

APPENDIX A

AGRICULTURAL REPORT BY R. J. A. AGRONOMY



Sustainable Arable Production

in the

Big Down

Townsend Farm

Poyntington

Prepared by

Richard Alcock

RJA Agronomy

INTRODUCTION

This report identifies the main issues that currently prohibit the profitable and safe operation of land at the Big Down at Townsend Farm, Poyntington for arable production.

The main aim is to look at the limiting factors for arable production on the southern part of the field where historically it has been difficult to produce viable arable crops and make recommendations to how this can be achieved.

1. Overview of the current enterprises at Townsend farm

There is approx 200ha (500ac) of land farmed from the Townsend farmstead. This is split between arable production 150ha (370ac) and grass production 52ha (130ac) for grazing and conserving forage for the lowland sheep flock.

The arable enterprise has increased in recent years and is now the mainstay of the business and with the current increase in arable commodity values the enterprise is set to remain the main source of income for the business for the foreseeable future.

In order to assist the farm to continue to be financially sustainable, improvements to parts of the farm that are currently underperforming need to be sought and additional land for arable production should be secured.

2. Cropping

Winter Wheat & Spring Barley are the main combinable crops grown with grass being rotated to provide a break. Winter Oilseed Rape & Winter Beans have and will feature in future years. Forage crops such as stubble turnips and kale have provided both break crops and forage for the livestock which works well between the two enterprises.

3. Big Down Field

The Big Down field is situated almost central of the farm. The field sits between two roads, an unclassified road to the west and the B3145 Sherborne road to the east. The field is currently split, the top half (north) is in the arable rotation. This area is mainly flat with a gentle slope running towards the Sherborne road. The southern half historically has been in set-aside having grown arable crops in the late 90's. The topography of this field includes some very steep slopes on the eastern side of the land parcel, it was for this reason that the set-aside option was utilised when available. (The land which is in most need of improvement is highlighted in appendix A to this report)

Last year with the removal of set-aside from the single farm payment legislation the decision to re-include this half in the arable rotation was made. The area is now in a winter wheat crop, but bringing this back into production has highlighted some fundamental issues with regards to profitable and safe arable production, these issues relate equally to either arable or grass production.

4. Factors limiting arable performance.

Topography: A substantial slope runs across the field increasing in gradient from west to east. At the most severe point there is approx 7 acres that would from a health and safety perspective be high risk for accidents, this is further increased by the size of the machinery that the business operates. Economics of modern arable production dictate the need for bigger machinery covering larger areas with less labour. With a slope of this type, effective and safe operations for establishment, maintenance and harvesting of the crops is seriously compromised.

Environment: The agricultural industry has a huge responsibility for the environment. Today under cross-compliance legislation linked to the single farm payment, farmers have an obligation to ensure any activities they undertake have minimal effect on the environment, If they are found to be in breach of cross-compliance then fines can be imposed which can amount £1000's. Diffuse pollution from agriculture has become a much focused topic and currently there are catchment sensitive programs running in the surrounding area of Townsend.

Due to the steep topography of the fields and the historic quarrying operation of the Big Down, it is at risk from soil erosion and surface wash which could reach the public highway or watercourses. Attempts need to be made to limit the likelihood of this happening.

Soil Type: Across the main parts of the field the soil type is Sandy Loam. However the south eastern corner is particularly short of top soil and has a high stone content, this is a consequence of the soil erosion caused by the steep slopes prevalent on this field. This being the case optimum crop performance is limited due to poor root establishment leading to reduced nutrient extraction from the soil solution.

Health and Safety Risk: Given the existing steep slopes of the site the potential for damage to machinery during cultivations is very likely and with the recent increases in all replacement parts etc. cost of repairs would have a serious negative effect on fixed costs. Operators of this machinery are also exposed to unnecessary risk when operating such large scale plant on the steep slopes prevalent on the site.

The most recent statistics contained in HSE's Injuries Reduction Programme – Policy Group document entitled 'Fatal Injuries in Farming, Forestry and Horticulture 2005/06' clearly identifies the main proportion of deaths that occur in this Industry being attributed to vehicle overturning and collision. The extract contained in Appendix B clearly summarises this issue.

Inputs: Costs for fertiliser & sprays have in some cases tripled in the last 12-18 months. This being the case the need to ensure accurate and precise applications to maximise the efficacy of products is paramount. The effects of working on slopes is that application can be varied as the machinery is not running at a constant speed and engine revs, this results in uneven application and in severe circumstances can reduce crop performance by upwards of 30%. There is also potential for a negative effect on the environment from diffuse pollution.

5. Recommendations

Soil Type: For viable crop production there will need to be some material imported to create a workable soil profile. I suggest a layer of subsoil would need to be placed on the area where historic quarrying has left bedrock exposed. This soil will need to be a minimum 500mm deep and of a high clay fraction to provide a moisture retentive subsoil. The topsoil will need to be a minimum of 200mm and of a loamy soil type to provide an open and friable soil profile to enable rainfall to percolate through to the groundwater and limit surface runoff.

Topography: The reduction of the slopes in the south eastern corner is paramount to the effective and safe operation of this part of the field. This will also reduce the likelihood of surface run-off and thus soil erosion.

Business Integration: The large machinery operated on the arable enterprise requires larger fields for efficient and safe operation. The recommendations above would create an area at Townsend farm that would be in balance with the rest of the arable enterprise. The improvement in soil quality and depth in the highlighted area would reduce the potential for damage to machinery coming in to contact with the exposed bedrock and resulting in costly repairs.



Appendix A



1. GENERAL

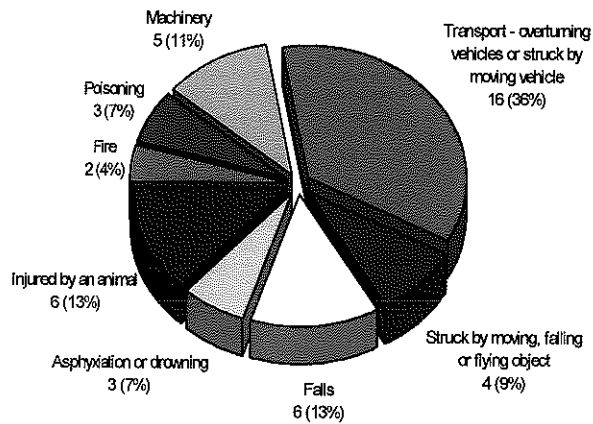
1.1 The total number of reported fatal injuries in the industry was 45, including 6 children under 16 years of age and 3 members of the public.

1.2 The total excludes reported deaths, resulting from a disease.

TABLE 1.1: Six year comparison

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06*
Employed	13	20	15	6	17	13
Self Employed	33	19	20	38	27	23
Non-employed	7	2	3	7	3	9
Total Adults	49	39	37	49	47	39
Total Children (<16)	4	2	1	2	0	6
Total (SIC92, A & B)	53	41	38	51	47	45

FIGURE 1.1: Fatal injuries by cause, 2005/2006



* = provisional data

