

Constituem fontes de rendimento destas populações a produção de sal, exportado em larga escala; a pesca de arrasto, muita dela empregada na Industria de conservas em Ovar e Espinho.

Fazem parte também da economia desta região os cereais, os vinhos de pasto e espumosos (região da Bairrada), e consequência da abundância de pastagens, a criação de gados, dando lugar a industrias, suas derivadas, de lacticínios, notavelmente desenvolvidas nos concelhos de Castelo de Paiva, Vale de Cambra e Estarreja.

Há ainda a referir industrias de lanificios, chapelaria, e cerâmica.

Contribuem também como fontes de riqueza as minas de cobre do Palhal e Telhadela, as de chumbo do Braçal e Malhada, e os jazigos de caulino do concelho da Feira.

Os inquéritos feitos aos agricultores foram baseados nos seguintes pontos elaborados pelo Sr. Engº.Peter Van Zeller:

Outline For Case Studies

1. **Backgrownd**: Farm's history (past few years, reasons which were behind going into wilking, family intentions for the future, owver and/or manager aunning the farm, etc).
2. **Evolution of productivity** (animal and labour and land availability).
3. **Present factors of the farm**:
   - Infraestructure
   - Stock
   - Management capability
   - Production e productivity, etc.
4. **Restrictions and potencial for improvement**
   - Discours in relation read of the points in nº 3.
5. **Strategy for improvements**
6. **Global apprecation y farm's viability under EEC'S conditions**

Nos seguintes quadros resumem-se a situação actual e os inquéritos feitos em 3 explorações visitadas:

BREVE HISTORIA DA EXPLORAÇAO

Carregosa (Oliveira de Azeméis)	S.Martinho de Gandara (Oliveira de Azeméis)	Murtosa
Esta exploração pertenceu ao Ex.mo Sr. Bispo de Coimbra que a doou a um sobrinho, pai do actual proprietário. Teve inicio como exploração pecuária no ano de 1962 com 25 vacas Holandesas importadas. Apartir desse ano práticamente nunca mudou de familia, estando sempre explorada por conta do proprietário. Actualmente a exploração possui uma dimensão de 39 ha e um efectivo total de 98 cabeças. Possui 2 pessoas permanentes e 1 gestor (Engº.Zootécnico).	Esta exploração teve inicio no ano de 1976. Está a ser explorada e gerida pelo próprio proprietário. Possui uma dimensão total de 6 ha e, um efectivo de 63 cabeças.	Até 1964 a exploração estava a ser explorada pelo próprio patrão. Tinha uma dimensão de 6 ha e um efectivo total de 30 cabeças. Desde o ano de 1963 mudou-se o sistema para arrendamento, aumentando-se a dimensão para 19 ha e 128 animais. É de salientar que aqui os solos são pouco férteis devido à água da Ria de Aveiro. Os solos são muito ricos em fósforo e potássio, bastante ácidos necessitando de fazer calagens todos os anos e, adubações adquadas. Actualmente está a ser explorada pelo rendeiro.

DIMENSAO DA EXPLORAÇAO E REPARTIÇAO DA SUPERFICIE TOTAL

Carregosa (Oliveira de Azeméis)	S. Martinho de Gandra (Oliveira de Azeméis)	Murtosa
Actualmente esta exploração tem 39 ha distribuídas do seguinte modo: –35 ha destinados à produção de forragens –2,5 ha destinadas à produção vitícola –1,5 ha destinados à produção hortícola . Para este ano vão fazer parte da exploração mais 12,5 ha que estavam alugados a um aviário. A sua utilização será a seguinte: –7,5 ha – irão ser utilizados para produção de azevém para corte e, possivelmente silagem. –5 ha – irão ser utilizados para fazer milho silagem	A dimensão total desta exploração são 6 ha, distribuídos por 17 parcelas e, distantes do assento de lavoura em média de 500 - 700 m. Destes 6 ha: – 5 ha estão destinados a produção de milho silagem; – 1 ha destinado à produção hortícola	Esta exploração possui 19 ha distribuídos do seguinte modo: – 14 ha são explorados para produção de milho silagem com rotação com azevém para silagem ou cortes para fornecer em verde aos animais. – 5 ha são destinados a prados permanentes

EFECTIVO ACTUAL

Carregosa (Oliveira de Azeméis)		S. Martinho de Gandara (Oliveira de Azeméis)		Murtosa	
Vacas	46	Vacas	35	Touros	1
Restantes animais	52	Novilhas	12	Vacas	40
Total	**98**	Bezerras	12	Novilhos	9
		Vitelos	4	Novilhas	33
Das 46 vacas:				Bezeros	13
		Total	**63**	Bezerras	9
– 86% estão em lactação				Vitelos	5
– 20% com diagnóstico de gestação positivo				Vitelas	18
– 52,3% estão cobertas				**Total**	**128**
– 13,6% ainda não estão cobertas					
– 0% – vazias com problemas					

SISTEMA PRODUTIVO ACTUAL

Careregosa (Oliveira de Azeméis)	S. Martinho de Gandara (Oliveira de Azeméis)	Murtosa
1) Produção de leite 2) Importação de novilhas, umas para vender após umas semanas outras para substituir vacas no efectivo da própria exploração. 3) Recria vitelos e vitelas	1) Produção de Leite 2) Recria das novilhas nascidas na própria exploração 3) venda dos vitelos aos 8 dias	1) Produção de Leite 2) Faz recria de todas as novilhas nascidas na exploração com a finalidade de substituição visto aqui serem muitas vacas adultas refugadas devido à doença peripneumonia. 3) Os vitelos são recriados com destino ao abate. Este é feito normalmente quando atingem 400 - 500 Kg de carcaça, isto é, com idade média de 2 anos Quando há necessidade: de dinheiro; de alojamento para ceder a outros animais ou quando há falta de alimentos o abate é feito mais cedo.

PRODUÇÃO DE FORRAGENS

Carregosa (Oliveira de Azeméis)	S. Martinho de Gandara (Oliveira de Azeméis)	Murtosa
. 600 toneladas de silagem de milho . 400 toneladas de silagem de erva (Aveia x Azevém Castelhano x Trevo da Pérsia, ou Aveia x Azevém Castelhano x Ervilhaca) . Pastagens	. 400 toneladas de silagem . 200 toneladas de erva verde (Azevém x Aveia ou Ervilhaca)	. 840 toneladas de silagem de milho (60t por ha com 28% M.S.). . 150 m3 de silagem de erva (cortada na fase de emborrachamento com18% de M.S.). . Pastagens.

ALIMENTAÇÃO ANIMAL

Carregosa (Oliveira de Azeméis)	S. Martinho de Gandara (Oliveira de Azeméis)	Murtosa
. 600 toneladas de milho silagem desde Outubro a Abril (7,5 Meses), cerca de 30 – 32 Kg por vaca, por dia. . Ferrã entre os meses de Abril e Maio. . 400 toneladas de silagem de erva (Aveia x Azevém x Trevo da Pérsia - ou no caso de terrenos com solos francos Aveia x Azevém x Ervilhaca) durante os meses de Maio, Junho e Julho. ."Drech" ou massa de cerveja em média 8-9 Kg /dia / cabeça. Este alimento é fornecido de manhã, a todos os animais durante todo o ano. . Concentrado comercial.	. 400 toneladas de milho silagem . 200 toneladas de erva silagem de (Azevém x Aveia x Ervilhaca). A silagem é dada 1 vez por dia durante todo o ano em média 15 Kg/ / dia/vaca. . Feno (feno semeado de Ervilhaca x Aveia x Azevém). . palha (trigo com tendência a aveia). . 400 gr de concentrado comercial por cada litro de leite produzido . Suplementos vitaminicos em pó.	. 840 toneladas de milho silagem . 150 m3 de silagem de erva . Palha . Soro e leite (9000 litros/semana) durante todo o ano e todo o efectivo. . Concentrado. Este é feito na exploração (excepto para os vitelos) nas seguintes proporções: – massa de cerveja – 900 Kg/dia – bagaço de girasol – 127 Kg/dia – bagaço de soja – 69 Kg/dia – mandioca – 163 Kg/dia – aveia – 190 Kg/dia . Erva verde – É dada às vacas durante todo o ano excepto nos meses de Novembro e Dezembro e, às novilhas nos últimos meses de gestação.

ALIMENTAÇÃO ANIMAL
(continuação)

Carregosa (Oliveira de Azeméis)	S. Martinho de Gandara (Oliveira de Azeméis)	Murtosa
Em 1987 era fornecido em média 368 gr de concentrado por cada litro de leite produzido. Em 1986 era fornecido em média 410 gr de concentrado por cada litro de leite produzido. Pastagens		.Pastagens .Os novilhos não comem silagem. As novilhas comem além da silagem erva verde nos últimos meses de gestação. Os vitelos são retirados das mães logo ao nascer. Os primeiros 15 dias estão no viteleiro, depois passam a estar em grupos durante 15 dias. Quando começam a comer ração suficiente tira-se-lhe o leite e juntam-se ao grupo dos vitelos que já comem bem. Os vitelos só bebem 2,5 - 3 litros de leite por dia fornecido de uma só vez. O concentrado é o comercial (B310) e fornecido "ad – libitum".

TRABALHADORES

Carregosa (Oliveira de Azeméis)	S. Martinho de Gandara (Oliveira de Azeméis)	Murtosa
– 2 pessoas permanentes para efectuar operações no estábulo (ordenha, alimentação) e trabalhos na quinta (sementeiras e colheitas de forragens produtos hortícolas e vitícolas). – 5 pessoas de 2 em 2 dias para cortar e transportar mato para as camas dos animais. – 1 gestor (Engº Zootécnico)	– 3 pessoas permanentes	– 5 pessoas permanentes: – 2 só para efectuar trabalho na ordenha – 3 para efectuar o restante trabalho inerente à exploração

PROBLEMAS SANITÁRIOS

Carregosa (Oliveira de Azeméis)	S. Martinho de Gandara (Oliveira de Azeméis)	Murtosa
– Problemas de infertilidade – Retenção de secundinas – Tem tido problemas de mamites mas só no Inverno(isso deve-se ao sistema de utilização de tojo e serrim nas camas dos animais) – Da interpretação do teste californiano para detecção de mamites na fase sub-clinica dá em média 130 000 a 200 000 cl/ml.	– Não refere problemas sanitários – Da interpretação do teste Californiano para detecção de mamites na sua fase sub-clinica dá em média 95 000 a 100 000 cl/ml	– Houve problemas de peripneumonia – Quando a ordenha era manual tinham problemas de mamites. De à 3 anos para cá mudou-se para o tipo de ordenha mecânica tendo-se assim reduzido o seu número. Actualmente da interpretação do teste Californiano para detecção de mamites na sua fase sub-clinica dá em média 200 000 a 300 000 cl/ml

MELHORAMENTO ANIMAL E FUNDIARIO

Carregosa (Oliveira de Azeméis)	S. Martinho de Gandara (Oliveira de Azeméis	Murtosa
. Melhoramento animal: – Através de importação de 26 novilhas Inglesas provenientes de uma exploração com altos níveis de produção – Por selecção de vacas com produção mais elevadas refugando todas as que tivessem produções inferiores a 4000 litros de leite por ano. – Mudando o sistema alimentar. A ração à base de palha foi substituída por silagem. . Melhoramento fundiário: – construções: a) remodelação do estábulo b) construção de silos.	. Melhoramento animal : – Aumentando a taxa de substituição apartir de um maior número de animais recriados e seleccionados na exploração . Melhoramento fundiário: – Construções : a) mudou-se o sistema de estabulação permanente para estabulação livre com colar Americano b) construção de silos (2 com capacidade de 240 m3 cada e, outro com capacidade de 95 m3).	.Melhoramento animal – Aumentando a taxa de substituição. . Melhoramento fundiário – Construções: a) remodelação dos estábulos quer para fêmeas adultas quer para vitelos e novilhas. b) construção de silos.

ALGUNS DADOS PRODUTIVOS E REPRODUTIVOS

Carregosa (Oliveira de Azeméis)	S. Martinho de Gandara (Oliveira de Azeméis)	Murtosa
– Inseminação. A inseminação utilizada, é a artificial. Quando esta é impossivel ou muito dificil é utilizada a natural. – Taxa de substituição. A taxa de sustituição é muito variável. Esta varia com a quantidade de novilhas importadas e não transacionadas – Produção de leite. A produção de leite média por vaca é de 5600 litros. .O custo total por litro de leite produzido é de 32$00.	– Inseminação . A inseminação usada é a artificial. – Data da 1ª. cobrição. Normalmente a 1ª. cobrição é efectuada quando as novilhas atingem um peso médio 350Kg isto é, com uma idade média de 14 meses. – Idade ao desmame . A idade ao desmame é aos 2 meses. – Produção de leite. A produção de leite média por vaca é de 6000 litros.	– Inseminação. A inseminação utilizada é a artificial. Quando esta é muito dificil utiliza-se a cobrição natural. – Produção de leite. A produção média do estábulo é de 19,5 litros por vaca ou seja 4800 litros por vaca.

EVOLUÇAO DA PRODUÇAO DE LEITE NOS ULTIMOS ANOS

Carregosa (Oliveira de Azeméis	S.Martinho de Gandara (Oliveira de Azeméis)	Murtosa
No ano de 1983 no efectivo de 25 vacas a média de produção de leite por vaca foi de ..... 3.971 litros, No ano de 1984 no efectivo de 23 vacas a média de produção de leite por vaca subiu para ..... 4.462 litros; No ano de 1986 essa média continuou a subir para ..... 5.025 litros; No ano de 1987 no efectivo de 36 vacas adultas e 10 de 1º. parto a média de produção de leite por vaca foi de 5.671 litros.	A produção de leite tem vindo a aumentar devido: – Melhoria no maneio alimentar; – Selecção de melhores novilhas. Actualmente a média de produção de leite é em média 6000 litros por vaca.	A produção de leite tem aumentado nos últimos anos, sendo a média a actual de 4800 litros por vaca.

SUBSÍDIOS E FINANCIAMENTO

Carregosa (Oliveira de Azeméis)	S. Martinho de Gandara (Oliveira de Azeméis)	Murtosa
Todos os investimentos tem sido feitos através de recursos da própria exploração. Em Setembro de 1986 fez-se um projecto de Investimento mas não foi aprovado pelos Serviços Oficiais. Os subsídios recebidos são: – 1.000$00 por vaca, por estarem inscritas no livro geneológico da Proleite. – 5.000$00 por parto de cada novilha inscrita no livro genealógico da Proleite. – 10.000$00 por parto de cada novilha dado pelos Serviços Regionais de Agricultura. – Subsídio de gasóleo atribuído pelos Serviços oficiais de Agricultura .	– Esta exploração obteve um financiamento pelos Serviços oficiais para executar um projecto de investimento que teve início em 1987 e termina em 1997, em que: – Os 2 primeiros anos só paga juros. – Os restantes anos paga amortização mais juros. Os subsídios recebidos por esta exploração são os mesmos que os obtidos pela exploração de Carregosa.	– Os investimentos desta exploração foram feitos através de seus próprios recursos. – Os subsídios recebidos são os mesmos que os obtidos pela exploração de Carregosa.

PLANOS DA EXPLORAÇAO PERANTE A NOSSA ENTRADA NA C.E.E.

Carregosa (Oliveira de Azeméis)	S. Martinho de Gandara (OLiveira de Azeméis)	Murtosa
1) Reduzir o consumo de concentrado por litro de leite produzido para 330gr. 2) Diminuia a quantidade de mão-de-obra. 3) Remodelar as actuais instalações para cubiculos individuais (as actuais tem 23 anos). 4) Aumentar o efectivo para 50 vacas adultas 5) Aumentar a produção de leite por selecção dos animais com maiores produções.	1) Aquisição de terreno 2) Diminuir a recria de novilhas 3) Aumentar o efectivo para 40 vacas.	1) Aumentar a produção de leite para poder ter quotas altas quando estas forem impostas pela CEE. Este agricultor acha que : – Se deve aumentar o consumo Nacional leite. – A nossa produção pode aumentar . – Não terá problemas com a nossa entrada na CEE.

SUGESTOES DO SR. ENGº. PETER VAN ZELLER

Carregosa (OLiveira de Azeméis)	S. Martinho da Gandara (Oliveira de Azeméis)	Murtosa
1 – Estabilizar o efectivo o mais depressa possivel. 2 – Melhorar a produção de leite para que, se vier o sistema de quotas, o corte na produção não seja tão drástico 3 – Diminuir o número de trabalhadores reduzindo-os ao número de 2 4 – Diminuir o consumo de concentrados.	1 – Estabilizar o efectivo o mais depressa possivel. 2 – Aumentar a produção 3 – Reduzir o consumo de concentrados.	1 – Aumentar a produção.

4. Cálculos Contabilisticos e Interpretação dos resultados obtidos através dos dados colhidos nos inquéritos.

Através dos dados colhidos nos inquéritos só foi possivel fazer os cálculos contabilisticos para a exploração de Carregosa.

Da análise do balanço e das contas (quadro 1 e 2) conclui-se que esta exploração teve um saldo positivo, ou seja lucro de 1 628 994$50. É com esta quantia que o empresário pode:

– melhorar a qualidade de vida;

– pagar os impostos;

– fazer investimentos;

– fazer todas as despesas.

Se este valor fosse negativo, teria que fazer um novo orçamento e fazer a análise custo/beneficio e ver se valia a pena ou não investir. Apartir daí teria que se fazer uma previsão das receitas e despesas mês a mês durante todo o ano. Com base nesta previsão, teriamos que fazer novo balanço.

5. Conclusões

Os agricultores inquiridos não estão muito preocupados com possiveis dificuldades que possam surgir na produção de leite devido à nossa entrada na CEE.

Contudo, estão a aumentar a produção de leite quer através de uma maior selecção das melhores vacas quer aumentando o efectivo para que, possam ter quotas altas se estas vierem a ser impostas pela CEE.

O Sr. Engº. Peter Van Zeller apresentou aos agricultores o problema que ocorreu em Inglaterra em 1984, levando muitos agricultores a desistir da exploração leiteira, quando o sistema de quotas foi imposto. Aconselhou também os agricultores a aumentar o mais rápido possível a produção, diminuir o consumo de concentrados e reduzir a mão-de-obra.

QUADRO 1

BALANÇO: Quinta Costeira – Carregosa – Oliveira de Azeméis.

1986	ACTIVO BENS IMÓVEIS:	MAIS COMPRAS	MENOS SUBSIDEOS E VENDAS	MENOS DEPRECIAÇÃO	1987
64 920 600$	Terra	–	–	–	64 920 600$
	Melhoramentos fundiários imóveis	–	–	–	–
	Melhoramentos fundiários terra	–	–	–	–
2 805 067$	Maquinaria	–	–	411 484$50	2 393 582$
8 400 000$	Vacas e Touros	–	–		9 200 000$
76 125 667$	TOTAL BENS IMÓVEIS	–	–	411 484$50	76 514 183$
	BENS MÓVEIS:				
–	Devedores				–
2 304 000$	Restantes animais				5 074 000$
2 352 600$	Sementes + adubos + alimentos + químicos armazenados + stocks				2 680 300$
–	Sementes e adubos incorporados na terra				283 395$
4 656 600$	TOTAL DE BENS MÓVEIS				8 037 695$
80 782 267$	TOTAL DE BENS MÓVEIS E IMÓVEIS				84 551 878$

1986	PASSIVO	1987
	Passivo corrente:	
–	Contas a pagar a credores	298 000$
–	Dinheiro que se deve ao banco ou letras a pagar	–
	Passivo a longo prazo:	
	Hipotecas, amortizações, etc.	–
	TOTAL PASSIVO	298 000$
80 782 267$	ACTIVO MENOS PASSIVO	84 253 878$

Lucro = 84 253 878$ - 80 782 267$= 3 471 611$00

QUADRO 2 LUCROS E PERDAS = CONTAS (Janeiro 1987/Janeiro 1988)

Quinta da Costeira: Carregosa_Oliveira de Azeméis.

Receitas				Despesas			
Venda de animais	3 010 000$00			Princípio do Ano			
Venda de leite	9 962 000$00			Máquinas + animais+ stocks +			
Venda de estrume	390 000$00			Valor dos edifícios *	14 330 067$00	14 330 067$00	
Venda de batata e vinho	662 000$00			Compra de animais	1 502 000$00		
Subsídio de recria e gasóleo	670 000$00			Compra de alimentos	5 032 456$00		
Rendas	480 000$00	15 175 075$00		Compra de sementes	652 770$00		
				Compra de adubos	657 120$00		
				Compra de produtos químicos	130 800$00		
FIM DO ANO				Compra de produtos veterinários			
Máquinas + animais+				e Médico Veterinário	82 400$00		
valor dos edifícios + stocks	17 079 067$00	17 079 067$00	32 254 142$00	Salários	3 562 550$00		
				Máquinas + energia	1 292 000$00		
				Telefone e seguros	252 000$00		
				Reparação do edifício	1 900 000$00		
				Amortização + Juros	819 500$00	15 883 596$00	
				Lucro antes da depreciação	2 040 479$00		
				Depreciação	411 484$50	411 484$50	
				Lucro	1 629 994$50	1 629 994$50	32 254 142$00

* Excepto valor da terra

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