AN EXPERT SYSTEM FOR SURPLUS FEED ALLOCATION

G J Bishop-Hurley *
P L Nuthall **

* Research Officer
Department of Farm Management

** Reader
Department of Farm Management

Research Report No.228
May 1994

Agribusiness & Economics Research Unit
PO Box 84
Lincoln University
CANTERBURY

Telephone No: (64) (3) 325 2811
Fax No: (64) (3) 325 3847

ISSN 1170-7682
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>(i)</td>
</tr>
<tr>
<td>PREFACE</td>
<td>(iii)</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>(v)</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>(vii)</td>
</tr>
<tr>
<td>CHAPTER 1 INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>CHAPTER 2 RESEARCH ON CONSERVATION AND SUPPLEMENTATION</td>
<td>3</td>
</tr>
<tr>
<td>2.1 Introduction</td>
<td>3</td>
</tr>
<tr>
<td>2.2 Feed Conservation and Feed Surpluses</td>
<td>4</td>
</tr>
<tr>
<td>CHAPTER 3 FACTORS AND RULES IN THE USE OF SURPLUS PASTURE</td>
<td>7</td>
</tr>
<tr>
<td>3.1 Introduction</td>
<td>7</td>
</tr>
<tr>
<td>3.2 Conservation/Surplus Rules</td>
<td>8</td>
</tr>
<tr>
<td>3.3 Weather Related Production Potential Rules</td>
<td>12</td>
</tr>
<tr>
<td>3.4 Animal Condition Rules</td>
<td>13</td>
</tr>
<tr>
<td>CHAPTER 4 FARMER COMMENTS ON THE EXPERT SYSTEM</td>
<td>15</td>
</tr>
<tr>
<td>4.1 Introduction</td>
<td>15</td>
</tr>
<tr>
<td>4.2 Farmers’ Views on the Supplement/Surplus Expert</td>
<td>16</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>21</td>
</tr>
<tr>
<td>APPENDIX 1 Conservation/Surplus Rule Set</td>
<td>23</td>
</tr>
<tr>
<td>APPENDIX 2 Outlook Rule Set</td>
<td>77</td>
</tr>
<tr>
<td>APPENDIX 3 Condition of Stock Rule Set</td>
<td>95</td>
</tr>
<tr>
<td>APPENDIX 4 Supplement/Surplus Expert Explanations</td>
<td>97</td>
</tr>
<tr>
<td>APPENDIX 5 Supplement/Surplus Expert Help</td>
<td>103</td>
</tr>
</tbody>
</table>
## List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Farmers' Importance Ranking on the Factors Used to Determine Stock Condition</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>Farmers' Importance Ranking on the Factors Used to Determine the Weather Outlook</td>
<td>17</td>
</tr>
<tr>
<td>3</td>
<td>Farmers' Importance Ranking on the Factors Used in Determining the Use of Surplus Feed</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>Additional Factors Believed to be Important by the Farmers</td>
<td>19</td>
</tr>
</tbody>
</table>
Preface

Computers are becoming an increasing part of the range of tools available to farmers in carrying out their farm management activities. However, there is a range of utilisation of computers within the farming sector. This Research Report provides an application which farmers would find of value in assisting with decisions regarding feed conservation and feed surplus utilisation. Further publications in this Series present systems applicable to drenching decisions and weaning and a farmer evaluation of the use of this type of computer assistance.

The approach taken is to design an "expert system" which provides responses to farmers on the basis of IF a condition exists, THEN this is the rule to follow. The computer approach is based on inputs by experts in the particular field and those expert views are built into the computer response process. An "expert system" approach is seen as a way of providing management assistance/advice on an "on-call" basis and this helps to improve the overall level of farm management expertise and the utilisation of farm consultant skills.

The Agribusiness and Economics Research Unit is pleased to be associated with this work and to participate in its dissemination through this and future publications.

R L Sheppard
ASSISTANT DIRECTOR

(iii)
Acknowledgements

The assistance of the experts who assisted in the development of the knowledge base (the rules) is gratefully acknowledged. Clearly they (Dr G A G Frengley, Mr N Gow, Mr R Plank and a number of farmers) are an essential part of the system, though the responsibility for the final set lies with the authors.

The farmers that agreed to use and comment on the system also made an extremely valuable contribution and their assistance is also acknowledged.

We would also like to record the help provided by the typist Mrs Judy Derby as she is a significant component of the team, and to Mrs Jan Clark who prepared the manuscript for publication.

The study was funded by AGMARDT and Lincoln University. Their support was, clearly, crucial to the completion of the project.
Summary

The animal grazing industry is a major sector of New Zealand's economy. Managers controlling the utilisation of the nation's massive pasture production tend to make utilisation decisions using experience and intuition in contrast to formal analytical analyses. Yet, when related to the potential, production achieved tends to suggest improvements are possible. That is, greater production is possible with the same resources, or alternatively the same production is possible from a smaller resource input. It appears one of the reasons for the lack of formal planning is the farmers' belief that the work involved is not commensurate with the gains. Thus, if techniques that are simple to use and provide an efficiency gain can be found they clearly have potential. The study discussed in this Report concerns the development of an expert system for a small component of the grazing management problem. It is proposed that such an expert system meets these requirements. This report is one of a series describing several expert systems in the area of grazing management. Another contains an evaluation of these expert systems.

An expert system is a set of knowledge and decision rules, usually computer-based for ease of access and retrieval, gleaned from experts (thus the term 'expert system') and made widely available to decision makers so they can gain the benefits of the 'experts' knowledge and experience. Essentially, creating an expert system involves questioning the experts to find out the factors they observe, and the conclusions they reach given the various values the factors or parameters can take on. This information is then computerised.

Grazing management involves many aspects. A single system that would cover all components would be extremely valuable, but it would be unmanageable. Thus, it needs to be broken into practicable sections. Three problems frequently mentioned by farmers are the selection of weaning date, deciding whether to drench, and deciding when to close an area of pasture for conservation. While there are also many others, the importance, in terms of farmers' comments, of these three meant they were selected for study. This Report contains a description of the conservation/surplus expert system.

While considerable research has been undertaken to understand the nutrient value of conserved feeds, and to explore the effect of supplement feeding on production and profitability, virtually no research into the management of when and how to utilise surplus pasture has been conducted. Yet, these decisions are constantly being made by farmers and recommendations provided by consultants. Thus, unlike the other two systems developed, the set of IF-THEN rules had to be based on farmer and consultant experience rather than research results.

The important factors, rules and explanations resulting from this process are listed in the Appendices. This list is the heart of the system and is the result of all the work. People interested in the conclusions and wishing to improve their decision skills in this area should consult these Appendices.
The acceptability of any system must be judged by the potential users as it is they that decide whether it is useful, not the experts. Consequently, a search was made for sheep farmers with suitable equipment that might be prepared to evaluate the system. Of the approximately 400 farmers that might have helped, 18 finally tested the system and completed an evaluation questionnaire. The others did not reply to an initial request and/or did not have suitable computer equipment.

Eighty-eight per cent agreed with the advice provided, and 94 per cent agreed with the explanations given for each conclusion. In that it is most unlikely to find complete agreement, this must be regarded as a very positive outcome. The farmers did make some comments on how to improve the system - these tended to involve a request for more detail and quantification. This might suggest mixed expert system/data base systems could be worth exploring.
CHAPTER ONE

INTRODUCTION

New Zealand relies heavily on pastoral products for its economic well-being. Approximately $8000 million of its exports (NZ Meat and Wool Board’s Economic Service, 1993) are from pasture, and these are mainly animal products. When compared to all other exports, pastoral products contribute some 45% of the total. Clearly, efficiency in utilising available pasture is crucial to the economic and social benefit of farmers and New Zealanders in general.

When animal output is compared with pasture production from cutting trials (Nuthall and Bishop-Hurley, 1994) it is clear efficiency of pasture utilisation could be improved. Yet few farmers spend time formally calculating feed supply and demand and committing plans to paper. Feed management is very much a matter of experience and mental figuring.

Formal feed budgeting, the business of estimating expected feed supplies and demand and adjusting plans to ensure appropriate animal intake levels period by period, is a well-recognised management technique. The few that use the procedure believe it is extremely valuable (Nuthall and Bishop-Hurley, 1994). Managers, therefore, do have techniques available to help improve the efficiency of feed management, but they are seldom used. When asked why feed management is not formally used, most simply note the benefits do not outweigh the time and effort involved (Nuthall and Bishop-Hurley, 1994). Some might hypothesise, however, that the real reason is a lack of understanding and a dislike for ‘office work’. Given systems that simplified the procedures, perhaps computer-based, the situation may well change. Similarly, related simple systems that help ensure appropriate animal health may assist feeding efficiency.

Even with computerised feed budgeting, and animal health systems, there is still an appreciable time input required, as well as a reasonable knowledge of the procedures. Consequently there could well be a place for simple question and answer systems that in part rely on the farmer’s experience. The study discussed in this Report is one of a series designed to explore this hypothesis.

A likely ‘simple question and answer system’ that many authors believe has promise for assisting farmers’ decision analysis is an ‘expert system’ (Bramer, 1986). Bramer defines an expert system as:

A computing system which consists of organised human knowledge concerning some specific area of expertise, sufficient to perform as a skilful and cost effective consultant.

Effectively, an expert system attempts to mimic an expert and uses the simple methods of an expert - namely observation and questioning, though in a computer system the observation
frequently reduces to additional questions. Expert systems are regarded as being a branch of the general area of artificial intelligence in which machines are used to perform human tasks requiring intelligence.

Clearly, some humans are intuitively very good at managing animal grazing and health—these are the experts. If systems can be devised that capture this expertise and are simple to operate, the resulting computer systems could provide real benefits to producers and still be very easy to use.

There are a large number of decisions to be made when managing animals and their feeding. It is not possible to include all these in one expert system. The particular decision for which a description is contained in this Report is that of utilising surplus pasture. Expert systems for the drenching and lamb weaning decisions are described in other Research Reports. These three decision areas were selected to explore expert systems as they represent different decision types and are frequently mentioned problems (Nuthall and Bishop-Hurley, 1994). They also cover a range of problem types all effecting the efficiency of pasture utilisation.

The procedure in developing an expert system (Forsyth and Naylor, 1986) involves elucidating the rules used by an expert/s when coming to a conclusion, incorporating these into a computer programme, and after checking the completeness of the programme, checking that the rules, and therefore conclusions reached, are generally acceptable (validation). Of course, experts do not all agree, and indeed in many situations a range of answers might provide a similar end result. In the end, if a farmer believes the system is useful in assisting the decision process the expert system must be regarded as being at least adequate. Ironically, a perfect expert system is of little use if the intended users do not in fact use it.

Most expert systems use IF-THEN type rules. IF, for example, there is at least two years hay requirement on hand THEN do not make additional hay but consider buying additional stock as surpluses develop. Developing an expert system, therefore, means finding out all the conditions for a wide range of situations and then incorporating them into a computer based question and answer system.

This report contains firstly a review of the technical factors and research relating to pasture conservation. The development of the associated expert system is then described, and finally results from asking farmers exposed to the system for testing purposes their opinions is reported. The appendices contain a full list of the rules used as well as the explanations provided. It has been found expert systems should provide not only a conclusion, but also an explanation of the conclusion. Experts tend to operate through explanation and so users of expert systems tend to demand the same output.

The package has been given the name ‘Conservation/Surplus Expert System’ as while many farmers comment that one of the difficult decisions is to decide when to close a paddock for conservation, the problem is often wider. Given an actual, or potential, pasture surplus it may in fact be desirable to use this, for example, for improving the condition of the animals, or perhaps for feeding additionally acquired stock. The package has therefore been named for a wider context than simply conservation.
CHAPTER TWO

RESEARCH ON CONSERVATION AND SUPPLEMENTATION

2.1 Introduction

Although pastoral agriculture in New Zealand is based on efficient production and in-situ grazing of pastures, supplements are also important. They are used to fill the seasonal gap between pasture production and animal requirements. In contrast many other countries have developed intensive production systems often including significant periods of animal housing. As a consequence management information from overseas is often not relevant to New Zealand. Care has to be taken when transferring this type of information.

For the purposes of this report conservation will be defined as the process of removing sheep from paddocks (closing the pasture) and, some time later, mowing and removing the feed from the paddock for use in the future. Supplements are then stored feed provided when pasture does not meet the animals’ requirements for a given level of production. Supplementation is the process of feeding the supplements, (conserved feed) to animals. In addition, conservation includes spring, summer or autumn saved pasture that is held over in situ, for later use. This procedure is mainly used in transferring feed from the autumn to the winter or spring as losses at this time are not great in most cases.

While searching through the literature it became clear that most research has been concerned with the effect of supplementation on animal production and performance, rather than on the integration of conservation into management systems. For example, see Gunn, Jones and Sim (1992), and Gunn, Milne, Senior and Sibbald (1992), who looked at the effect supplements have on the reproductive performance of grazing ewes, or Freer, Dove, Axelsen and Donnelly (1988) who investigated the responses of weaned lambs to supplements. See also Leaver (1986) who examined the effect of supplements on intake and animal performance for lactating cows. Intake and the level of production are the focus of these studies on sheep.

In New Zealand the situation is similar with the majority of research being concerned with responses to supplements. Much of this work has been with dairy cows. For example, see Wills and Holmes (1988) where the objective was to measure the effect of supplementation on pasture intake.

It is generally accepted that supplements allow higher stocking rates to be achieved without the fear of running out of grass. The fact remains that many farmers currently conserve feed to make up a feed deficit during the course of the year. These producers are of the opinion that the operation is economic or offers them some other benefit (peace of mind, for
example). One alternative to feed conservation is to have a production system that allows stock numbers to be easily adjusted to reflect pasture growth rates. While in theory this might have appeal, it may be difficult to, at the same time, maintain an adequate cash surplus.

Farmers indicated, through an earlier survey (Nuthall and Bishop-Hurley, 1994), that conservation (including control of surplus feed) is a decision they find difficult to make, or make poorly. To be in a position to supplement pasture the farmer needs to conserve or buy in feed. The remainder of this report then will concentrate on feed conservation and dealing with pasture surpluses.

2.2 Feed Conservation and Feed Surpluses

As indicated previously the research emphasis has been on supplements and their effect on animal performance and production. Little information exists on conservation and even less on the conservation decision and the factors affecting it. Sims (1983) and Supplementary Feeding (1980) provide technical information on fodder conservation.

Mackie, Yackiminie and Hunter (1986) report on a trial with the aim of examining the benefits of conservation and supplementation for grazing beef cattle in the northern hemisphere. They report on the effect conservation/supplementation has on production and financial performance. They conclude by saying that grazing buffers can assume an insurance role, allowing high stocking rates to be achieved without the fear of running out of grass. In this trial financial returns were improved by the use of grazing buffers.

Another trial which looked at feed conservation and supplementation for cattle in Queensland, Australia, is reported by Scattini (1984). In this trial the benefit from making and feeding hay was small and the economics uncertain. They found the pasture conditioning effect (improved quality) of hay making may influence animal production as much as feeding the hay in the autumn.

Wright, Scott, Bryant, and Hockings (1980) refer to a report on a trial where dairy cattle stocked at high rates are fed home produced maize silage. Another similar trial fed dairy cattle purchased concentrates (Hutton, 1968). In both trials higher production was obtained but the economics were uncertain. However, it should be remembered that as the price of feed changes in relation to animal products the amount of supplements which should be used will vary (Wright et al., 1980).

Wright et al. (1980) consider supplementary feeding on a whole farm scale in New Zealand. First they discuss the need for supplements and how to determine their best use on individual farms. The main use of supplements in New Zealand is to overcome feed deficits, particularly in the summer and winter. Under extreme conditions supplements may be the only feed source but more commonly supply 2-80% of feed intake.

To decide which of the various conservation alternatives best suites the current situation Wright et al. (1980) suggest that a partial budget be used. An example of a partial budget is provided. They also discuss the factors contributing to pasture shortages and suggest
possible agronomic remedies. It is suggested that stocking rate can be reduced although this usually results in reduced production and profit, unless drastically overstocked. Once it has been decided that supplements are needed the next step is to determine the quantity of supplements required. This is done by comparing the requirements, for the desired animal performance, to the feed available.

The effect of mechanical topping on pasture accumulation and quality and lamb growth is reported by McDonald (1986) and McDonald, Van Leeuwen and Harris (1986) respectively. When seed head density was high (greater than 1200 seed heads/m²) topping improved herbage quality by reducing dead matter which improved herbage nitrogen and digestibility. Topping also increased clover content. Pasture quality is improved most by topping ryegrass flower heads between mid emergence and flowering. Topping more than once is not recommended and spring herbage quality was better when pastures were set stocked. Lamb growth reflected the improvements in herbage quality outlined above. Topping in late November-early December is profitable, especially if lambs are not grazed at greater than 40/ha during summer (McDonald, Van Leeuwen and Harris, 1986).

MacMillan (1989) reports that he advises clients to conserve, as hay or silage, sufficient feed reserves for at least one and preferably two adverse seasons in seasons of abundance. Standing hay may also be an option on some properties, although this can result in problems with the pasture deteriorating in the longer term.

None of the work reported in the literature considers the detailed factors farmers should consider when deciding whether or not to conserve a particular area of pasture. This is the issue that farmers indicate they require assistance with and is the subject of this study. Consequently, it was necessary to turn to other areas for guidance.
CHAPTER THREE

FACTORS AND RULES IN THE USE OF SURPLUS PASTURE

3.1 Introduction

As indicated the literature provides little guidance for the pasture 'shutting up' decision. Consequently, three experts (lecturer/researchers who also have extensive farm consulting experience) were consulted. In addition, the farmers who assisted in evaluating the drenching expert system (Bishop-Hurley & Nuthall, 1994) were asked to list all the factors they considered important in the conservation and supplementation use decisions. They were also asked to rank their lists. In most cases their responses were extensive and detailed indicating a keen interest in the subject.

The conclusion was that the following factors were important to the decisions:

- the availability of pasture
- feed reserves on hand
- season and terrain
- weather outlook
  - reliability of good weather
  - expected rainfall
  - expected temperatures
  - current soil moisture
  - current soil temperature
- condition of the stock
  - whether or not the animals are scouring
  - condition of the wool
  - body condition over time
- the number of lambs that have been weaned
- quality of the surplus, if any
- conserved feed storage space availability
These factors need little explanation. Appendix Five contains the help messages associated with each factor and provides definitions of the factors should more detail be required.

The need to have information on the weather and stock condition means that several sub-systems are necessary to obtain all the information required for a decision. The general nature of the rules which evolved for each sub-system is provided in the next section. The detailed rules are listed in the Appendices.

The conclusion for any set of conditions is provided as a set of options, in contrast to a simple 'shut' or 'do not shut' recommendation. It was felt more appropriate to take this approach as elucidating all the specific farm information necessary for a definitive recommendation was believed to be too complex and cumbersome. Furthermore, this approach enabled obtaining farmers' views on this less detailed system, though it must be noted the list of information requested was still quite extensive.

3.2 Conservation/Surplus Rules

The following rules apply when there is a pasture surplus and additional feed reserves are not required (this is where there are at least two years of supplements in storage). Appendix One contains a full list of the detailed IF-THEN conditions that emanate from these rules. There are 351 of them. The 'outlook' referred to in most rules refers to the weather situation. The set of conditions giving rise to the various 'outlooks' are listed in the next section.

- When neither the season nor the terrain limit making hay and the outlook and condition of stock is good, the options are to sell grazing, sell hay/feed and buy in stock.

- When neither the season nor the terrain limit making hay or silage, the outlook is good and the condition of the stock is average the options are to sell grazing, sell hay/feed, buy in stock and feed stock better. If half, or less of the lambs have been weaned and the quality of the surplus is high, weaning early also becomes an option.

- When neither the season nor the terrain limit making hay or silage, the outlook is good and the condition of the stock is poor then the option is to feed stock better. If half, or less of the lambs have been weaned and the quality of the surplus is high, weaning early also becomes an option.

- When neither the season nor the terrain limit making hay or silage, the outlook is average, and condition of stock is good the options are to sell grazing, sell hay/feed and buy in stock.

- When neither the season nor the terrain limit making hay or silage, the outlook is average, and the condition of the stock is average, the options are to sell grazing, sell hay/feed and feed stock better. If half or less of the lambs have
been weaned and the quality of the surplus is high weaning early also becomes an option.

- When neither the season nor the terrain limit making hay or silage, the outlook is average and the condition of the stock is poor then the option is to feed the stock better. If half or less of the lambs have been weaned and the quality of the surplus is high, weaning early also becomes an option.

- When neither season nor terrain limit hay or silage making, and the outlook is poor, and stock condition good, then additional feed should be conserved. If half or less of the lambs have been weaned and the quality of the surplus is high or average, weaning early becomes another option.

- When neither season nor terrain limit hay or silage making, and the outlook is poor, and stock condition is average, the options are to feed stock better and conserve additional feed. If half or less of the lambs have been weaned, and the quality of the surplus is high or average, weaning early becomes another option.

- When either season or terrain limit hay making, and the outlook is good or average, and stock condition is good, the options are to sell grazing, buy in stock and standing hay.

- When either season or terrain limit hay or silage making, outlook is good or average, and the stock condition is average the options are to sell grazing, buy in stock, standing hay and feed stock better. If half or less of the lambs have been weaned and the quality of the surplus is high, weaning early becomes another option.

- When either season or terrain limit hay or silage making, the outlook is good or average but the stock condition is poor, then the option is to feed stock better. If half or less of the lambs have been weaned and the quality of the surplus is high, weaning early also becomes an option.

- When either season or terrain limit hay or silage making, the outlook is poor but stock condition is good, and most lambs have been weaned, then standing hay should be considered.

- When either season or terrain limit hay or silage making, the outlook is poor but stock condition is good, and half or less of the lambs have been weaned, and the quality of the surplus is high or average, the lambs should be weaned early. When the quality of the surplus is low standing hay should be considered.

- When either season or terrain limit hay or silage making, the outlook is poor and
the stock condition is average to poor, then the stock should be fed better. If half or less of the lambs have been weaned, and the quality of the surplus is high, then weaning early also becomes an option.

The following rules apply when there is a pasture surplus and there are not sufficient feed reserves on hand for two years.

- Since season and terrain do not limit conservation options feed should be conserved even though storage space may not be readily available (store hay covered under trees or silage in a bun). If the stock is in average or poor condition feeding them better should also be considered.

- When either season or terrain limit hay or silage making, the outlook is good or average and the condition of stock is good, the options are to buy feed, sell grazing, buy stock and save surplus as standing hay.

- When either season or terrain limit hay or silage making, the outlook is good or average and the stock condition is average, the options are to buy feed, sell grazing, buy stock, save surplus as standing hay and feed stock better. If half or less of the lambs have been weaned and the quality of the surplus is high, weaning early could also be considered.

- When either season or terrain limit hay or silage making, the outlook is good or average but stock condition is poor, the options are to buy feed and feed stock better. If half or less of the lambs have been weaned and the quality of the surplus is high, weaning early could also be considered.

- When either season or terrain limit hay or silage making, the outlook is poor and the stock condition is good, one option is to buy feed. If half or less of the lambs have been weaned and the quality of the surplus is high or average, weaning early should be considered, otherwise standing hay.

- When either season or terrain limit hay or silage making, the outlook is poor and the stock condition is average the options are to buy feed, feed stock better and standing hay. If half or less of the lambs have been weaned and the quality of the surplus is high or average, weaning early can be added to the list of options.

- When either season or terrain limit hay or silage making, the outlook and stock condition are poor the options are to buy feed and feed stock better. If half or less of the lambs have been weaned and the quality of the surplus is high or average, weaning early can be added to the list of options.

The following rules apply when pasture supply and demand are balanced and there is sufficient feed reserves on hand for two years.

- When outlook and stock condition are good or average, the user should continue as planned.
- When outlook is good but stock condition is poor, then the option is to feed stock better. If half or less of the lambs have been weaned and the quality of the surplus is high or average, weaning early is an option.

- When outlook is poor and stock condition good or average with most lambs having been weaned, the user should continue as planned.

- When outlook is poor and stock condition average with half or less of the lambs having been weaned, then they should be weaned early. When stock condition is poor supplements should be fed out. If half or less of the lambs have been weaned then weaning early should also be considered.

The following rules apply when pasture supply and demand are balanced and there is not sufficient feed reserves on hand for two years.

- When outlook is good or average then the options are to buy feed and apply fertiliser. If storage space is a constraint then the types of feed purchased or conserved should be evaluated carefully and temporary storage facilities considered. If half or less of the lambs have been weaned then weaning early is also an option.

- When the outlook is poor the user should purchase the required supplements. If storage space is a constraint the types of feed purchased should be evaluated carefully and temporary storage facilities considered. If half or less of the lambs have been weaned then weaning early is also an option.

The following rules apply when there is a shortage of pasture and there is sufficient feed reserves on hand for two years.

- When outlook is good or average and stock condition good or average the options are to apply fertiliser and wean early unless most of the lambs have been weaned. When stock condition is poor another option is to feed out.

- When outlook is poor feeding out should be considered, and if half or less of the lambs have been weaned then weaning early is also an option.

The following rules apply when there is a shortage of pasture and there is not sufficient feed reserves on hand for two years. When storage space is a constraint the types of feed purchased should be evaluated carefully and temporary storage facilities considered.

- When outlook is good and stock condition good or average the options are to apply fertiliser, and buy in feed. If half or less of the lambs have been weaned then weaning early is also an option.

- When outlook is good or average but stock condition is poor the options are apply fertiliser, buy in feed and feed stock better. If half or less of the lambs have been weaned then weaning early is also an option.
When outlook is average and stock condition good the options are to apply fertiliser and buy in feed. If half or less of the lambs have been weaned then weaning early is also an option.

- When outlook and stock condition are average the options are to apply fertiliser, buy in feed and feed stock better. If half or less of the lambs have been weaned then weaning early is also an option.

- When outlook is poor and stock condition good then buy in feed. If half or less of the lambs have been weaned then weaning early is also an option.

- When outlook is poor and stock condition average, the options are to wean all lambs early, buy in feed and de-stock. Should stock condition be poor then the order of the options changes to de-stocking, weaning early and buying in feed.

3.3 Weather Related Production Potential (Outlook) Rules

Weather is fundamental to growth and medium term expectations are, therefore, crucial to conservation decisions. The conditions giving rise to the various 'outlook' states are listed in this section.

- When the growing season (reliability of good weather for pasture growth) is reliable the outlook is good.

When the user is unsure of the reliability of the growing season or it is unreliable the following rules apply:

- When expected rainfall is high and expected temperature is hot, and current soil moisture saturated or moist and current soil temperature warm or average, the outlook is good but only average if current soil temperature is cold.

- When expected rainfall is high and expected temperature is hot, current soil moisture dry and current soil temperature warm, the outlook is good but average if current soil temperature is average or cold.

- When expected rainfall is high and expected temperature is moderate, current soil moisture saturated or moist then outlook goes from good through average to poor as current soil temperature changes from warm through average to cold.

- When expected rainfall is high, expected temperature is moderate and current soil moisture dry outlook is poor when current soil temperature is average or cold, but average when current soil temperature is warm.

- When expected rainfall is high or average, expected temperature is cold and current soil moisture saturated or moist outlook is poor when current soil temperature is average or cold, but average when current soil temperature is
- When expected rainfall is high or average, expected temperature is cold and current soil moisture is dry, the outlook is poor.

- When expected rainfall is average and expected temperature is hot, current soil moisture saturated and current soil temperature warm, the outlook is good but average if current soil temperature is average or cold.

- When expected rainfall is average and expected temperature is hot, and current soil moisture moist then the outlook goes from good through average to poor as current soil temperature changes from warm through average to cold.

- When expected rainfall is average, expected temperature is hot or moderate and current soil moisture dry, the outlook is poor when current soil temperature is average or cold, but average when current soil temperature is warm.

- When expected rainfall is average, expected temperature is moderate and current soil moisture saturated or moist, the outlook is average when current soil temperature is warm or average, but poor when current soil temperature is cold.

- When expected rainfall is low and expected temperature is hot, current soil moisture saturated, then outlook goes from good through average to poor as current soil temperature changes from warm through average to cold.

- When expected rainfall is low, expected temperature is hot and current soil moisture moist, the outlook is poor when current soil temperature is average or cold, but average when current soil temperature is warm.

- When expected rainfall is low, expected temperature is hot and current soil moisture dry, the outlook is poor.

- When expected rainfall is low, expected temperature is moderate and current soil moisture saturated or moist, the outlook is poor when current soil temperature is average or cold, but average when current soil temperature is warm.

- When expected rainfall is low and expected temperature is moderate and current soil moisture dry or cold then the outlook is poor.

3.4 Animal Condition Rules

Clearly current animal condition has an important bearing on whether feed can be regarded as surplus. The basis of the rules used to define animal condition are listed here.

- If scouring is severe then overall condition is poor.
- If scouring is moderate and wool condition good then condition goes from good through average to poor as body condition goes from increasing to stable to decreasing.

- If scouring is moderate and wool is poor and body condition is stable or decreasing then overall condition is poor unless body condition is increasing in which case condition is average.

- When the animals are not scouring and wool condition is good, condition is good when body condition is increasing or stable, and average when body condition is decreasing.

- If the animals are not scouring animal condition is good when body condition is increasing, average when body condition is stable and poor when body condition is decreasing.
CHAPTER FOUR
FARMER COMMENTS ON THE EXPERT SYSTEM

4.1 Introduction

To develop the full list of rules which determine the decision options for all combinations of the parameters, the isolated factors were loaded into a spreadsheet to ensure all relevant sequences and permutations were located. Effectively these sequences became examples from which induction was used to create the rule sets. These are listed in the Appendices. (Appendix One contains the rules for the main system - conservation/surplus rules, Appendix Two has the outlook (weather) rule set, and Appendix Three the rules for determining stock condition, the latter two providing conclusions which feed into the conservation/surplus decision system. Appendix Four and Appendix Five contain the explanations and help messages respectively).

The rule sets were coded into a mouse driven package using an object orientated language designed for presenting expert systems (Knowledge Pro's KPWin Gold). It operates under the Windows interface on MSDOS based computers.

The real test of any system is whether farmers find it acceptable and useful. To this end as many sheep farmers as possible with suitable equipment were located, asked to use the package and to answer a series of questions on the package. The result was eighteen completed questionnaires.

Location involved searching a data base of farmers receiving a computer newsletter for which data was held on their computers. All Ministry of Agriculture and Fisheries offices were also contacted with a request for farmers' names. In the end, nearly 400 farmers that might well have had Windows were written to asking if they would be happy to assist in an evaluation. Nine-two responded with an offer to use the system, but 54 of these did not have a sufficiently powerful computer. After some pulled out for various reasons, thirty were sent the package (disks, manual and instructions). After a reminder letter and phone calls, eighteen completed evaluations were received. The following sections document the responses. The questionnaire contained a wide range of topics aimed at elucidating the farmers' views on not only the conservation/surplus topic itself, but also on topics such as the format, screen presentation, and value of the system. This information, and its analysis, is presented in another Research Report No.225 (Nuthall & Bishop-Hurley, 1994).
4.2 Farmers’ Views on the Supplement/Surplus Expert

In contrast to the other expert systems referred to earlier (Weaning and Drenching) the conclusion provided by this system was rather more general. An example conclusion is ‘you should consider selling grazing, buying stock, creating standing hay, and/or feed the stock better’. The nature of the problem is quite dissimilar to weaning and drenching where at any point the answer required is to wean or not, or to drench or not. Which of the various options offered, and the list clearly varied for each situation, should be taken up depends on many more farm and market factors than was asked in the questions. The problem is that for each additional factor considered the number of rules required increases exponentially. In general, another factor would have required approximately another 350 rules.

It is clear from the farmers’ responses that some believed the system was too general. When asked whether they agreed with the advice provided 77.8 per cent replied in the affirmative. However, 16.7 per cent believed the advice was too simplistic, 5.5 per cent believed more detail was required, and another 5.5 per cent noted quantitative data was required to make the decision. Thus, while by far the majority agreed (the general nature of the advice meant, of course, that there was less chance of disagreement), it is clear there was a significant comment that they would have preferred more specific advice. Future work on this topic needs to address how this can be achieved without creating too complex a system.

When asked about the explanations associated with each conclusion (see Appendix Four), the trial farmers were more positive in that 93.7 per cent agreed with the ones provided. The qualifying comments were ‘need to consider more factors’ 11.1 per cent; ‘need more detail’ 11.1 per cent; and ‘need more picture help’ 5.5 per cent. These responses are similar to those noted above.

The majority (77.8%) also believed the package would make the decision on how to use any surplus much easier. Those who did not believe this was the case noted ‘can’t make hay on my farm due to the terrain’, ‘too simplistic’ and ‘problem too complex to computerise’. Clearly, the first point largely invalidates the system, and the latter two are consistent with the other comments noted previously.

Overall, it must be noted that the trial farmers were supportive of the package, but there is room for improvement.

The farmers were also asked to indicate the importance they attach to the various factors included in the expert system for making a decision. This has implications for future modifications to the package. Currently the package gives equal weight to the factors used in deciding the weather outlook and animal condition - this should be, possibly, altered. For deciding on the use of any surplus pasture, however, there is an implied weight through the order in which they are asked. The particular set of questions asked is dependent on the answers to earlier questions so that, for example, if the season and/or terrain is not appropriate for hay making then, clearly, the quality of the surplus does not influence whether to make hay.
Tables 1 to 3 give the farmers' scores for each factor on a 1 (very important) to 10 (not at all important) scale.

Table 1

**Farmers' Importance Ranking on the Factors Used to Determine Stock Condition**

(1 = very important, 10 = not at all important)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Average</th>
<th>Standard Deviation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body condition over time</td>
<td>2.44</td>
<td>2.34</td>
<td>1</td>
</tr>
<tr>
<td>Wool condition (appearance)</td>
<td>3.61</td>
<td>1.77</td>
<td>2</td>
</tr>
<tr>
<td>Existence of scouring</td>
<td>3.78</td>
<td>2.22</td>
<td>3</td>
</tr>
</tbody>
</table>

There is not a large variation in the averages so clearly the farmers do not believe one, or more, factors should dominate. This is effectively the approach used in the package.

Table 2

**Farmers' Importance Ranking on the Factors Used to Determine the Weather Outlook**

(1 = very important, 10 = not at all important)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Average</th>
<th>Standard Deviation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current soil moisture</td>
<td>2.33</td>
<td>1.29</td>
<td>1</td>
</tr>
<tr>
<td>Current soil temperature</td>
<td>2.61</td>
<td>1.16</td>
<td>2=</td>
</tr>
<tr>
<td>Expected temperatures</td>
<td>2.61</td>
<td>1.77</td>
<td>2=</td>
</tr>
<tr>
<td>Expected rainfall</td>
<td>2.89</td>
<td>2.60</td>
<td>4</td>
</tr>
<tr>
<td>Reliability of good weather</td>
<td>3.89</td>
<td>2.77</td>
<td>5</td>
</tr>
</tbody>
</table>
Similarly, there is little variation in the scores, though reliability does slightly stand apart. It seems the farmers are more concerned about the growth prospects than the likelihood of making good hay.

When it comes to scoring the factors used to decide on the use of any surplus there is a slightly wider range. Table 3 contains this data.

<table>
<thead>
<tr>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers' Importance Ranking on the Factors Used in Determining the Use of Surplus Feed</td>
</tr>
<tr>
<td>(1 = very important, 10 = not at all important)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average</th>
<th>Standard Deviation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasture availability</td>
<td>2.33</td>
<td>2.81</td>
</tr>
<tr>
<td>Season and terrain</td>
<td>2.61</td>
<td>2.07</td>
</tr>
<tr>
<td>Quality of the surplus</td>
<td>3.05</td>
<td>1.39</td>
</tr>
<tr>
<td>Stock condition</td>
<td>3.17</td>
<td>2.52</td>
</tr>
<tr>
<td>Feed reserves</td>
<td>3.33</td>
<td>2.91</td>
</tr>
<tr>
<td>Weather outlook</td>
<td>3.94</td>
<td>2.15</td>
</tr>
<tr>
<td>Availability of storage space</td>
<td>4.78</td>
<td>2.55</td>
</tr>
<tr>
<td>Percentage of lambs weaned</td>
<td>4.83</td>
<td>1.95</td>
</tr>
</tbody>
</table>

Pasture availability, season and terrain, quality of the surplus, stock condition and feed reserves on hand might be regarded as being similarly rated by the farmers, though the weather outlook clearly also has an influence. It is likely most will make a decision without worrying too much about storage space and the number of lambs weaned.

Relative to the package assumptions, feed reserves are downgraded in importance by the farmers, as is the weather outlook, whereas the quality of any surplus feed is believed to be more important than assumed in the package. It is possible that current feed reserves are very low and therefore considered not important. Clearly, there comes a time where feed on hand levels are so high it is not worth making more, though age and quality factors may also be relevant.
Growth prospects through the weather outlook are important, but perhaps farmers believe it is not possible to predict with any degree of certainty and confidence and consequently proceed despite any feelings they may have about the outlook. The quality of the surplus perhaps needs to be reviewed as a factor - it is possible the cost in terms of the direct expense as well as the time of conservation activities means only high quality feed should be conserved.

Some of the farmers indicated the package should have taken into account additional factors. Table 4 lists these.

### Table 4
**Additional Factors Believed to be Important by the Farmers**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Percentage Mentioning the Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current stock prices</td>
<td>11.1</td>
</tr>
<tr>
<td>Financial situation</td>
<td>11.1</td>
</tr>
<tr>
<td>Soil fertility</td>
<td>11.1</td>
</tr>
<tr>
<td>Costs of the alternative options</td>
<td>5.5</td>
</tr>
<tr>
<td>Sheep/cattle ratio used</td>
<td>5.5</td>
</tr>
<tr>
<td>Whether stock no's are different to the normal</td>
<td>5.5</td>
</tr>
</tbody>
</table>

All these factors must be regarded as being relevant. Clearly stock prices and the financial situation affect both stock and feed buying and selling decisions, and the cost of the alternatives must similarly influence the selection of the possibilities presented. The soil fertility will clearly influence the pasture growth as well as the weather outlook (as defined by the factors), and the sheep/cattle ratio influences the type of feed required for wintering. Equally, whether stock numbers are greater or less than normal relative to feed reserves is also a factor to be considered. It must be noted again, however, that there is a dimensionality problem in including all factors. This means farmers must make further interpretations from the options provided.

Finally, the respondents were asked for any other reflections they might have. The tenor of these comments was that the allocation of surplus feed was not a problem as easily addressed by a computer system, relative to the weaning and drenching problems they had been
exposed to as further trial expert systems. Twenty-seven percent believed more detail was required and 16.7 per cent noted the system should be farm specific. Other comments included 'need more pictures' (5.5%) and 'base system on quantitative data'. While generally the farmers believed the package was beneficial and useable, there is a need for additional work if this form of problem is to be successfully addressed by an expert system. Possibly a mixed expert system/calculation based package would be successful.
References


APPENDIX ONE

Conservation/Surplus Ruleset

The explanation codes and their meanings are listed in Appendix Four

Rule 1:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Good

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06

Rule 2:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06

Rule 3:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06

Rule 4:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06

Rule 5:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06

Rule 6:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06
Rule 7:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:-
Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06

Rule 8:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:-
Sell Grazing, Sell Hay/Feed, Buy Stock, Feed Stock Better

Explanation: 16, 15, 04, 05, 06

Rule 9:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:-
Sell Grazing, Sell Hay/Feed, Buy Stock, Wean Early, Feed Stock Better

Explanation: 17, 15, 04, 05, 08, 06

Rule 10:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Sell Grazing, Sell Hay/Feed, Buy Stock, Feed Stock Better

Explanation: 16, 15, 04, 05, 06

Rule 11:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:-
Sell Grazing, Sell Hay/Feed, Buy Stock, Feed Stock Better

Explanation: 16, 15, 04, 05, 06

Rule 12:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:-
Sell Grazing, Sell Hay/Feed, Buy Stock, Wean Early, Feed Stock Better

Explanation: 17, 15, 04, 05, 08, 06
Rule 13:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:-
Sell Grazing, Sell Hay/Feed, Buy Stock, Feed Stock Better

Explanation: 16, 15, 04, 05, 06

Rule 14:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:-
Sell Grazing, Sell Hay/Feed, Buy Stock, Feed Stock Better

Explanation: 16, 15, 04, 05, 06

Rule 15:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:-
Feed Stock Better

Explanation: 18, 11

Rule 16:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:-
Feed Stock Better, Wean Early

Explanation: 18, 11, 08

Rule 17:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Feed Stock Better

Explanation: 18, 11

Rule 18:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:-
Feed Stock Better

Explanation: 18, 11
Rule 19:
- Pasture Availability: Surplus
- Feed Reserves: Yes
- Season and Terrain: Yes
- Weather Outlook: Good
- Stock Condition: Poor
- Number Lambs Weaned: Few
- Quality of Surplus: High

You should consider the following options:
- Feed Stock Better
- Wean Early

Explanation: 18, 11, 08

Rule 20:
- Pasture Availability: Surplus
- Feed Reserves: Yes
- Season and Terrain: Yes
- Weather Outlook: Good
- Stock Condition: Poor
- Number Lambs Weaned: Few
- Quality of Surplus: Average

You should consider the following options:
- Feed Stock Better

Explanation: 18, 11

Rule 21:
- Pasture Availability: Surplus
- Feed Reserves: Yes
- Season and Terrain: Yes
- Weather Outlook: Good
- Stock Condition: Poor
- Number Lambs Weaned: Few
- Quality of Surplus: Low

You should consider the following options:
- Feed Stock Better

Explanation: 18, 11

Rule 22:
- Pasture Availability: Surplus
- Feed Reserves: Yes
- Season and Terrain: Yes
- Weather Outlook: Average
- Stock Condition: Good
- Number Lambs Weaned: Most

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06

Rule 23:
- Pasture Availability: Surplus
- Feed Reserves: Yes
- Season and Terrain: Yes
- Weather Outlook: Average
- Stock Condition: Good
- Number Lambs Weaned: Half
- Quality of Surplus: High

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06

Rule 24:
- Pasture Availability: Surplus
- Feed Reserves: Yes
- Season and Terrain: Yes
- Weather Outlook: Average
- Stock Condition: Good
- Number Lambs Weaned: Half
- Quality of Surplus: Average

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06
Rule 25:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:
Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06

Rule 28:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:
Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06

Rule 26:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:
Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06

Rule 29:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:
Sell Grazing, Sell Hay/Feed, Buy Stock, Feed Stock Better

Explanation: 16, 15, 04, 05, 06

Rule 27:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:
Sell Grazing, Sell Hay/Feed, Buy Stock

Explanation: 15, 04, 05, 06

Rule 30:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:
Sell Grazing, Sell Hay/Feed, Buy Stock, Wean Early, Feed Stock Better

Explanation: 17, 15, 04, 05, 08 06
### Rule 31:
- **Pasture Availability:** Surplus
- **Feed Reserves:** Yes
- **Season and Terrain:** Yes
- **Weather Outlook:** Average
- **Stock Condition:** Average
- **Number Lambs Weaned:** Half
- **Quality of Surplus:** Average

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock, Feed Stock Better

**Explanation:** 16, 15, 04, 05, 06

---

### Rule 32:
- **Pasture Availability:** Surplus
- **Feed Reserves:** Yes
- **Season and Terrain:** Yes
- **Weather Outlook:** Average
- **Stock Condition:** Average
- **Number Lambs Weaned:** Half
- **Quality of Surplus:** Low

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock, Feed Stock Better

**Explanation:** 16, 15, 04, 05, 06

---

### Rule 33:
- **Pasture Availability:** Surplus
- **Feed Reserves:** Yes
- **Season and Terrain:** Yes
- **Weather Outlook:** Average
- **Stock Condition:** Average
- **Number Lambs Weaned:** Few
- **Quality of Surplus:** High

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock, Wean Early, Feed Stock Better

**Explanation:** 17, 15, 04, 05, 08 06

---

### Rule 34:
- **Pasture Availability:** Surplus
- **Feed Reserves:** Yes
- **Season and Terrain:** Yes
- **Weather Outlook:** Average
- **Stock Condition:** Average
- **Number Lambs Weaned:** Few
- **Quality of Surplus:** Average

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock, Feed Stock Better

**Explanation:** 16, 15, 04, 05, 06

---

### Rule 35:
- **Pasture Availability:** Surplus
- **Feed Reserves:** Yes
- **Season and Terrain:** Yes
- **Weather Outlook:** Average
- **Stock Condition:** Average
- **Number Lambs Weaned:** Few
- **Quality of Surplus:** Low

You should consider the following options:
- Sell Grazing, Sell Hay/Feed, Buy Stock, Feed Stock Better

**Explanation:** 16, 15, 04, 05, 06

---

### Rule 36:
- **Pasture Availability:** Surplus
- **Feed Reserves:** Yes
- **Season and Terrain:** Yes
- **Weather Outlook:** Average
- **Stock Condition:** Poor
- **Number Lambs Weaned:** Most

You should consider the following options:
- Feed Stock Better

**Explanation:** 18, 11
Rule 37:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:
Feed Stock Better, Wean Early
Explanation: 18, 11, 08

Rule 40:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:
Feed Stock Better, Wean Early
Explanation: 18, 11, 08

Rule 38:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:
Feed Stock Better
Explanation: 18, 11

Rule 41:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:
Feed Stock Better
Explanation: 18, 11

Rule 39:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:
Feed Stock Better
Explanation: 18, 11

Rule 42:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:
Feed Stock Better
Explanation: 18, 11
Rule 43:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Most

You should consider the following options:-
Conserve

Explanation: 19, 03

Rule 44:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:-
Wean Early, Conserve

Explanation: 20, 08, 03

Rule 45:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Wean Early, Conserve

Explanation: 20, 08, 03

Rule 46:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:-
Conserve

Explanation: 19, 03

Rule 47:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:-
Wean Early, Conserve

Explanation: 20, 08, 03

Rule 48:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:-
Wean Early, Conserve

Explanation: 20, 08, 03
**Rule 49:**
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:
- Conserve

Explanation: 19, 03

**Rule 50:**
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:
- Feed Stock Better, Conserve

Explanation: 21, 19, 03

**Rule 51:**
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:
- Feed Stock Better, Wean Early, Conserve

Explanation: 21, 20, 08, 03

**Rule 52:**
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:
- Feed Stock Better, Wean Early, Conserve

Explanation: 21, 20, 08, 03

**Rule 53:**
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:
- Feed Stock Better

Explanation: 21

**Rule 54:**
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:
- Feed Stock Better, Wean Early, Conserve

Explanation: 21, 20, 08, 03
Rule 55:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:-
Feed Stock Better, Wean Early, Conserve

Explanation: 21, 20, 08, 03

Rule 56:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:-
Feed Stock Better

Explanation: 21

Rule 57:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:-
Feed Stock Better

Explanation: 21, 19

Rule 58:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:-
Feed Stock Better, Wean Early

Explanation: 21, 20, 08

Rule 59:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Feed Stock Better, Wean Early

Explanation: 21, 20, 08

Rule 60:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:-
Feed Stock Better

Explanation: 21
Rule 61:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:
Feed Stock Better, Wean Early

Explanation: 21, 20, 08

Rule 62:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:
Feed Stock Better, Wean Early

Explanation: 21, 20, 08

Rule 63:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:
Feed Stock Better

Explanation: 21

Rule 64:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Most

You should consider the following options:
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01

Rule 65:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01

Rule 66:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01
Rule 67:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:­
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01

Rule 68:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:­
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01

Rule 69:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:­
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01

Rule 70:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:­
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01

Rule 71:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:­
Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 23, 04, 06, 10, 01

Rule 72:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:­
Sell Grazing, Buy Stock, Standing Hay, Wean Early, Feed Stock Better

Explanation: 24, 04, 06, 10, 01
Rule 73:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 23, 04, 06, 10, 01

Rule 76:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 23, 04, 06, 10, 01

Rule 74:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 23, 04, 06, 10, 01

Rule 77:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 23, 04, 06, 10, 01

Rule 75:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay, Wean Early, Feed Stock Better

Explanation: 24, 04, 06, 10, 01

Rule 78:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:-
Feed Stock Better

Explanation: 18, 11
Rule 79:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:-
Feed Stock Better, Wean Early

Explanation: 18, 11, 08

Rule 82:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:-
Feed Stock Better, Wean Early

Explanation: 18, 11, 08

Rule 80:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Feed Stock Better

Explanation: 18, 11

Rule 83:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:-
Feed Stock Better

Explanation: 18, 11

Rule 81:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:-
Feed Stock Better

Explanation: 18, 11

Rule 84:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:-
Feed Stock Better

Explanation: 18, 11
Rule 85:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Most

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01

Rule 86:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01

Rule 87:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01

Rule 88:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01

Rule 89:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01

Rule 90:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01
Rule 91:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay

Explanation: 22, 04, 06, 10, 01

Rule 92:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 23, 04, 06, 10, 01

Rule 93:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay, Wean Early, Feed Stock Better

Explanation: 24, 04, 06, 10, 01

Rule 94:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 23, 04, 06, 10, 01

Rule 95:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 23, 04, 06, 10, 01

Rule 96:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay, Wean Early, Feed Stock Better

Explanation: 24, 04, 06, 10, 01

38
Rule 97:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 23, 04, 06, 10, 01

Rule 100:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:-
Feed Stock Better, Wean Early

Explanation: 18, 11, 08

Rule 98:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:-
Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 23, 04, 06, 10, 01

Rule 101:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Feed Stock Better

Explanation: 18, 11

Rule 99:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:-
Feed Stock Better

Explanation: 18, 11
Rule 103:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:
Feed Stock Better, Wean Early

Explanation: 18, 11, 08

Rule 104:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:
Feed Stock Better

Explanation: 18, 11

Rule 105:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:
Feed Stock Better

Explanation: 18, 11

Rule 106:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Most

You should consider the following options:
Standing Hay

Explanation: 19, 10

Rule 107:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:
Wean Early

Explanation: 20, 08 10

Rule 108:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:
Wean Early

Explanation: 20, 08, 10
Rule 109:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:
Standing Hay

Explanation: 19, 10

Rule 110:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:
Wean Early

Explanation: 20, 08, 10

Rule 111:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:
Wean Early

Explanation: 20, 08, 10

Rule 112:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:
Standing Hay

Explanation: 19, 10

Rule 113:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:
Feed Stock Better

Explanation: 21, 19, 10

Rule 114:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:
Feed Stock Better, Wean Early

Explanation: 21, 20, 08, 10
### Rule 115:

<table>
<thead>
<tr>
<th>Pasture Availability:</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Reserves:</td>
<td>Yes</td>
</tr>
<tr>
<td>Season and Terrain:</td>
<td>No</td>
</tr>
<tr>
<td>Weather Outlook:</td>
<td>Poor</td>
</tr>
<tr>
<td>Stock Condition:</td>
<td>Average</td>
</tr>
<tr>
<td>Number Lambs Weaned:</td>
<td>Half</td>
</tr>
<tr>
<td>Quality of Surplus:</td>
<td>Average</td>
</tr>
</tbody>
</table>

You should consider the following options: Feed Stock Better

Explanation: 21, 20, 08, 10

### Rule 116:

<table>
<thead>
<tr>
<th>Pasture Availability:</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Reserves:</td>
<td>Yes</td>
</tr>
<tr>
<td>Season and Terrain:</td>
<td>No</td>
</tr>
<tr>
<td>Weather Outlook:</td>
<td>Poor</td>
</tr>
<tr>
<td>Stock Condition:</td>
<td>Average</td>
</tr>
<tr>
<td>Number Lambs Weaned:</td>
<td>Half</td>
</tr>
<tr>
<td>Quality of Surplus:</td>
<td>Low</td>
</tr>
</tbody>
</table>

You should consider the following options: Feed Stock Better

Explanation: 21

### Rule 117:

<table>
<thead>
<tr>
<th>Pasture Availability:</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Reserves:</td>
<td>Yes</td>
</tr>
<tr>
<td>Season and Terrain:</td>
<td>No</td>
</tr>
<tr>
<td>Weather Outlook:</td>
<td>Poor</td>
</tr>
<tr>
<td>Stock Condition:</td>
<td>Average</td>
</tr>
<tr>
<td>Number Lambs Weaned:</td>
<td>Few</td>
</tr>
<tr>
<td>Quality of Surplus:</td>
<td>High</td>
</tr>
</tbody>
</table>

You should consider the following options: Feed Stock Better, Wean Early

Explanation: 21, 20, 08, 10

### Rule 118:

<table>
<thead>
<tr>
<th>Pasture Availability:</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Reserves:</td>
<td>Yes</td>
</tr>
<tr>
<td>Season and Terrain:</td>
<td>No</td>
</tr>
<tr>
<td>Weather Outlook:</td>
<td>Poor</td>
</tr>
<tr>
<td>Stock Condition:</td>
<td>Average</td>
</tr>
<tr>
<td>Number Lambs Weaned:</td>
<td>Few</td>
</tr>
<tr>
<td>Quality of Surplus:</td>
<td>Average</td>
</tr>
</tbody>
</table>

You should consider the following options: Feed Stock Better

Explanation: 21, 20, 08, 10

### Rule 119:

<table>
<thead>
<tr>
<th>Pasture Availability:</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Reserves:</td>
<td>Yes</td>
</tr>
<tr>
<td>Season and Terrain:</td>
<td>No</td>
</tr>
<tr>
<td>Weather Outlook:</td>
<td>Poor</td>
</tr>
<tr>
<td>Stock Condition:</td>
<td>Average</td>
</tr>
<tr>
<td>Number Lambs Weaned:</td>
<td>Few</td>
</tr>
<tr>
<td>Quality of Surplus:</td>
<td>Low</td>
</tr>
</tbody>
</table>

You should consider the following options: Feed Stock Better

Explanation: 21

### Rule 120:

<table>
<thead>
<tr>
<th>Pasture Availability:</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Reserves:</td>
<td>Yes</td>
</tr>
<tr>
<td>Season and Terrain:</td>
<td>No</td>
</tr>
<tr>
<td>Weather Outlook:</td>
<td>Poor</td>
</tr>
<tr>
<td>Stock Condition:</td>
<td>Poor</td>
</tr>
<tr>
<td>Number Lambs Weaned:</td>
<td>Most</td>
</tr>
</tbody>
</table>

You should consider the following options: Feed Stock Better

Explanation: 21, 19
Rule 121:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:
Feed Stock Better, Wean Early

Explanation: 21, 20, 08

Rule 122:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:
Feed Stock Better

Explanation: 21, 20, 08

Rule 123:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:
Feed Stock Better

Explanation: 21

Rule 124:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:
Feed Stock Better, Wean Early

Explanation: 21, 20, 08

Rule 125:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:
Feed Stock Better

Explanation: 21, 20, 08

Rule 126:
Pasture Availability: Surplus
Feed Reserves: Yes
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:
Feed Stock Better

Explanation: 21
Rule 127:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: Yes
Stock Condition: Good
Storage Space Availability: Yes

You should consider the following options: Conserve
Explanation: 03

Rule 131:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: Yes
Stock Condition: Poor
Storage Space Availability: Yes

You should consider the following options: Conserve, Feed Stock Better
Explanation: 24, 03

Rule 128:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: Yes
Stock Condition: Good
Storage Space Availability: No

You should consider the following options: Conserve
Explanation: 25, 03

Rule 132:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: Yes
Stock Condition: Poor
Storage Space Availability: No

You should consider the following options: Conserve, Feed Stock Better
Explanation: 24, 25, 03

Rule 129:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: Yes
Stock Condition: Average
Storage Space Availability: Yes

You should consider the following options: Conserve, Feed Stock Better
Explanation: 03, 24

Rule 133:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Most

You should consider the following options: Buy Feed, Sell Grazing, Buy Stock, Standing Hay
Explanation: 09, 22, 04, 06, 10, 01

Rule 130:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: Yes
Stock Condition: Average
Storage Space Availability: No

You should consider the following options: Conserve, Feed Stock Better
Explanation: 25, 03, 24
<table>
<thead>
<tr>
<th>Rule 134:</th>
<th>Rule 137:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pasture Availability:</strong></td>
<td>Surplus</td>
</tr>
<tr>
<td><strong>Feed Reserves:</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Season and Terrain:</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Weather Outlook:</strong></td>
<td>Good</td>
</tr>
<tr>
<td><strong>Stock Condition:</strong></td>
<td>Good</td>
</tr>
<tr>
<td><strong>Number Lambs Weaned:</strong></td>
<td>Half</td>
</tr>
<tr>
<td><strong>Quality of Surplus:</strong></td>
<td>High</td>
</tr>
</tbody>
</table>

You should consider the following options:-
Buy Feed, Sell Grazing, Buy Stock, Standing Hay

Explanation: 09, 22, 04, 06, 10, 01

<table>
<thead>
<tr>
<th>Rule 135:</th>
<th>Rule 138:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pasture Availability:</strong></td>
<td>Surplus</td>
</tr>
<tr>
<td><strong>Feed Reserves:</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Season and Terrain:</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Weather Outlook:</strong></td>
<td>Good</td>
</tr>
<tr>
<td><strong>Stock Condition:</strong></td>
<td>Good</td>
</tr>
<tr>
<td><strong>Number Lambs Weaned:</strong></td>
<td>Half</td>
</tr>
<tr>
<td><strong>Quality of Surplus:</strong></td>
<td>Average</td>
</tr>
</tbody>
</table>

You should consider the following options:-
Buy Feed, Sell Grazing, Buy Stock, Standing Hay

Explanation: 09, 22, 04, 06, 10, 01

<table>
<thead>
<tr>
<th>Rule 136:</th>
<th>Rule 139:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pasture Availability:</strong></td>
<td>Surplus</td>
</tr>
<tr>
<td><strong>Feed Reserves:</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Season and Terrain:</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Weather Outlook:</strong></td>
<td>Good</td>
</tr>
<tr>
<td><strong>Stock Condition:</strong></td>
<td>Good</td>
</tr>
<tr>
<td><strong>Number Lambs Weaned:</strong></td>
<td>Half</td>
</tr>
<tr>
<td><strong>Quality of Surplus:</strong></td>
<td>Low</td>
</tr>
</tbody>
</table>

You should consider the following options:-
Buy Feed, Sell Grazing, Buy Stock, Standing Hay

Explanation: 09, 22, 04, 06, 10, 01
Rule 140:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:-
Buy Feed, Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 09, 23, 04, 06, 10, 01

Rule 141:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:-
Buy Feed, Sell Grazing, Buy Stock, Standing Hay, Wean Early, Feed Stock Better

Explanation: 09, 24, 04, 06, 10, 01

Rule 142:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Buy Feed, Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 09, 23, 04, 06, 10, 01

Rule 143:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:-
Buy Feed, Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 09, 23, 04, 06, 10, 01

Rule 144:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:-
Buy Feed, Sell Grazing, Buy Stock, Standing Hay, Wean Early, Feed Stock Better

Explanation: 09, 24, 04, 06, 10, 01

Rule 145:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:-
Buy Feed, Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 09, 23, 04, 06, 10, 01
Rule 146:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:
Buy Feed, Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 09, 23, 04, 06, 10, 01

Rule 147:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:
Buy Feed, Feed Stock Better

Explanation: 09, 18, 11

Rule 148:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:
Buy Feed, Wean Early, Feed Stock Better

Explanation: 09, 18, 11, 08

Rule 149:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:
Buy Feed, Feed Stock Better

Explanation: 09, 18, 11

Rule 150:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:
Buy Feed, Feed Stock Better

Explanation: 09, 18, 11

Rule 151:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:
Buy Feed, Wean Early, Feed Stock Better

Explanation: 09, 18, 11, 08
Rule 152:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Average
You should consider the following options:
Buy Feed, Feed Stock Better
Explanation: 09, 22, 04, 06, 10, 01

Rule 155:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: High
You should consider the following options:
Buy Feed, Sell Grazing, Buy Stock, Standing Hay
Explanation: 09, 22, 04, 06, 10, 01

Rule 153:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Low
You should consider the following options:
Buy Feed, Feed Stock Better
Explanation: 09, 18, 11

Rule 156:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Average
You should consider the following options:
Buy Feed, Sell Grazing, Buy Stock, Standing Hay
Explanation: 09, 22, 04, 06, 10, 01

Rule 154:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Most
You should consider the following options:
Buy Feed, Sell Grazing, Buy Stock, Standing Hay
Explanation: 09, 22, 04, 06, 10, 01

Rule 157:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Low
You should consider the following options:
Buy Feed, Sell Grazing, Buy Stock, Standing Hay
Explanation: 09, 22, 04, 06, 10, 01
### Rule 158:

<table>
<thead>
<tr>
<th>Pasture Availability:</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Reserves:</td>
<td>No</td>
</tr>
<tr>
<td>Season and Terrain:</td>
<td>No</td>
</tr>
<tr>
<td>Weather Outlook:</td>
<td>Average</td>
</tr>
<tr>
<td>Stock Condition:</td>
<td>Good</td>
</tr>
<tr>
<td>Number Lambs Weaned:</td>
<td>Few</td>
</tr>
<tr>
<td>Quality of Surplus:</td>
<td>High</td>
</tr>
</tbody>
</table>

You should consider the following options:
- Buy Feed
- Sell Grazing
- Buy Stock
- Standing Hay

Explanation: 09, 22, 04, 06, 10, 01

### Rule 159:

<table>
<thead>
<tr>
<th>Pasture Availability:</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Reserves:</td>
<td>No</td>
</tr>
<tr>
<td>Season and Terrain:</td>
<td>No</td>
</tr>
<tr>
<td>Weather Outlook:</td>
<td>Average</td>
</tr>
<tr>
<td>Stock Condition:</td>
<td>Good</td>
</tr>
<tr>
<td>Number Lambs Weaned:</td>
<td>Few</td>
</tr>
<tr>
<td>Quality of Surplus:</td>
<td>Average</td>
</tr>
</tbody>
</table>

You should consider the following options:
- Buy Feed
- Sell Grazing
- Buy Stock
- Standing Hay

Explanation: 09, 22, 04, 06, 10, 01

### Rule 160:

<table>
<thead>
<tr>
<th>Pasture Availability:</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Reserves:</td>
<td>No</td>
</tr>
<tr>
<td>Season and Terrain:</td>
<td>No</td>
</tr>
<tr>
<td>Weather Outlook:</td>
<td>Average</td>
</tr>
<tr>
<td>Stock Condition:</td>
<td>Good</td>
</tr>
<tr>
<td>Number Lambs Weaned:</td>
<td>Few</td>
</tr>
<tr>
<td>Quality of Surplus:</td>
<td>Low</td>
</tr>
</tbody>
</table>

You should consider the following options:
- Buy Feed
- Sell Grazing
- Buy Stock
- Standing Hay

Explanation: 09, 22, 04, 06, 10, 01

### Rule 161:

<table>
<thead>
<tr>
<th>Pasture Availability:</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Reserves:</td>
<td>No</td>
</tr>
<tr>
<td>Season and Terrain:</td>
<td>No</td>
</tr>
<tr>
<td>Weather Outlook:</td>
<td>Average</td>
</tr>
<tr>
<td>Stock Condition:</td>
<td>Average</td>
</tr>
<tr>
<td>Number Lambs Weaned:</td>
<td>Most</td>
</tr>
</tbody>
</table>

You should consider the following options:
- Buy Feed
- Sell Grazing
- Buy Stock
- Standing Hay, Feed Stock Better

Explanation: 09, 23, 04, 06, 10, 01

### Rule 162:

<table>
<thead>
<tr>
<th>Pasture Availability:</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Reserves:</td>
<td>No</td>
</tr>
<tr>
<td>Season and Terrain:</td>
<td>No</td>
</tr>
<tr>
<td>Weather Outlook:</td>
<td>Average</td>
</tr>
<tr>
<td>Stock Condition:</td>
<td>Average</td>
</tr>
<tr>
<td>Number Lambs Weaned:</td>
<td>Half</td>
</tr>
<tr>
<td>Quality of Surplus:</td>
<td>High</td>
</tr>
</tbody>
</table>

You should consider the following options:
- Buy Feed
- Sell Grazing
- Buy Stock
- Standing Hay, Wean Early, Feed Stock Better

Explanation: 09, 24, 04, 06, 10, 01

### Rule 163:

<table>
<thead>
<tr>
<th>Pasture Availability:</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed Reserves:</td>
<td>No</td>
</tr>
<tr>
<td>Season and Terrain:</td>
<td>No</td>
</tr>
<tr>
<td>Weather Outlook:</td>
<td>Average</td>
</tr>
<tr>
<td>Stock Condition:</td>
<td>Average</td>
</tr>
<tr>
<td>Number Lambs Weaned:</td>
<td>Half</td>
</tr>
<tr>
<td>Quality of Surplus:</td>
<td>Average</td>
</tr>
</tbody>
</table>

You should consider the following options:
- Buy Feed
- Sell Grazing
- Buy Stock
- Standing Hay, Feed Stock Better

Explanation: 09, 23, 04, 06, 10, 01
Rule 164:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:
Buy Feed, Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 09, 23, 04, 06, 10, 01

Rule 165:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:
Buy Feed, Sell Grazing, Buy Stock, Standing Hay, Wean Early, Feed Stock Better

Explanation: 09, 24, 04, 06, 10, 01

Rule 166:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:
Buy Feed, Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 09, 23, 04, 06, 10, 01

Rule 167:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:
Buy Feed, Sell Grazing, Buy Stock, Standing Hay, Feed Stock Better

Explanation: 09, 23, 04, 06, 10, 01

Rule 168:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:
Buy Feed, Wean Early, Feed Stock Better

Explanation: 09, 18, 11

Rule 169:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:
Buy Feed, Wean Early, Feed Stock Better

Explanation: 09, 18, 11, 08
Rule 170:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Buy Feed, Feed Stock Better

Explanation: 09, 18, 11

Rule 171:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:-
Buy Feed, Feed Stock Better

Explanation: 09, 18, 11

Rule 172:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:-
Buy Feed, Wean Early, Feed Stock Better

Explanation: 09, 18, 11, 08

Rule 173:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:-
Buy Feed, Feed Stock Better

Explanation: 09, 18, 11

Rule 174:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:-
Buy Feed, Feed Stock Better

Explanation: 09, 18, 11

Rule 175:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Most

You should consider the following options:-
Buy Feed, Standing Hay

Explanation: 09, 19, 10
Rule 176:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options: Buy Feed, Wean Early
Explanation: 09, 20, 08, 10

Rule 177:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options: Buy Feed, Wean Early
Explanation: 09, 20, 08, 10

Rule 178:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options: Buy Feed, Standing Hay
Explanation: 09, 19, 10

Rule 179:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options: Buy Feed, Wean Early
Explanation: 09, 20, 08, 10

Rule 180:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options: Buy Feed, Wean Early
Explanation: 09, 20, 08, 10

Rule 181:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options: Buy Feed, Standing Hay
Explanation: 09, 19, 10
Rule 182:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:-
Buy Feed, Feed Stock Better, Standing Hay

Explanation: 09, 21, 19, 10

Rule 183:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:-
Buy Feed, Feed Stock Better, Wean Early, Standing Hay

Explanation: 09, 21, 20, 08, 10

Rule 184:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Buy Feed, Feed Stock Better, Wean Early, Standing Hay

Explanation: 09, 21, 20, 08, 10

Rule 185:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:-
Buy Feed, Feed Stock Better, Standing Hay

Explanation: 09, 21, 19, 10

Rule 186:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:-
Buy Feed, Feed Stock Better, Wean Early, Standing Hay

Explanation: 09, 21, 20, 08, 10

Rule 187:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:-
Buy Feed, Feed Stock Better, Wean Early, Standing Hay

Explanation: 09, 21, 20, 08, 10
Rule 188:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:-
Buy Feed, Feed Stock Better

Explanation: 09, 21

Rule 189:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:-
Buy Feed, Feed Stock Better

Explanation: 09, 21, 19

Rule 190:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: High

You should consider the following options:-
Buy Feed, Feed Stock Better, Wean Early

Explanation: 09, 21, 20, 08

Rule 191:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Average

You should consider the following options:-
Buy Feed, Feed Stock Better, Wean Early

Explanation: 09, 21, 20, 08

Rule 192:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Quality of Surplus: Low

You should consider the following options:-
Buy Feed, Feed Stock Better

Explanation: 09, 21

Rule 193:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: High

You should consider the following options:-
Buy Feed, Feed Stock Better, Wean Early

Explanation: 09, 21, 20, 08
Rule 194:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Average

You should consider the following options:
Buy Feed, Feed Stock Better, Wean Early

Explanation: 09, 21, 20, 08

Rule 195:
Pasture Availability: Surplus
Feed Reserves: No
Season and Terrain: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Quality of Surplus: Low

You should consider the following options:
Buy Feed, Feed Stock Better

Explanation: 09, 21

Rule 196:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Good

You should consider the following options:
Continue as Planned

Explanation: 26

Rule 197:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:
Continue as Planned

Explanation: 26

Rule 198:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half

You should consider the following options:
Continue as Planned

Explanation: 26

Rule 199:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Few

You should consider the following options:
Continue as Planned

Explanation: 26

Rule 200:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:
Feed Stock Better

Explanation: 11

Rule 201:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half

You should consider the following options:
Feed Stock Better, Wean Early

Explanation: 27, 08
Rule 202:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Few

You should consider the following options:
Feed Stock Better, Wean Early

Explanation: 27, 08

Rule 203:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Good

You should consider the following options:
Continue as Planned

Explanation: 26

Rule 204:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:
Continue as Planned

Explanation: 26

Rule 205:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Half

You should consider the following options:
Continue as Planned

Explanation: 26

Rule 206:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Few

You should consider the following options:
Continue as Planned

Explanation: 26

Rule 207:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:
Feed Stock Better

Explanation: 11

Rule 208:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half

You should consider the following options:
Feed Stock Better, Wean Early

Explanation: 27, 08

Rule 209:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few

You should consider the following options:
Feed Stock Better, Wean Early

Explanation: 27, 08
Rule 210:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Good

You should consider the following options:
Continue as Planned

Explanation: 28

Rule 211:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:
Continue as Planned

Explanation: 28

Rule 212:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half

You should consider the following options:
Wean Early

Explanation: 29, 08

Rule 213:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Few

You should consider the following options:
Wean Early

Explanation: 29, 08

Rule 214:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:
Feedout

Explanation: 14

Rule 215:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half

You should consider the following options:
Wean Early, Feedout

Explanation: 30, 08

Rule 216:
Pasture Availability: Balanced
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few

You should consider the following options:
Wean Early, Feedout

Explanation: 30, 08

Rule 217:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options:
Buy Feed, Apply Fert

Explanation: 31
Rule 218:
Pasture Availability: Balanced  
Feed Reserves: No  
Weather Outlook: Good  
Stock Condition: Good  
Number Lambs Weaned: Most  
Storage Space Availability: No  

You should consider the following options:  
Buy Feed, Apply Fertilizer  

Explanation: 31, 32

Rule 219:
Pasture Availability: Balanced  
Feed Reserves: No  
Weather Outlook: Good  
Stock Condition: Good  
Number Lambs Weaned: Half  
Storage Space Availability: Yes  

You should consider the following options:  
Wean Early, Buy Feed, Apply Fertilizer  

Explanation: 33

Rule 220:
Pasture Availability: Balanced  
Feed Reserves: No  
Weather Outlook: Good  
Stock Condition: Good  
Number Lambs Weaned: Half  
Storage Space Availability: No  

You should consider the following options:  
Wean Early, Buy Feed, Apply Fertilizer  

Explanation: 33, 32

Rule 221:
Pasture Availability: Balanced  
Feed Reserves: No  
Weather Outlook: Good  
Stock Condition: Good  
Number Lambs Weaned: Few  
Storage Space Availability: Yes  

You should consider the following options:  
Wean Early, Buy Feed, Apply Fertilizer  

Explanation: 33

Rule 222:
Pasture Availability: Balanced  
Feed Reserves: No  
Weather Outlook: Good  
Stock Condition: Good  
Number Lambs Weaned: Few  
Storage Space Availability: No  

You should consider the following options:  
Wean Early, Buy Feed, Apply Fertilizer  

Explanation: 33, 32

Rule 223:
Pasture Availability: Balanced  
Feed Reserves: No  
Weather Outlook: Good  
Stock Condition: Average  
Number Lambs Weaned: Most  
Storage Space Availability: Yes  

You should consider the following options:  
Buy Feed, Apply Fertilizer  

Explanation: 31

Rule 224:
Pasture Availability: Balanced  
Feed Reserves: No  
Weather Outlook: Good  
Stock Condition: Average  
Number Lambs Weaned: Most  
Storage Space Availability: No  

You should consider the following options:  
Buy Feed, Apply Fertilizer  

Explanation: 31, 32
<table>
<thead>
<tr>
<th>Rule 225:</th>
<th>Rule 229:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasture Availability: Balanced</td>
<td>Pasture Availability: Balanced</td>
</tr>
<tr>
<td>Feed Reserves: No</td>
<td>Feed Reserves: No</td>
</tr>
<tr>
<td>Weather Outlook: Good</td>
<td>Weather Outlook: Good</td>
</tr>
<tr>
<td>Stock Condition: Average</td>
<td>Stock Condition: Poor</td>
</tr>
<tr>
<td>Number Lambs Weaned: Half</td>
<td>Number Lambs Weaned: Most</td>
</tr>
<tr>
<td>Storage Space Availability: Yes</td>
<td>Storage Space Availability: Yes</td>
</tr>
</tbody>
</table>

You should consider the following options:
- Wean Early, Buy Feed, Apply Fert

Explanation: 33

<table>
<thead>
<tr>
<th>Rule 226:</th>
<th>Rule 230:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasture Availability: Balanced</td>
<td>Pasture Availability: Balanced</td>
</tr>
<tr>
<td>Feed Reserves: No</td>
<td>Feed Reserves: No</td>
</tr>
<tr>
<td>Weather Outlook: Good</td>
<td>Weather Outlook: Good</td>
</tr>
<tr>
<td>Stock Condition: Average</td>
<td>Stock Condition: Poor</td>
</tr>
<tr>
<td>Number Lambs Weaned: Half</td>
<td>Number Lambs Weaned: Most</td>
</tr>
<tr>
<td>Storage Space Availability: No</td>
<td>Storage Space Availability: No</td>
</tr>
</tbody>
</table>

You should consider the following options:
- Wean Early, Buy Feed, Apply Fert

Explanation: 33, 32

<table>
<thead>
<tr>
<th>Rule 227:</th>
<th>Rule 231:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasture Availability: Balanced</td>
<td>Pasture Availability: Balanced</td>
</tr>
<tr>
<td>Feed Reserves: No</td>
<td>Feed Reserves: No</td>
</tr>
<tr>
<td>Weather Outlook: Good</td>
<td>Weather Outlook: Good</td>
</tr>
<tr>
<td>Stock Condition: Average</td>
<td>Stock Condition: Poor</td>
</tr>
<tr>
<td>Number Lambs Weaned: Few</td>
<td>Number Lambs Weaned: Half</td>
</tr>
<tr>
<td>Storage Space Availability: Yes</td>
<td>Storage Space Availability: Yes</td>
</tr>
</tbody>
</table>

You should consider the following options:
- Wean Early, Buy Feed, Apply Fert

Explanation: 33

<table>
<thead>
<tr>
<th>Rule 228:</th>
<th>Rule 232:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasture Availability: Balanced</td>
<td>Pasture Availability: Balanced</td>
</tr>
<tr>
<td>Feed Reserves: No</td>
<td>Feed Reserves: No</td>
</tr>
<tr>
<td>Weather Outlook: Good</td>
<td>Weather Outlook: Good</td>
</tr>
<tr>
<td>Stock Condition: Average</td>
<td>Stock Condition: Poor</td>
</tr>
<tr>
<td>Number Lambs Weaned: Few</td>
<td>Number Lambs Weaned: Half</td>
</tr>
<tr>
<td>Storage Space Availability: No</td>
<td>Storage Space Availability: No</td>
</tr>
</tbody>
</table>

You should consider the following options:
- Wean Early, Buy Feed, Apply Fert

Explanation: 33, 32
Rule 233:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options: –
Wean Early, Buy Feed, Apply Fert

Explanation: 33

Rule 237:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options: –
Wean Early, Buy Feed, Apply Fert

Explanation: 33

Rule 234:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options: –
Wean Early, Buy Feed, Apply Fert

Explanation: 33, 32

Rule 238:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options: –
Wean Early, Buy Feed, Apply Fert

Explanation: 33, 32

Rule 235:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options: –
Buy Feed, Apply Fert

Explanation: 31

Rule 239:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options: –
Wean Early, Buy Feed, Apply Fert

Explanation: 33

Rule 236:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options: –
Buy Feed, Apply Fert

Explanation: 31, 32

Rule 240:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options: –
Wean Early, Buy Feed, Apply Fert

Explanation: 33, 32
Rule 241:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options:-
Buy Feed, Apply Fert

Explanation: 31

Rule 242:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options:-
Buy Feed, Apply Fert

Explanation: 31, 32

Rule 243:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options:-
Wean Early, Buy Feed, Apply Fert

Explanation: 33

Rule 244:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options:-
Wean Early, Buy Feed, Apply Fert

Explanation: 33, 32

Rule 245:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:-
Wean Early, Buy Feed, Apply Fert

Explanation: 33

Rule 246:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options:-
Wean Early, Buy Feed, Apply Fert

Explanation: 33, 32

Rule 247:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options:-
Buy Feed, Apply Fert

Explanation: 31

Rule 248:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options:-
Buy Feed, Apply Fert

Explanation: 31, 32
Rule 249:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options:
Wean Early, Buy Feed, Apply Fert

Explanation: 33

Rule 250:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options:
Wean Early, Buy Feed, Apply Fert

Explanation: 33, 32

Rule 251:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:
Wean Early, Buy Feed, Apply Fert

Explanation: 33

Rule 252:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options:
Wean Early, Buy Feed, Apply Fert

Explanation: 33, 32

Rule 253:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options:
Buy Feed

Explanation: 34

Rule 254:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options:
Buy Feed

Explanation: 34, 32

Rule 255:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options:
Wean Early, Buy Feed

Explanation: 35

Rule 256:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options:
Wean Early, Buy Feed

Explanation: 35, 32
Rule 257:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 35

Rule 258:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 35, 32

Rule 259:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options:-
Buy Feed

Explanation: 34

Rule 260:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options:-
Buy Feed

Explanation: 34, 32

Rule 261:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 35

Rule 262:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 35, 32

Rule 263:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 35

Rule 264:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 35, 32
Rule 265:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options:-
Buy Feed

Explanation: 34

Rule 269:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 35

Rule 266:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options:-
Buy Feed

Explanation: 34, 32

Rule 267:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 35

Rule 268:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 35, 32

Rule 269:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 35

Rule 270:
Pasture Availability: Balanced
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 35, 32

Rule 271:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Most

You should consider the following options:-
Apply Fert

Explanation: 36

Rule 272:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Half

You should consider the following options:-
Wean Early, Apply Fert

Explanation: 37, 08
Rule 273:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Few

You should consider the following options:
Wean Early, Apply Fert

Explanation: 37, 08

Rule 277:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:
Apply Fert, Feedout

Explanation: 36, 14

Rule 274:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:
Apply Fert

Explanation: 36

Rule 278:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half

You should consider the following options:
Wean Early, Apply Fert, Feedout

Explanation: 37, 14, 08

Rule 275:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half

You should consider the following options:
Wean Early, Apply Fert

Explanation: 37, 08

Rule 279:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Few

You should consider the following options:
Wean Early, Apply Fert, Feedout

Explanation: 37, 14, 08

Rule 276:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Few

You should consider the following options:
Wean Early, Apply Fert

Explanation: 37, 08

Rule 280:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Most

You should consider the following options:
Apply Fert

Explanation: 36
Rule 281:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Half

You should consider the following options:­
Wean Early, Apply Fert

Explanation: 37, 08

Rule 282:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Few

You should consider the following options:­
Wean Early, Apply Fert

Explanation: 37, 08

Rule 283:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:­
Apply Fert

Explanation: 36

Rule 284:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Half

You should consider the following options:­
Wean Early, Apply Fert

Explanation: 37, 08

Rule 285:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Few

You should consider the following options:­
Wean Early, Apply Fert

Explanation: 37, 08

Rule 286:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:­
Apply Fert, Feedout

Explanation: 36, 14

Rule 287:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half

You should consider the following options:­
Wean Early, Apply Fert, Feedout

Explanation: 37, 14, 08

Rule 288:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few

You should consider the following options:­
Wean Early, Apply Fert, Feedout

Explanation: 37, 14, 08
Rule 289:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Most

You should consider the following options:
- Feedout

Explanation: 36

Rule 290:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half

You should consider the following options:
- Wean Early, Feedout

Explanation: 37, 08

Rule 291:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few

You should consider the following options:
- Wean Early, Feedout

Explanation: 37, 08

Rule 292:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Most

You should consider the following options:
- Feedout

Explanation: 38

Rule 293:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half

You should consider the following options:
- Wean Early, Feedout

Explanation: 39, 08

Rule 294:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Few

You should consider the following options:
- Wean Early, Feedout

Explanation: 39, 08

Rule 295:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Most

You should consider the following options:
- Feedout

Explanation: 38

Rule 296:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half

You should consider the following options:
- Wean Early, Feedout

Explanation: 39, 08
Rule 297:
Pasture Availability: Shortage
Feed Reserves: Yes
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few

You should consider the following options: -
Wean Early, Feedout

Explanation: 39, 08

Rule 298:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options: -
Apply Fert, Buy Feed

Explanation: 40

Rule 299:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options: -
Apply Fert, Buy Feed

Explanation: 40, 32

Rule 300:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options: -
Wean Early, Apply Fert, Buy Feed

Explanation: 41

Rule 301:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options: -
Wean Early, Apply Fert, Buy Feed

Explanation: 41, 32

Rule 302:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options: -
Wean Early, Apply Fert, Buy Feed

Explanation: 41

Rule 303:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Good
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options: -
Wean Early, Apply Fert, Buy Feed

Explanation: 41, 32

Rule 304:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options: -
Apply Fert, Buy Feed

Explanation: 40
Rule 305:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options:­
Apply Fen, Buy Feed

Explanation: 40, 32

Rule 306:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options:­
Wean Early, Apply Fen, Buy Feed

Explanation: 41

Rule 307:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options:­
Wean Early, Apply Fen, Buy Feed

Explanation: 41, 32

Rule 308:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:­
Wean Early, Apply Fen, Buy Feed

Explanation: 41

Rule 309:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Average
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options:­
Wean Early, Apply Fen, Buy Feed

Explanation: 41, 32

Rule 310:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options:­
Apply Fert, Buy Feed, Feed Stock Better

Explanation: 40, 42

Rule 311:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options:­
Apply Fert, Buy Feed, Feed Stock Better

Explanation: 40, 42, 32
Rule 312:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options:
- Wean Early, Apply Fert, Buy Feed, Feed Stock Better

Explanation: 41, 42

Rule 313:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options:
- Wean Early, Apply Fert, Buy Feed, Feed Stock Better

Explanation: 41, 42, 32

Rule 314:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:
- Wean Early, Apply Fert, Buy Feed, Feed Stock Better

Explanation: 41, 42

Rule 315:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Good
Stock Condition: Poor
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options:
- Wean Early, Apply Fert, Buy Feed, Feed Stock Better

Explanation: 41, 42, 32

Rule 316:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options:
- Apply Fert, Buy Feed

Explanation: 40

Rule 317:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options:
- Apply Fert, Buy Feed

Explanation: 40, 32
Rule 318:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options:
- Wean Early, Apply Fert, Buy Feed

Explanation: 41

Rule 319:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options:
- Wean Early, Apply Fert, Buy Feed

Explanation: 41, 32

Rule 320:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:
- Wean Early, Apply Fert, Buy Feed

Explanation: 41

Rule 321:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Good
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options:
- Wean Early, Apply Fert, Buy Feed

Explanation: 41, 32
Rule 325:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options:
Wean Early, Apply Fert, Buy Feed, Feed Stock Better

Explanation: 41, 42, 32

Rule 326:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:
Wean Early, Apply Fert, Buy Feed, Feed Stock Better

Explanation: 41, 42

Rule 327:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Average
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options:
Wean Early, Apply Fert, Buy Feed, Feed Stock Better

Explanation: 41, 42, 32

Rule 328:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options:
Apply Fert, Buy Feed, Feed Stock Better

Explanation: 40, 42

Rule 329:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options:
Apply Fert, Buy Feed, Feed Stock Better

Explanation: 40, 42, 32

Rule 330:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options:
Wean Early, Apply Fert, Buy Feed, Feed Stock Better

Explanation: 41, 42

72
Rule 331:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options:­
Wean Early, Apply Fert, Buy Feed, Feed Stock Better

Explanation: 41, 42, 32

Rule 332:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:­
Wean Early, Apply Fert, Buy Feed, Feed Stock Better

Explanation: 41, 42

Rule 333:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Average
Stock Condition: Poor
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options:­
Wean Early, Apply Fert, Buy Feed, Feed Stock Better

Explanation: 41, 42, 32

Rule 334:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options:­
Buy Feed

Explanation: 43

Rule 335:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options:­
Buy Feed

Explanation: 43, 32

Rule 336:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options:­
Wean Early, Buy Feed

Explanation: 44

Rule 337:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options:­
Wean Early, Buy Feed

Explanation: 44, 32
**Rule 338:**
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 44

**Rule 339:**
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Good
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options:-
Wean Early, Buy Feed

Explanation: 44, 32

**Rule 340:**
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options:-
Wean Early, Buy Feed, De-stock

Explanation: 43, 13

**Rule 341:**
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options:-
Wean Early, Buy Feed, De-stock

Explanation: 43, 32, 13

**Rule 342:**
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options:-
Wean Early, Buy Feed, De-stock

Explanation: 43, 13

**Rule 343:**
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options:-
Wean Early, Buy Feed, De-stock

Explanation: 43, 32, 13

**Rule 344:**
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options:-
Wean Early, Buy Feed, De-stock

Explanation: 43, 13

**Rule 345:**
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Average
Number Lambs Weaned: Few
Storage Space Availability: No

You should consider the following options:-
Wean Early, Buy Feed, De-stock

Explanation: 43, 32, 13
Rule 346:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Most
Storage Space Availability: Yes

You should consider the following options: De-stock, Buy Feed

Explanation: 45

Rule 350:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Few
Storage Space Availability: Yes

You should consider the following options: De-stock, Wean Early, Buy Feed

Explanation: 46

Rule 347:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Most
Storage Space Availability: No

You should consider the following options: De-stock, Buy Feed

Explanation: 45, 32

Rule 348:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Storage Space Availability: Yes

You should consider the following options: De-stock, Wean Early, Buy Feed

Explanation: 46

Rule 349:
Pasture Availability: Shortage
Feed Reserves: No
Weather Outlook: Poor
Stock Condition: Poor
Number Lambs Weaned: Half
Storage Space Availability: No

You should consider the following options: De-stock, Wean Early, Buy Feed

Explanation: 46, 32
APPENDIX TWO

Outlook Ruleset
(Weather Related Production Potential)

Rule 1:
Weather Reliability: Reliable
Outlook is Good.

Rule 2:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Warm
Outlook is Good.

Rule 3:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Average
Outlook is Good.

Rule 4:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Cold
Outlook is Average.

Rule 5:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Warm
Outlook is Good.

Rule 6:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Average
Outlook is Good.

Rule 7:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Cold
Outlook is Average.

Rule 8:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Warm
Outlook is Good.

Rule 9:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Average
Outlook is Average.

Rule 10:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Cold
Outlook is Average.
**Rule 11:**
Weather Reliability: Unsure  
Expected Rainfall: High  
Expected Temperature: Moderate  
Current Soil Moisture: Saturated  
Current Soil Temperature: Warm

Outlook is Good.

**Rule 12:**
Weather Reliability: Unsure  
Expected Rainfall: High  
Expected Temperature: Moderate  
Current Soil Moisture: Saturated  
Current Soil Temperature: Average

Outlook is Average.

**Rule 13:**
Weather Reliability: Unsure  
Expected Rainfall: High  
Expected Temperature: Moderate  
Current Soil Moisture: Saturated  
Current Soil Temperature: Cold

Outlook is Poor.

**Rule 14:**
Weather Reliability: Unsure  
Expected Rainfall: High  
Expected Temperature: Moderate  
Current Soil Moisture: Moist  
Current Soil Temperature: Warm

Outlook is Good.

**Rule 15:**
Weather Reliability: Unsure  
Expected Rainfall: High  
Expected Temperature: Moderate  
Current Soil Moisture: Moist  
Current Soil Temperature: Average

Outlook is Average.

**Rule 16:**
Weather Reliability: Unsure  
Expected Rainfall: High  
Expected Temperature: Moderate  
Current Soil Moisture: Moist  
Current Soil Temperature: Cold

Outlook is Poor.

**Rule 17:**
Weather Reliability: Unsure  
Expected Rainfall: High  
Expected Temperature: Moderate  
Current Soil Moisture: Dry  
Current Soil Temperature: Warm

Outlook is Average.

**Rule 18:**
Weather Reliability: Unsure  
Expected Rainfall: High  
Expected Temperature: Moderate  
Current Soil Moisture: Dry  
Current Soil Temperature: Average

Outlook is Poor.

**Rule 19:**
Weather Reliability: Unsure  
Expected Rainfall: High  
Expected Temperature: Moderate  
Current Soil Moisture: Dry  
Current Soil Temperature: Cold

Outlook is Poor.

**Rule 20:**
Weather Reliability: Unsure  
Expected Rainfall: High  
Expected Temperature: Cold  
Current Soil Moisture: Saturated  
Current Soil Temperature: Warm

Outlook is Average.
Rule 21:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Saturated
Current Soil Temperature: Average
Outlook is Poor.

Rule 22:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Saturated
Current Soil Temperature: Cold
Outlook is Poor.

Rule 23:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Warm
Outlook is Average.

Rule 24:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Average
Outlook is Poor.

Rule 25:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Cold
Outlook is Poor.

Rule 26:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Warm
Outlook is Poor.

Rule 27:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Average
Outlook is Poor.

Rule 28:
Weather Reliability: Unsure
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Cold
Outlook is Poor.

Rule 29:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Warm
Outlook is Good.

Rule 30:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Average
Outlook is Average.
Rule 31:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Cold

Outlook is Average.

Rule 32:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Warm

Outlook is Good.

Rule 33:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Average

Outlook is Average.

Rule 34:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Cold

Outlook is Poor.

Rule 35:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Warm

Outlook is Average.

Rule 36:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Average

Outlook is Poor.

Rule 37:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Cold

Outlook is Poor.

Rule 38:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Moderate
Current Soil Moisture: Saturated
Current Soil Temperature: Warm

Outlook is Average.

Rule 39:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Moderate
Current Soil Moisture: Saturated
Current Soil Temperature: Average

Outlook is Average.

Rule 40:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Moderate
Current Soil Moisture: Saturated
Current Soil Temperature: Cold

Outlook is Poor.
<table>
<thead>
<tr>
<th>Rule 41:</th>
<th>Rule 46:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Rainfall: Average</td>
<td>Expected Rainfall: Average</td>
</tr>
<tr>
<td>Expected Temperature: Moderate</td>
<td>Expected Temperature: Moderate</td>
</tr>
<tr>
<td>Current Soil Moisture: Moist</td>
<td>Current Soil Moisture: Dry</td>
</tr>
<tr>
<td>Current Soil Temperature: Warm</td>
<td>Current Soil Temperature: Cold</td>
</tr>
<tr>
<td>Outlook is Average.</td>
<td>Outlook is Poor.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rule 42:</th>
<th>Rule 47:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Rainfall: Average</td>
<td>Expected Rainfall: Average</td>
</tr>
<tr>
<td>Expected Temperature: Moderate</td>
<td>Expected Temperature: Cold</td>
</tr>
<tr>
<td>Current Soil Moisture: Moist</td>
<td>Current Soil Moisture: Saturated</td>
</tr>
<tr>
<td>Current Soil Temperature: Average</td>
<td>Current Soil Temperature: Warm</td>
</tr>
<tr>
<td>Outlook is Average.</td>
<td>Outlook is Average.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rule 43:</th>
<th>Rule 48:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Rainfall: Average</td>
<td>Expected Rainfall: Average</td>
</tr>
<tr>
<td>Expected Temperature: Moderate</td>
<td>Expected Temperature: Cold</td>
</tr>
<tr>
<td>Current Soil Moisture: Moist</td>
<td>Current Soil Moisture: Saturated</td>
</tr>
<tr>
<td>Current Soil Temperature: Cold</td>
<td>Current Soil Temperature: Average</td>
</tr>
<tr>
<td>Outlook is Poor.</td>
<td>Outlook is Poor.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rule 44:</th>
<th>Rule 49:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Rainfall: Average</td>
<td>Expected Rainfall: Average</td>
</tr>
<tr>
<td>Expected Temperature: Moderate</td>
<td>Expected Temperature: Cold</td>
</tr>
<tr>
<td>Current Soil Moisture: Dry</td>
<td>Current Soil Moisture: Saturated</td>
</tr>
<tr>
<td>Current Soil Temperature: Warm</td>
<td>Current Soil Temperature: Cold</td>
</tr>
<tr>
<td>Outlook is Average.</td>
<td>Outlook is Poor.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rule 45:</th>
<th>Rule 50:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Rainfall: Average</td>
<td>Expected Rainfall: Average</td>
</tr>
<tr>
<td>Expected Temperature: Moderate</td>
<td>Expected Temperature: Cold</td>
</tr>
<tr>
<td>Current Soil Moisture: Dry</td>
<td>Current Soil Moisture: Moist</td>
</tr>
<tr>
<td>Current Soil Temperature: Average</td>
<td>Current Soil Temperature: Warm</td>
</tr>
<tr>
<td>Outlook is Poor.</td>
<td>Outlook is Average.</td>
</tr>
</tbody>
</table>
Rule 51:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Average

Outlook is Poor.

Rule 52:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Cold

Outlook is Poor.

Rule 53:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Warm

Outlook is Poor.

Rule 54:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Average

Outlook is Poor.

Rule 55:
Weather Reliability: Unsure
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Cold

Outlook is Poor.

Rule 56:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Warm

Outlook is Good.

Rule 57:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Average

Outlook is Average.

Rule 58:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Cold

Outlook is Poor.

Rule 59:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Warm

Outlook is Average.

Rule 60:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Average

Outlook is Poor.
Rule 61:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Cold

Outlook is Poor.

Rule 62:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Warm

Outlook is Poor.

Rule 63:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Average

Outlook is Poor.

Rule 64:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Cold

Outlook is Poor.

Rule 65:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Moderate
Current Soil Moisture: Saturated
Current Soil Temperature: Warm

Outlook is Average.

Rule 66:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Moderate
Current Soil Moisture: Saturated
Current Soil Temperature: Average

Outlook is Poor.

Rule 67:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Moderate
Current Soil Moisture: Saturated
Current Soil Temperature: Cold

Outlook is Poor.

Rule 68:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Moderate
Current Soil Moisture: Moist
Current Soil Temperature: Warm

Outlook is Average.

Rule 69:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Moderate
Current Soil Moisture: Moist
Current Soil Temperature: Average

Outlook is Poor.

Rule 70:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Moderate
Current Soil Moisture: Moist
Current Soil Temperature: Cold

Outlook is Poor.
Rule 71:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Moderate
Current Soil Moisture: Dry
Current Soil Temperature: Warm

Outlook is Poor.

Rule 72:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Moderate
Current Soil Moisture: Dry
Current Soil Temperature: Average

Outlook is Poor.

Rule 73:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Moderate
Current Soil Moisture: Dry
Current Soil Temperature: Cold

Outlook is Poor.

Rule 74:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Cold
Current Soil Moisture: Saturated
Current Soil Temperature: Warm

Outlook is Poor.

Rule 75:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Cold
Current Soil Moisture: Saturated
Current Soil Temperature: Average

Outlook is Poor.

Rule 76:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Cold
Current Soil Moisture: Saturated
Current Soil Temperature: Cold

Outlook is Poor.

Rule 77:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Warm

Outlook is Poor.

Rule 78:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Average

Outlook is Poor.

Rule 79:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Cold

Outlook is Poor.

Rule 80:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Warm

Outlook is Poor.
Rule 81:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Average
Outlook is Poor.

Rule 82:
Weather Reliability: Unsure
Expected Rainfall: Low
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Cold
Outlook is Poor.

Rule 83:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Warm
Outlook is Good.

Rule 84:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Average
Outlook is Good.

Rule 85:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Cold
Outlook is Average.

Rule 86:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Warm
Outlook is Good.

Rule 87:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Average
Outlook is Good.

Rule 88:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Cold
Outlook is Average.

Rule 89:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Warm
Outlook is Good.

Rule 90:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Average
Outlook is Average.
<table>
<thead>
<tr>
<th>Rule</th>
<th>Weather Reliability</th>
<th>Expected Rainfall</th>
<th>Expected Temperature</th>
<th>Current Soil Moisture</th>
<th>Current Soil Temperature</th>
<th>Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td>91</td>
<td>Unreliable</td>
<td>High</td>
<td>Hot</td>
<td>Dry</td>
<td>Cold</td>
<td>Average</td>
</tr>
<tr>
<td>92</td>
<td>Unreliable</td>
<td>High</td>
<td>Moderate</td>
<td>Saturated</td>
<td>Warm</td>
<td>Good</td>
</tr>
<tr>
<td>93</td>
<td>Unreliable</td>
<td>High</td>
<td>Moderate</td>
<td>Saturated</td>
<td>Average</td>
<td>Average</td>
</tr>
<tr>
<td>94</td>
<td>Unreliable</td>
<td>High</td>
<td>Moderate</td>
<td>Saturated</td>
<td>Cold</td>
<td>Poor</td>
</tr>
<tr>
<td>95</td>
<td>Unreliable</td>
<td>High</td>
<td>Moderate</td>
<td>Moist</td>
<td>Warm</td>
<td>Good</td>
</tr>
<tr>
<td>96</td>
<td>Unreliable</td>
<td>High</td>
<td>Moderate</td>
<td>Moist</td>
<td>Average</td>
<td>Poor</td>
</tr>
<tr>
<td>97</td>
<td>Unreliable</td>
<td>High</td>
<td>Moderate</td>
<td>Moist</td>
<td>Cold</td>
<td>Poor</td>
</tr>
<tr>
<td>98</td>
<td>Unreliable</td>
<td>High</td>
<td>Moderate</td>
<td>Dry</td>
<td>Warm</td>
<td>Average</td>
</tr>
<tr>
<td>99</td>
<td>Unreliable</td>
<td>High</td>
<td>Moderate</td>
<td>Dry</td>
<td>Average</td>
<td>Poor</td>
</tr>
<tr>
<td>100</td>
<td>Unreliable</td>
<td>High</td>
<td>Moderate</td>
<td>Dry</td>
<td>Cold</td>
<td>Poor</td>
</tr>
</tbody>
</table>
Rule 101: Rule 106:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Saturated
Current Soil Temperature: Warm

Outlook is Average.

Rule 102: Rule 107:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Saturated
Current Soil Temperature: Average

Outlook is Poor.

Rule 103: Rule 108:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Saturated
Current Soil Temperature: Cold

Outlook is Poor.

Rule 104: Rule 109:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Warm

Outlook is Average.

Rule 105: Rule 110:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Average

Outlook is Poor.

Rule 106:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Cold

Outlook is Poor.

Rule 107:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Warm

Outlook is Poor.

Rule 108:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Average

Outlook is Poor.

Rule 109:
Weather Reliability: Unreliable
Expected Rainfall: High
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Cold

Outlook is Poor.

Rule 110:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Warm

Outlook is Good.
Rule 111:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Average
Outlook is Average.

Rule 112:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Cold
Outlook is Average.

Rule 113:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Warm
Outlook is Good.

Rule 114:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Average
Outlook is Average.

Rule 115:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Cold
Outlook is Poor.

Rule 116:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Warm
Outlook is Average.

Rule 117:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Average
Outlook is Poor.

Rule 118:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Hot
Current Soil Moisture: Dry
Current Soil Temperature: Cold
Outlook is Poor.

Rule 119:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Moderate
Current Soil Moisture: Saturated
Current Soil Temperature: Warm
Outlook is Average.

Rule 120:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Moderate
Current Soil Moisture: Saturated
Current Soil Temperature: Average
Outlook is Average.
Rule 121:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Moderate
Current Soil Moisture: Saturated
Current Soil Temperature: Cold
Outlook is Poor.

Rule 122:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Moderate
Current Soil Moisture: Moist
Current Soil Temperature: Warm
Outlook is Average.

Rule 123:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Moderate
Current Soil Moisture: Moist
Current Soil Temperature: Average
Outlook is Average.

Rule 124:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Moderate
Current Soil Moisture: Moist
Current Soil Temperature: Cold
Outlook is Poor.

Rule 125:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Moderate
Current Soil Moisture: Dry
Current Soil Temperature: Warm
Outlook is Average.

Rule 126:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Moderate
Current Soil Moisture: Dry
Current Soil Temperature: Average
Outlook is Poor.

Rule 127:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Moderate
Current Soil Moisture: Dry
Current Soil Temperature: Cold
Outlook is Poor.

Rule 128:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Saturated
Current Soil Temperature: Warm
Outlook is Average.

Rule 129:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Saturated
Current Soil Temperature: Average
Outlook is Poor.

Rule 130:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Saturated
Current Soil Temperature: Cold
Outlook is Poor.
Rule 131:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Warm

Outlook is Average.

Rule 132:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Average

Outlook is Poor.

Rule 133:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Moist
Current Soil Temperature: Cold

Outlook is Poor.

Rule 134:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Warm

Outlook is Poor.

Rule 135:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Average

Outlook is Poor.

Rule 136:
Weather Reliability: Unreliable
Expected Rainfall: Average
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Cold

Outlook is Poor.

Rule 137:
Weather Reliability: Unreliable
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Warm

Outlook is Good.

Rule 138:
Weather Reliability: Unreliable
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Average

Outlook is Average.

Rule 139:
Weather Reliability: Unreliable
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Saturated
Current Soil Temperature: Cold

Outlook is Poor.

Rule 140:
Weather Reliability: Unreliable
Expected Rainfall: Low
Expected Temperature: Hot
Current Soil Moisture: Moist
Current Soil Temperature: Warm

Outlook is Average.
<table>
<thead>
<tr>
<th>Rule 141:</th>
<th>Rule 146:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Rainfall: Low</td>
<td>Expected Rainfall: Low</td>
</tr>
<tr>
<td>Expected Temperature: Hot</td>
<td>Expected Temperature: Moderate</td>
</tr>
<tr>
<td>Current Soil Moisture: Moist</td>
<td>Current Soil Moisture: Saturated</td>
</tr>
<tr>
<td>Current Soil Temperature: Average</td>
<td>Current Soil Temperature: Warm</td>
</tr>
</tbody>
</table>

Outlook is Poor.

<table>
<thead>
<tr>
<th>Rule 142:</th>
<th>Rule 147:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Rainfall: Low</td>
<td>Expected Rainfall: Low</td>
</tr>
<tr>
<td>Expected Temperature: Hot</td>
<td>Expected Temperature: Moderate</td>
</tr>
<tr>
<td>Current Soil Moisture: Moist</td>
<td>Current Soil Moisture: Saturated</td>
</tr>
<tr>
<td>Current Soil Temperature: Cold</td>
<td>Current Soil Temperature: Average</td>
</tr>
</tbody>
</table>

Outlook is Poor.

<table>
<thead>
<tr>
<th>Rule 143:</th>
<th>Rule 148:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Rainfall: Low</td>
<td>Expected Rainfall: Low</td>
</tr>
<tr>
<td>Expected Temperature: Hot</td>
<td>Expected Temperature: Moderate</td>
</tr>
<tr>
<td>Current Soil Moisture: Dry</td>
<td>Current Soil Moisture: Saturated</td>
</tr>
<tr>
<td>Current Soil Temperature: Warm</td>
<td>Current Soil Temperature: Cold</td>
</tr>
</tbody>
</table>

Outlook is Poor.

<table>
<thead>
<tr>
<th>Rule 144:</th>
<th>Rule 149:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Rainfall: Low</td>
<td>Expected Rainfall: Low</td>
</tr>
<tr>
<td>Expected Temperature: Hot</td>
<td>Expected Temperature: Moderate</td>
</tr>
<tr>
<td>Current Soil Moisture: Dry</td>
<td>Current Soil Moisture: Moist</td>
</tr>
<tr>
<td>Current Soil Temperature: Average</td>
<td>Current Soil Temperature: Warm</td>
</tr>
</tbody>
</table>

Outlook is Poor.

<table>
<thead>
<tr>
<th>Rule 145:</th>
<th>Rule 150:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Rainfall: Low</td>
<td>Expected Rainfall: Low</td>
</tr>
<tr>
<td>Expected Temperature: Hot</td>
<td>Expected Temperature: Moderate</td>
</tr>
<tr>
<td>Current Soil Moisture: Dry</td>
<td>Current Soil Moisture: Moist</td>
</tr>
<tr>
<td>Current Soil Temperature: Cold</td>
<td>Current Soil Temperature: Average</td>
</tr>
</tbody>
</table>

Outlook is Poor.
**Rule 151:**
- Weather Reliability: Unreliable
- Expected Rainfall: Low
- Expected Temperature: Moderate
- Current Soil Moisture: Moist
- Current Soil Temperature: Cold

Outlook is Poor.

**Rule 152:**
- Weather Reliability: Unreliable
- Expected Rainfall: Low
- Expected Temperature: Moderate
- Current Soil Moisture: Dry
- Current Soil Temperature: Warm

Outlook is Poor.

**Rule 153:**
- Weather Reliability: Unreliable
- Expected Rainfall: Low
- Expected Temperature: Moderate
- Current Soil Moisture: Dry
- Current Soil Temperature: Average

Outlook is Poor.

**Rule 154:**
- Weather Reliability: Unreliable
- Expected Rainfall: Low
- Expected Temperature: Moderate
- Current Soil Moisture: Dry
- Current Soil Temperature: Cold

Outlook is Poor.

**Rule 155:**
- Weather Reliability: Unreliable
- Expected Rainfall: Low
- Expected Temperature: Cold
- Current Soil Moisture: Saturated
- Current Soil Temperature: Warm

Outlook is Poor.

**Rule 156:**
- Weather Reliability: Unreliable
- Expected Rainfall: Low
- Expected Temperature: Cold
- Current Soil Moisture: Saturated
- Current Soil Temperature: Average

Outlook is Poor.

**Rule 157:**
- Weather Reliability: Unreliable
- Expected Rainfall: Low
- Expected Temperature: Cold
- Current Soil Moisture: Saturated
- Current Soil Temperature: Cold

Outlook is Poor.

**Rule 158:**
- Weather Reliability: Unreliable
- Expected Rainfall: Low
- Expected Temperature: Cold
- Current Soil Moisture: Moist
- Current Soil Temperature: Warm

Outlook is Poor.

**Rule 159:**
- Weather Reliability: Unreliable
- Expected Rainfall: Low
- Expected Temperature: Cold
- Current Soil Moisture: Moist
- Current Soil Temperature: Average

Outlook is Poor.

**Rule 160:**
- Weather Reliability: Unreliable
- Expected Rainfall: Low
- Expected Temperature: Cold
- Current Soil Moisture: Moist
- Current Soil Temperature: Cold

Outlook is Poor.
Rule 161:
Weather Reliability: Unreliable
Expected Rainfall: Low
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Warm

Outlook is Poor.

Rule 162:
Weather Reliability: Unreliable
Expected Rainfall: Low
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Average

Outlook is Poor.

Rule 163:
Weather Reliability: Unreliable
Expected Rainfall: Low
Expected Temperature: Cold
Current Soil Moisture: Dry
Current Soil Temperature: Cold

Outlook is Poor.
APPENDIX THREE

Condition of Stock Ruleset

Rule 1:
Severity of Scouring: Severe
Condition of Stock is Poor.

Rule 2:
Severity of Scouring: Moderate
Condition of Wool: Bright/Good
Body Condition: Increasing
Condition of Stock is Good.

Rule 3:
Severity of Scouring: Moderate
Condition of Wool: Bright/Good
Body Condition: Stable
Condition of Stock is Average.

Rule 4:
Severity of Scouring: Moderate
Condition of Wool: Bright/Good
Body Condition: Decreasing
Condition of Stock is Poor.

Rule 5:
Severity of Scouring: Moderate
Condition of Wool: Dull/Poor
Body Condition: Increasing
Condition of Stock is Average.

Rule 6:
Severity of Scouring: Moderate
Condition of Wool: Dull/Poor
Body Condition: Stable
Condition of Stock is Poor.

Rule 7:
Severity of Scouring: Moderate
Condition of Wool: Dull/Poor
Body Condition: Decreasing
Condition of Stock is Poor.

Rule 8:
Severity of Scouring: Not Scouring
Condition of Wool: Bright/Good
Body Condition: Increasing
Condition of Stock is Good.

Rule 9:
Severity of Scouring: Not Scouring
Condition of Wool: Bright/Good
Body Condition: Stable
Condition of Stock is Good.

Rule 10:
Severity of Scouring: Not Scouring
Condition of Wool: Bright/Good
Body Condition: Decreasing
Condition of Stock is Average.

Rule 11:
Severity of Scouring: Not Scouring
Condition of Wool: Dull/Poor
Body Condition: Increasing
Condition of Stock is Good.

Rule 12:
Severity of Scouring: Not Scouring
Condition of Wool: Dull/Poor
Body Condition: Stable
Condition of Stock is Average.

Rule 13:
Severity of Scouring: Not Scouring
Condition of Wool: Dull/Poor
Body Condition: Decreasing
Condition of Stock is Poor.
APPENDIX FOUR

Supplement/Surplus Expert Explanations

Explanation 01:
One way of deciding between the options is to work out the costs and returns for each. You could then implement the option with the best margin.

Explanation 02:
Since the quality of the surplus pasture is good it could be made into silage. Poorer quality feed is usually made into hay. Generally this means that silage is made in the spring and hay in the summer.

Explanation 03:
Conserve means to shut up the paddock and prepare it for making into hay, silage or haylage. If later there is a feed shortage you should not hesitate to open the gate to the stock. Only a genuine surplus should be conserved.

Explanation 04:
If you are prepared to have other farmers animals on the property then grazing is an option. It’s important to take precautions when moving animals from one farm to another so that resistant worms are not introduced (quarantine drenching). The problem is that if you have surplus feed others in your area are also likely to have a surplus. This could make it difficult to acquire grazers on a casual basis.

Explanation 05:
You could sell the surplus feed as either bales of hay or standing hay. The important question that needs to be answered is what are the market opportunities for selling feed either as hay or standing. It might be possible to make extra hay in the hope that there is a market for it at some later date. If a contractor and/or equipment is required you will need to ensure that it is available. This will allow the pasture to recover and should provide you with high quality feed in 4-6 weeks.

Explanation 06:
Buying additional stock to utilise the surplus is an option provided the animals on the farm are being fed adequately. Availability of cash to purchase the extra stock is an important consideration as is the expected margin (costs and returns). Probable market trends and availability of suitable animals are also important factors.

Explanation 07:
The main advantage obtained from topping is that the quality of the pasture is maintained or improved. Quality pasture is required for flushing and finishing lambs. It also allows the plant to resume vegetative growth. Contour may also limit your ability to top.

Explanation 08:
You can wean lambs early if there is enough high quality pasture for them for several weeks. While lambs can be weaned as early as 4 weeks weaning early here refers to weaning them from about 8 weeks on. Provided they are given high quality pasture they will not suffer any long term effects from being weaned early.
Explanation 09:
Since you do not have enough feed reserves and you are unable to make supplements you will need to purchase the required feed. You need to decide whether it will be cheaper to buy the feed now or later.

Explanation 10:
By doing nothing with the surplus feed you are by default accumulating standing hay for use later. If doing so you need to have animals that can utilise this feed which is likely to be of poor quality. Contour can limit feed conservation options so the surplus can left standing. Leaving standing hay in a paddock can cause subsequent poor pasture quality and regrowth during autumn and encourages grass grub. Since cattle can utilise rough feed better than sheep they are usually given standing hay.

Explanation 11:
With the condition of the stock being poor your first priority should be to feed the stock better.

Explanation 12:
If you think the weather pattern is going to be favourable then you could consider applying fertiliser to create a surplus.

Explanation 13:
Since you currently have a feed shortage and the outlook is not good you should consider de-stocking now.

Explanation 14:
Since you have plenty of feed in storage and the ewes are in poor condition you should consider feeding out to improve the animals condition.

Explanation 15:
Although there are plenty of reserves already in storage you could make more hay to be sold now or later. You might also consider purchasing additional animals or taking on some grazers.

Explanation 16:
Since stock condition is only average you should make sure that the stock is fed better. With a surplus and plenty of feed in storage the stock should be doing very well. If you think that the stock should be doing better than they are perhaps they need to be drenched.

Explanation 17:
Since stock condition is only average you should make sure that the stock is fed better. With a surplus and plenty of feed in storage the stock should be doing very well. If you think that the stock should be doing better than they are perhaps they need to be drenched. You might also consider weaning the lambs and putting them onto high quality pasture. The ewes could be fed to improve condition.

Explanation 18:
There is no reason for the condition of the stock to be poor with a feed surplus. If you think the animals are being fed plenty and are still poor perhaps they need to be drenched or they have some other health problem. In this case you should consider getting expert help.
Explanation 19:
Since the outlook is poor you might want to re-evaluate your feed reserves.

Explanation 20:
As there is high quality feed available and the outlook is poor you might consider weaning the lambs and getting them ready for the work as soon as possible. You might it difficult later to provide high quality feed for them. In light of the poor outlook you might also like to re-evaluate your feed reserves.

Explanation 21:
You should consider feeding the surplus to the stock to improve their condition. They will then be in a better position to get through any feed shortages.

Explanation 22:
Although there is a surplus you are unable to conserve the feed so the options open to you are limited to selling grazing, purchasing additional animals or leaving the surplus on the paddocks as standing hay.

Explanation 23:
Since the stock is not in as good a condition as it could be you might consider feeding them better. Other options are to sell grazing, purchase additional animals or leave the surplus on the paddocks as standing hay.

Explanation 24:
With the condition of the animals being poor you should consider feeding the flock better. In light of this you might like to consider weaning the lambs and giving them high quality pasture. This will also take pressure off the ewes and allow them to "pick up".

Explanation 25:
Since you do not have any storage space for the conserved you feed you might like to consider a method of conservation that can withstand the weather.

Explanation 26:
Everything seems to be in order and no change to the management plan is necessary. You have sufficient feed reserves for two winters and have neither a feed surplus or deficit. Since the outlook is good you should not have many problems in the future.

Explanation 27:
While the outlook is okay stock condition is poor so the animals need to be fed better. If there is high quality feed available you might consider weaning the lambs as this will reduce the overall feed requirement. The feed saved can be fed to the animals to improve their condition.

Explanation 28:
Since the outlook is not good you will need to take care that you do not get into difficulties.

Explanation 29:
Since the outlook is poor and the stock is not in as good a condition as it could be you will need to be careful. You may have to feed out if things do not look as though they are going to improve. You might also consider weaning some lambs if there is high quality pasture for them to go onto. The feed saved by weaning could be useful.
Explanation 30:
Since both the outlook and the condition of the stock is poor and there is plenty of feed in reserves you should start to feed out after weaning as many lambs as possible.

Explanation 31:
Since you have neither sufficient feed reserves or a feed surplus you will have to either buy-in the feed or apply fertiliser to create a surplus to conserve.

Explanation 32:
Since you need more supplements and you don’t have storage space you should consider purchasing supplements that can withstand the weather.

Explanation 33:
Since you have neither sufficient feed reserves or a feed surplus you will have to either buy-in the feed or apply fertiliser to create a surplus to conserve. Since not all the lambs have been weaned you should consider weaning them. The feed that is saved might be able to be conserved.

Explanation 34:
With the outlook being poor you are probably not going to be able to make supplements this season so should consider buying in the required feed reserves.

Explanation 35:
With the outlook being poor you are probably not going to be able to make supplements this season so should consider buying in the required feed reserves. Since not all the lambs have been weaned you should consider weaning them. The feed that is saved might be able to be conserved.

Explanation 36:
Although there is a feed shortage you have plenty of feed in storage. If you think the weather pattern is going to be favourable then you could consider applying fertiliser to create a surplus.

Explanation 37:
Although there is a feed shortage you have plenty of feed in storage. If you think the weather pattern is going to be favourable then you could consider applying fertiliser to create a surplus. Weaning the lambs early will save feed since the ewes can be tightened up.

Explanation 38:
Since the weather outlook is poor and the stock could be in better condition you should consider feeding out to the ewes and give any lambs the highest quality pasture that is available and look to get them away as soon as possible.

Explanation 39:
Since the weather outlook is poor and the stock could be in better condition you should consider feeding out to the ewes and give any lambs the highest quality pasture that is available and look to get them away as soon as possible. Weaning the lambs early will save feed since the ewes can be tightened up.

Explanation 40:
If you think the weather pattern is going to be favourable then you could consider applying fertiliser to create a surplus. This surplus could then be either fed to the stock or made into supplements. The other option is to buy in the required feed for the winter.
Explanation 41:
If you think the weather pattern is going to be favourable then you could consider applying fertiliser to create a surplus. This surplus could then be either fed to the stock or made into supplements. The other option is to buy in the required feed for the winter. Weaning the lambs early will save feed since the ewes can be tightened up.

Explanation 42:
With a feed shortage and few reserves you need to keep a close watch on the condition of the stock. Make sure that the stock does not lose any more condition or they will be worth little to sell if you have to.

Explanation 43:
Since the outlook is poor it is unlikely that it would be economic to apply fertiliser. While the stock is currently in good condition you will need to keep a close watch to ensure that they do not go down. If stock has to be sold you do so before their condition decreases significantly.

Explanation 44:
Since the outlook is poor it is unlikely that it would be economic to apply fertiliser. While the stock is currently in good condition you will need to keep a close watch to ensure that they do not go down. If stock has to be sold you do so before their condition decreases significantly. Weaning the lambs early will save feed since the ewes can be tightened up.

Explanation 45:
With the stock already in poor condition and the outlook also poor you should consider destocking and buying in feed.

Explanation 46:
With the stock already in poor condition and the outlook also poor you should consider destocking and buying in feed. Weaning the lambs early will save feed since the ewes can be tightened up.
APPENDIX FIVE

Supplement/Surplus Expert Help

"Readme" Button Help:
This expert system is designed to assist the user make decisions regarding making supplements and feed surpluses. The system asks the user a series of questions and then renders an opinion based on the answers given by the user. When the system has given its advice the user can get an explanation if required.

The system is best used with a mouse although it can be used without one. When the system is started it will ask its first question. The user should select the item for the factor that best describes the current situation. This can be done by moving the mouse pointer to the item and pressing and releasing the left mouse button. The system will then respond by either displaying the next question (factor) or giving its conclusion. At the bottom of the screen are a series of buttons and those that are highlighted can be activated. As before this is done by moving the mouse pointer to the button and pressing and releasing the left mouse button.

Pasture Production Help:

Pasture Production

Refers to the current on-farm feed situation. Is there currently a shortage or a surplus of feed on the property in question. It requires you to relate the amount of pasture that is being grown to the quantity that is being consumed by the stock. If you indicate that there is a surplus it is assumed that all stock are being fed adequately.

Please select the list item that best describes the farm's current feed situation.

- Surplus

There is a surplus when feed production is greater then feed requirement. That is the animals are unable to consume all the pasture that is being grown.

- Balanced

This is defined as when feed production equals feed requirement. That is the animals are eating all the pasture that is being grown.

- Shortage

When the animals require more feed than is being produced there is a feed shortage.
Reserves Held Help:

Feed Reserves

This question aims to determine whether or not you have sufficient feed reserves to carry you through two winters. This requires you to consider your annual requirements minus the amount of feed already in storage. Annual requirement is based on the following: stock numbers (including sales/purchases), age, condition, performance required, length of winter. Feed in storage includes carry over from previous winters and forage crops.

Please select the list item that best describes current feed reserves.

- Yes
  This indicates that you estimate there to be enough feed in storage to carry the stock through two winters.

- No
  You do not have enough feed reserves to carry the stock through two winters.

Season and Terrain Help:

Season/Terrain

There are two parts to this question. The first part asks whether you are able to make hay and/or silage at this time of year, in this season. This question is asked so the system does not suggest you make supplements at times of the year when you consider the weather to be to unsettled. The second part of the question refers to the terrain of the paddocks that contain the surplus. This allows the user to tell the system whether or not contour removes conservation from the list of possible options. It also allows hill and high country users to use the system.

Please select the list item that best describes the season and farm’s terrain.

- Yes
  It is possible to conserve the feed in those paddocks. Season and/or terrain are not limiting factors.

- No
  It is not possible to conserve the feed. Season and/or terrain are limiting factors.
Weather Outlook Help:

Weather Outlook

This question requires an appreciation of how good the weather will be for pasture growth over the next 6 weeks or so. Alternatively you can select the "InDepth" button for help with this factor.

Please select either the list item that best describes the weather outlook or activate the "InDepth" button.

- Good
  A good weather outlook is when the season is reliable and rainfall is expected to be regular and the temperatures expected to be warm. Current soil moisture status and soil temperature are good indicating that the potential growth rate is high.

- Average
  An average weather outlook is when growth rate will be approximately normal.

- Poor
  A poor outlook will mean that there is likely to be a feed shortage in the coming weeks.

Stock Condition Help:

Condition of Stock

This questions requires the user to look at the condition of the entire flock and then select the option that best describes what they think of the condition of the animals. Alternatively you can select the "InDepth" button for help with this factor. When answering this question you should do so with the time of year and production required from the animals in mind.

Please select the list item that best describes the condition of the stock on the farm or activate the "InDepth" button for help with this factor.

- Good
  The overall condition of the flock is above average. The animals are well fed and not scouring.

- Average
  The overall condition of the flock is not to bad but could be better.

- Poor
  The overall condition of the flock is poor and could be much better.
Number Weaned Help:

Number Weaned

The questions aim to determine what proportion of the lambs have been weaned. You should answer this question with the entire flock in mind not just one mob.

Please select the list item that best describes proportion of lambs weaned.

- Most
  You would select this option if most mobs have been weaned.

- Half
  About half the flock has been weaned at this time.

- Few
  You should select this option if about one mob has been weaned at this time.

Surplus Quality Help:

Surplus Quality

What is the quality of the surplus pasture? Is it composed of grass and legume or mainly grasses? Has it become old and gone to seed or is it lush? These are the factors that need to be considered here.

Please select the list item that best describes the quality of the surplus.

- High
  If the pasture that is surplus to requirements is composed of a significant proportion of legumes and the grass has not seeded select this option.

- Average
  Average quality feed would be pasture that has legume in it but has gone to seed. Pasture that has lush grass with little or no legume would also be classed as average quality.

- Low
  Pasture that has gone to seed and has little or no legume in it is classed as poor quality pasture.
Storage Help:

Availability of Storage

This question aims to find out if there is shed space available for hay or pit space available for silage should the surplus be conserved.

Please select the list item that best describes the availability of storage.

- Yes
  There is storage space available for the surplus should it be made into hay or silage.

- No
  There is no shed/pit space available for the surplus should it be made into hay or silage.

Season Reliability Help:

Reliability of the Season

This question aims to determine how reliable the coming weather pattern (season) is. Does it regularly produce a surplus on this property?

Please select the list item that best describes how reliable the weather pattern is.

- Reliable
  If you are certain that there will be a surplus then you could select this option, otherwise do not.

- Unsure
  If you are not certain what the season will bring then choose this option.

- Unreliable
  If the season is very unreliable then choose this option.
Expected Rainfall Help:

Expected Rainfall

This question requires you to indicate the amount of rainfall that you expect to fall in the next 6 weeks to 2 months. This information will come partly from your own opinions on the weather over this period and long range weather forecasts.

Please select the list item that best describes the expected rainfall.

- **High**
  You should select this option if you think that plants will not suffer any moisture stress in the next 6 weeks or so.

- **Average**
  Select this option if you believe that there will be sufficient rainfall in the next 6 weeks to avoid plants suffering from moisture stress most of the time.

- **Low**
  You expect that there will not be enough rain in the next 6 weeks to avoid pastures suffering from moisture stress.

Expected Temperature Help:

Expected Temperature

This question requires you to indicate the temperature that you expect in the next 6 weeks to 2 months. This information will come partly from your own opinions on the weather over this period and long range weather forecasts.

Please select the list item that best describes the expected temperature.

- **Hot**
  You should select this option if you think that temperature will be warm enough to warm the soil for good plant growth.

- **Moderate**
  Select this option if you believe that the temperature will be average.

- **Cold**
  Select this option if you expect the temperature to be cold over the next 6 weeks or so. This will in turn cause soil temperature to be cold and not allow maximum plant growth.
Current Soil Moisture Help:

Current Soil Moisture Status

The question to be answered here is what is the soil moisture status now. It is limiting to plant growth at this time.

Please select the list item that best describes the current soil moisture status.

- Saturated
  The soil moisture status is currently around field capacity and ideal for good plant growth.

- Moist
  The soil is damp and in no way limiting plant growth.

- Dry
  The soil is dry (drought) and limiting plant growth.

Expected Soil Moisture Help:

Current Soil Temperature

The question to be answered here is what is the current soil temperature status. Is it limiting to plant growth at this time.

Please select the list item that best describes the current soil temperature.

- Warm
  The temperature of the soil allows good plant growth and is warmer than average.

- Average
  The soil is reasonably warm but not as warm as it could be.

- Cold
  The soil is cold and limiting to plant growth. The plants are not able to grow to potential due to the lack of soil temperature.
Scouring Help:

Scouring

This question aims to determine if the animals are scouring and if so how badly. Since it is unlikely that all mobs will be scouring badly you need to answer this question with the flock as a whole in mind. Animals that are scouring badly are unlikely to be doing well.

Select the list item that best describes the flock with regard to scouring.

- **Severe**
  Most of the animals in the flock are scouring badly.

- **Moderate**
  Some individuals in the mob are scouring badly while most are not, or animals are scouring but not badly.

- **Not Scouring**
  In general the animals in the mob are not scouring.

Wool Condition Help:

Condition of Wool

The condition of the wool of the animals is often a good indication of how well the animals are doing. Answer this question with the flock as a whole in mind and not just individual mobs.

Select the list item that best describes the condition of the wool of the animals in the flock.

- **Bright/Good**
  In general the wool of the animals in the flock is bright and of good quality.

- **Dull/Poor**
  In general the wool of the animals in the flock is poor and dull in appearance.
Body Condition Help:  

This question aims to get an appreciation of how the flock as a whole is doing. You need to compare the body condition of the flock one or two weeks ago with their condition at present to answer this question.

Select the list item that best describes the body condition of the animals in the flock as a whole over time.

- Increasing
  Over time the body condition of the animals is increasing.

- Stable
  Body condition is stable over time.

- Decreasing
  Over time body condition is decreasing.