

Report for the Sustainable Development Commission

Sustainability Implications of the Little Red Tractor Scheme

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Foreword

We're now three years into the most radical reform of farming in England for more than fifty years. That process is driven in part by substantial changes in the Common Agricultural Policy, and in part by the Government's own strategy for Sustainable Farming and Food. And that Strategy owes much to the report of the Curry Commission on the Future of Farming and Food, published in January 2002.

Unfortunately, consumers still remain largely detached from this process, shielded as most of them are by the large supermarkets from the reality of what's actually happening on our farms and in the wider food chain.

That's not good. One of the central foundations of the Sustainable Farming and Food Strategy is to reconnect food producers with food consumers, to establish the kind of face-to-face market disciplines that played so little part in food and farming over the last fifty years. And to rebuild trust.

In food retailing, trust depends principally on consumers being able to believe the claims made on behalf of particular products and fresh foods. And that's where the Little Red Tractor comes into the picture. Set up in 2000, and now managed by Assured Food Standards (AFS), the Little Red Tractor (LRT) "stamp of approval" is designed to reassure consumers on a range of food safety, animal welfare and environmental issues.

The Curry Report could not have been clearer about the importance of the LRT:

"We think that the Red Tractor should be a baseline standard that all food produced in England should attain ... AFS should ensure that all the schemes for which the Red Tractor is a public face meets stringent and – as far as possible - comparable criteria. Assurance schemes trade on their reputation. It would be bad news for English farming if the Red Tractor were to be compromised by adverse media stories after so much hard work. The Red Tractor needs strong enforcement to command confidence."

As a major contributor both to the Curry Report and to the Strategy for Sustainable Food and Farming, the Sustainable Development Commission felt it was timely to see how well

the Little Red Tractor has risen to that challenge. We therefore commissioned consultants Levett-Therivel to carry out a review of the LRT mark, and compare the various standards it promotes against the core objectives for sustainable farming and food as defined by the Sustainable Development Commission itself.

As you'll see in this report, the conclusions are somewhat mixed. As a "baseline standard", the LRT generally corresponds to minimum regulatory requirements in the UK, and acts therefore as a "market qualifier" rather than a driver for further change to more sustainable farming practices. Reassuringly, however, its approach to regulation and on-farm inspection seems to be both robust and effective.

But on many aspects of sustainable food production and land management, including broader public health issues, the LRT has nothing to tell consumers. As Levett-Therivel put it:

"The levels of the current LRT standards do not provide customers with an assurance that products marked with the logo are "sustainable food products."

In itself, there's nothing wrong with adopting such a modest, minimalist position. As this report makes clear, there are indeed genuine difficulties regarding both the interpretation of the 1998 Competition Act, and the willingness of the majority of consumers to seek out produce offering higher sustainability standards. A baseline is, after all, a baseline.

As supermarkets source more and more of what they sell from other countries, often operating at far lower standards than here in the UK, the LRT can clearly help British farmers in providing consumers with some reliable assurance.

But the Sustainable Development Commission is now keen to see three things happen:

1. AFS must do everything in its power to ensure that consumers understand what it is that the LRT is telling them, and must strenuously avoid any suggestion of over-claiming.

In that respect, the basic description of the LRT on the AFS website causes us some concern:

“When you buy food carrying the Little Red Tractor stamp of approval, you can be sure it has been produced to standards that have been independently inspected. They cover all aspects of production on the farm from looking after the countryside to food hygiene and safety, what animals are fed, and how they are cared for.”

Reading these words, many consumers may very well assume more than they should in terms of food safety, animal welfare, environmental practices and other aspects of sustainable food and farming. In reality, the standards are only marginally more demanding than the minimum demanded by the law.

2. It seems improbable to us that the Government will be content with such a minimalist baseline, with Ministers knowing full well the gap between the standards achieved under the LRT and what now needs to be achieved to ensure genuinely sustainable farming and food.

We recognise, however, that ensuring UK consumers continue to have easy access to quality produce at reasonable prices remains a critical policy priority. And we are particularly anxious to ensure that UK farmers do not lose out any more to imported produce that doesn't even meet the LRT baseline: for today's reforms to work, it is crucial that higher standards command a higher market share.

In that regard, it seems to us that there is considerable scope for AFS to seek substantial improvements, particularly on the environmental front, and we urge AFS to initiate a new consultative process with that in mind.

3. Achieving sustainable food consumption will require a lot more than the LRT scheme is able to cover. Retailers need to be looking at how they can provide assurance to customers about:

- imported fresh and frozen food, especially food sourced from nations where European Union regulatory systems are not available to provide even the most basic reassurance;
- processed food – by far the largest content in most shopping trolleys – where there is a real dilemma about assurance when ready meals contain a mixture of LRT and non-LRT ingredients

Beyond that, there are similar challenges which the catering industry needs to address, given the ever increasing volume of food we consume away from the home.

We therefore urge the Government to return to the recommendations of the Curry report:

“Schemes and production systems which significantly exceed the Red Tractor baseline should be allowed to develop and encouraged to flourish ... all such schemes provide valuable opportunities and energy in the market place; they can all serve to engage and inform the consumer. We would not want to interfere in the functioning of this market, though in due course we think consideration should be given to pulling these initiatives together under a higher-tier insurance umbrella, once the baseline ‘Red Tractor’ scheme is well embedded”.

As Defra moves towards an agreement with the food industry on a new Food Industry Sustainability Strategy, to complement the Sustainable Farming and Food Strategy, urgent consideration needs to be given to the most effective and appropriate way of helping consumers to identify production systems which significantly exceed the LRT base line. If organic certification represents “the gold standard” and LRT the base line standard, what scope is there for some national accreditation scheme that combines the best of some of the “half-way houses” already on the market such as (LEAF) Linking Environment and Farming, Freedom Foods, Conservation Grade, Fair Trade, and so on? And how can nutrition and public health issues be included in the process?

We shall continue to work both with AFS, Defra and the Devolved Administrations to pursue these recommendations.

Jonathon Porritt
Chairman

January 2005

Summary

Sustainable food, in the view of the Sustainable Development Commission is food and drink that:

- Is safe, healthy and nutritious, for consumers in shops, restaurants, schools, hospitals etc
- Can meet the needs of less well-off people
- Provides a viable livelihood for farmers, processors and retailers, whose employees enjoy a safe and hygienic working environment, whether in the UK or overseas
- Respects biophysical and environmental limits in its production and processing, while reducing energy consumption and improving the wider environment; it also respects the highest standards of animal health and welfare, compatible with the production of affordable food for all sectors of society
- Supports rural economies and the diversity of rural culture, in particular through an emphasis on local products that keep food miles to a minimum.

Food is a significant element of society's overall consumption. So, the achievement of sustainable development means consuming food that meets appropriate standards. In a market economy, consumers can have a significant influence through their purchasing decisions. But it's simply not realistic for people to research each and every item in an average shopping trolley. So, the Sustainable Development Commission has called for assurance schemes that

- embrace the whole sustainable development agenda
- provide standards that are compatible with the overall goals of sustainable development
- are properly regulated and inspected, and
- are properly communicated to the public so that consumers understand how their choices can make a difference.

The SDC was interested to know how close the Little Red Tractor Scheme comes to an adequate basis for assuring sustainable food production and consumption. This research shows that:

- In terms of their *coverage*, the LRT standards do a good job of assuring food safety, animal welfare and to a lesser extent, environmental imperatives. They also generally cover safe working environments and appropriate training where these relate to food safety. However they do not cover (not least because they were never designed to meet the particular need now identified) other key aspects of sustainable development – viable livelihoods, environmental improvements, rural cultures and economies, nutritious food and accurate information about food, and local foods
- The *levels* set for some of the LRT standards are well below those that the UK Sustainable Development Commission would argue are necessary in sustainable food production and AFS have no plans to change the levels enough to satisfy the Commission's goal
- The LRT scheme's emphasis on *inputs rather than outcomes* weakens its ability to promote sustainability
- Although the LRT's *transparency* in making its standards public is commendable, the *information provided* in the LRT website may well lead customers to believe that the LRT scheme is closer to the standards of sustainable development that is the case in reality.

The LRT scheme's approach to the *regulation and inspection* of standards seems to be robust and effective, and a good model for other schemes.

We understand from discussions with Assured Food Standards that the LRT is unlikely to be considerably amended in part because of concerns about anti-competitiveness (due to the scheme's dominant market position), and in part because it is seen as a market-led scheme and the market is not demanding much stricter standards. It is uncertain whether they have any plans to introduce a parallel, stronger, "LRT-plus".

A more ambitious approach is needed. Such an approach could be freestanding, but with standards set comprehensively at levels compatible with sustainable development principles. Or it might be worth looking at a combination of the more specialist, more exigent assurance schemes such as those of:

- the Soil Association and other organic bodies, which focus on good soil and environmental

management

- Fairtrade, which aims to improve the position of disadvantaged producers in the developing countries
- RSPCA Freedom Food which promotes animal welfare of farm animals
- Linking Environment and Farming (LEAF), which focuses on the environment and wildlife.

It would be important to look at each of these against the criteria used in this report, and also to look at the overall impact on the market price of food, since sustainable development clearly encompasses the provision of nutritious food at a reasonable price to all sectors of society.

1. Introduction

Farm assurance schemes can have several objectives:

- to help ensure the safety of food, and assure people about food safety¹
- to provide assurance to buyers that farmers' operations are environmentally, socially and economically sustainable: that animals are well treated, the environment is protected, etc.
- to set a rigorous standard that makes farmers improve their practices
- to provide a starting point for improving farmers' activities through steady expansion and strengthening of standards.

The Little Red Tractor (LRT) logo was launched in June 2000 to offer consumers reassurance that food marked with the logo has been produced to independently inspected standards laid down in a number of qualifying assurance schemes. The schemes in question predated it. Assured Food Standards (AFS) was established to administer the logo and licence its use. AFS subsequently assumed ownership of the standards of a number of the schemes that used the Red Tractor logo, though the existing scheme names have been retained. Some schemes, e.g. Genesis and QMS, remain independent of AFS, though they continue to be eligible to use the Red Tractor logo (LRT has been used as shorthand in the report for the *main* schemes using the Red Tractor logo).

The most publicly accessible source of information about the scheme is the website www.littleredtractor.org.uk. The first page of the LRT website says:

*"When you buy food carrying the Little Red Tractor stamp of approval, you can be sure it has been produced to standards that have been independently inspected. They cover all aspects of production on the farm from looking after the countryside to food hygiene and safety, what animals are fed and how they are cared for."*²

¹ Safe food is a basic expectation of consumers, and is achieved through good practice at all stages of the food chain. However farm assurance schemes do not advertise the fact that they help to ensure food safety because consumers assume it at a subconscious level and assurance schemes would not wish to make this a more conscious, challengeable assumption. In other words, farm assurance schemes *do* both but only advertise the first.

² Update 13.1.05: When this report was first written, it said "...produced to stringent standards that are

The LRT scheme focuses, in descending order of importance on:

1. Food safety, particularly the requirements of the Food Safety Act 1990 (c.16), which places responsibility for safe food all along the food chain;
2. Animal welfare; and
3. Environmental issues, mainly where these link to food safety (e.g. pesticide levels).

The Sustainable Development Commission (SDC) argued, in its submission to the Curry Commission, that assurance schemes, and in particular the LRT scheme, could be useful tools for achieving sustainable farming, but that such schemes needed to:

- provide standards that are significantly above the legal minimum
- be properly regulated and inspected; and
- be properly communicated to the public so that consumers understand what they are paying for.

In the SDC's subsequent submission to Defra on *The Strategy for Sustainable Farming and Food*, it noted that "Government needs to encourage those responsible for all assurance schemes to develop them to embrace the whole sustainable development agenda." It suggested that the LRT scheme needed overhauling and better policing.

This report analyses the sustainability implications of the LRT scheme. It discusses:

- how this analysis was carried out
- how well the LRT scheme "embraces the whole sustainable development agenda" in its coverage of the SDC's objectives for sustainable agriculture and food (Box 1)³
- how strong a tool it is for achieving sustainable farming in terms of the standards' levels vis-à-vis legal requirements, and how it is communicated to the public; and
- possible next steps for the SDC.

independently inspected". Some of the schemes that fall under the LRT logo still advertise it with this stronger claim. Assured British Meat's website, for example, says that the LRT logo "ensures consumers that it has been produced to stringent standards that are independently inspected" (<http://www.abm.org.uk/abm/> - accessed 13 January 2005).

³ The SDC's objectives go considerably further than the LRT's own objectives: in other words, the LRT scheme is being tested on criteria that it does not set for itself.

<p>Box 1. SDC’s objectives for sustainable agriculture and food</p> <p>The original objectives have been slightly adapted for this study</p> <p>Bullet points are examples of the types of issues covered by the objectives</p>
<p>A. Produce safe, healthy food and non-food products in response to market demands, now & in the future</p> <ul style="list-style-type: none"> • food security • food health and safety • non-food products
<p>B. Enable viable livelihoods to be made from sustainable land management, taking account of payments for public benefits provided</p> <ul style="list-style-type: none"> • number/security of agricultural jobs • value-added processing near producers • compatibility with tourism and other rural employment • public subsidy
<p>C. Operate within biophysical constraints & conform to other environmental limits</p> <ul style="list-style-type: none"> • biodiversity • rare species • water demand v. supply • climate/flooding/drought
<p>D. Provide environmental improvements & other benefits that the public wants – such as recreation of habitats & access to land</p> <ul style="list-style-type: none"> • access to countryside, recreation • landscape • habitat recreation • public value placed on benefits provided by farming
<p>E. Achieve the highest standards of animal health & welfare compatible with society’s right of access to food at a fair price</p> <ul style="list-style-type: none"> • ready access to fresh water and a diet to maintain full health and vigour³ • an appropriate environment including shelter and a comfortable resting area³ • freedom from pain, injury and disease by prevention or rapid diagnosis and treatment³ • sufficient space, proper facilities and company of the animal’s own kind³ • conditions and treatment which avoid mental suffering⁴ • food affordability
<p>F. Support the vitality of rural economies and the diversity of rural culture</p> <ul style="list-style-type: none"> • vitality of rural economies • economic autonomy/control by farmers/rural residents • vitality of rural communities, age balance • (diversity of) rural traditions/cultures, diversity
<p>G. Sustain the resource available for growing food & supplying other public benefits over time, except where alternative land uses are essential in order to meet other needs of society</p> <ul style="list-style-type: none"> • water quality • soil quality and quantity • waste arisings and management • air pollution, odours, nuisance, acidification • genetic impacts • use of undeveloped land for development that genuinely meets human needs

³ Precise levels of, for example, space, food etc. for farm animals are a very controversial topic, which Levett-Therivel are not competent to specify. The “five freedoms” – from hunger and thirst; discomfort; pain, injury and disease; to express normal behaviour; and from fear and distress – are widely agreed (FAWC, 2001).

<p>H. Ensure that all consumers have access to nutritious food at a reasonable price, & to accurate information about food products</p> <ul style="list-style-type: none"> • nutritional value of food • provision of accurate information about food
<p>I. Achieve the highest standards of environmental performance by reducing energy consumption, minimising resource inputs, & using renewable energy wherever possible</p> <ul style="list-style-type: none"> • energy balance (energy produced (biomass, windfarm etc.) minus energy used) • energy used per food unit produced/transported/consumed • use of pesticides, herbicides, etc. • use of minerals, wood, other materials
<p>J. Ensure a safe & hygienic working environment & high social welfare & training for all employees involved in the food chain, here & overseas</p> <ul style="list-style-type: none"> • safe and hygienic work environment • good social welfare for workforce • training for employees • ... for workers abroad as well as in UK
<p>I. Minimise food miles, minimise distance to slaughter, promote a short food chain, promote local food</p> <ul style="list-style-type: none"> • food miles • distance to slaughter • length of food chain • support of farmers' markets, farm retail outlets etc.

2. Methodology

The LRT mark (in red at Figure 1) covers six sectors of agricultural production (orange). Each has a broad description of themes/ standards on the LRT website, plus individual detailed standards (yellow) on the websites of the schemes administering them. In some cases – beef and lamb; fruit, vegetables and salad – there are several "yellow layer" standards. For each "yellow layer" standard, additional more detailed "brown layer" standards and guidance documents exist which assist inspectors in analysing farmers' operations, determining appropriate feedback to farmers, and deciding whether farmers should receive the LRT logo. The red, orange and yellow layer standards are on the LRT website; the brown layer standards are not.

Levett-Therivel's first analysis of the LRT scheme was carried out in February 2004. The analysis:

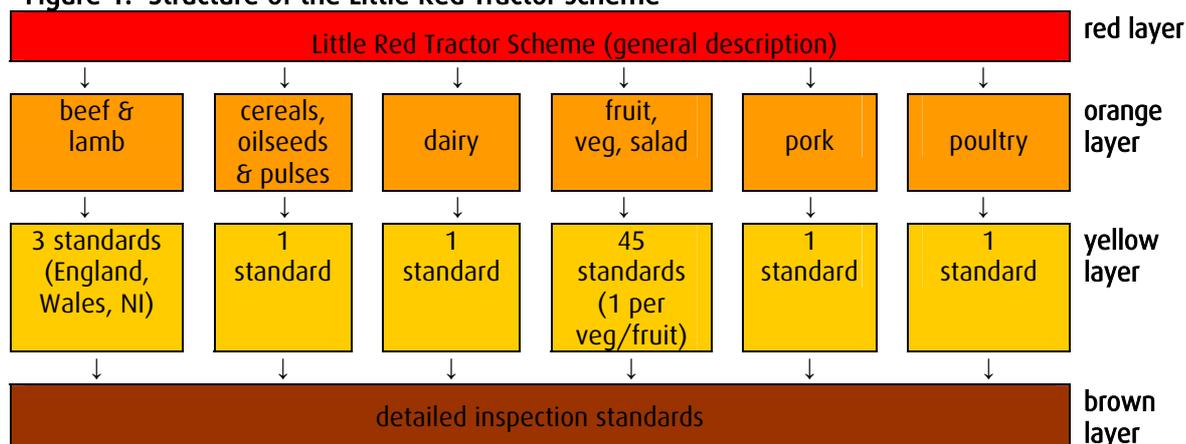
- considered whether the six "orange layer" parts of the scheme – beef and lamb; cereals, oilseed and pulses; dairy; fruit, vegetables and salad; pork; and poultry promote sustainability according to the SDC's criteria
- analysed whether a sample of the "yellow layer" standards used by inspectors promote sustainability
- identified some problems with the standard; and

- suggested actions that may help to make the LRT scheme more sustainable.⁵

The SDC and Levett-Therivel have discussed this initial analysis of the LRT scheme with Assured Food Standards and this final report takes those discussions into account.

⁵ The layers are given colours in this report to help with presentation. They do not correspond to any names/colours given to them by Assured Food Standards.

Figure 1. Structure of the Little Red Tractor scheme



3. Analysis of the Little Red Tractor standards against SDC objectives

3.1 "Orange layer"

We first analysed whether the six parts of the LRT scheme's "orange layer", as described on the LRT website, meet the requirements of the Sustainable Development Commission's objectives of Box 1. Several important provisos and explanatory notes apply to our analysis:

- The analysis was of the standards only, not of their implementation on the ground⁴
- Where the website suggests that something is required (e.g. "inspectors test ..." or "growers must ..."), we assumed that this is in the detailed standard and thus carried out in practice. Where the website suggests that things *might* happen (e.g. "growers may" or "growers are encouraged to"), we assumed that it is not in the detailed standard and is thus carried out only when the farmer wishes to. No "points" were given for the latter
- Where a requirement was listed for one of the six schemes but not others (e.g. no artificial growth hormones), we assumed that the requirement does not apply to the others (i.e. a gap in standard = a gap in practice)
- We were generous in our marking. For instance, the mere mention that grazing animals help to preserve the landscape and

thus support rural tourism got a (single) tick. Three ticks do NOT imply perfect practice; merely a reasonably good stab at the topic.

Table 1 summarises the results of our analysis. Appendix A gives more detail. The *emphasis* of the six "orange layer" parts is firmly on:

- A. Safety (e.g. through regular cleaning of equipment and animal housing, animal passports, prohibition of certain types of animal feed, minimal use of pesticides and fertilizers)
- E. Animal welfare (e.g. through standards on stocking densities, requirements for food, litter, water, etc)
- C. To a lesser extent, environmental imperatives.

As such, the scheme does quite well in relation to what it was set up to do.

On the other hand, obvious *gaps* against the SDC's sustainability criteria are:

- B. Viable livelihoods. None of the standards mentions pay, local employment, or any other aspect of viable livelihoods.
- D./G. Providing environmental improvements, and sustaining the resource available for growing food. The standards for cereals and fruit/veg note that growers "should have a policy for managing wildlife and conservation on their property", and they suggest alternative methods of land management such as crop rotation and buffer zones. None of the other standards say anything about this topic.
- F. Rural culture and economies: Two standards arguably support local economies. The one for beef and lamb notes that:

"The majority of beef and sheep are grazed outdoors which helps to

⁴ Fearne and Walters (2004) cite the top non compliances for the Assured British Pigs standards, October 2001 – April 2003. These were 1. sharp edges on structures or fittings (12.8%), 2. use of non-assured haulage (7.3%), 3. failure to review cleansing policy in light of the DEFRA Salmonella Code (6.7%), 4. failure to have the DEFRA Salmonella Code on farm (5.4%). All the others were less than 5%. This suggests that the standards have a relatively high compliance rate.

Table 1. Analysis of LRT "orange layer" v. SDC objectives

	beef & lamb	cereals, oilseeds & pulses	dairy	fruit, vegetables, salad	pork	poultry
A. Produce safe, healthy food & non-food products in response to market demands , now & in the future	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓✓
B. Enable viable livelihoods to be made from sustainable land management, taking account of payments for public benefits provided	0	0	0	0	0	0
C. Operate within biophysical constraints & conform to other environmental imperatives*	✓✓	✓✓	0	✓✓✓	0	✓✓
D. Provide environmental improvements & other benefits that the public wants – such as re-creation of habitats & access to land	0	✓	0	✓	0	0
E. Achieve the highest standards of animal health & welfare compatible with society's right of access to food at a fair price	✓✓	N/A	✓✓	N/A	✓✓	✓✓
F. Support the vitality of rural economies & the diversity of rural culture	✓	0	✓	0	0	0
G. Sustain the resource available for growing food & supplying other public benefits over time, except where alternative land uses are essential in order to meet other needs of society	0	✓	0	✓	0	0
H. Ensure that all consumers have access to nutritious food , & to accurate information about food products	?	✓	?	✓	?	?
I. Achieve the highest standards of environmental performance by reducing energy consumption, minimising resource inputs, & using renewable energy wherever possible	0	0	0	✓✓	0	0
J. Ensure a safe & hygienic working environment & high social welfare & training for all employees involved in the food chain, here & overseas	✓	✓	✓	✓	✓	✓
K. Minimise food miles, minimise distance to slaughter, promote a short food chain, promote local foods	0	0	0	0	0	0

✓✓✓ main emphasis of standard ✓✓ several aspects mentioned ✓ just mentioned 0 not mentioned
 ? depends on interpretation N/A not applicable

maintain and shape the patchwork of fields and pastures which make up our treasured landscape, the bedrock of the tourist industry... many beef and sheep farmers play a vital role in maintaining and enhancing habitats for the benefit of wildlife, the environment and future generations."

The one for dairy uses very similar words. None of the other standards says anything about this topic.

- I. Environmental performance: Only one standard (fruit/veg) mentions energy use. The standards for cereals and fruit/veg note that "fertilisers and pesticides are used sparingly". Neither transport energy consumption nor renewable energy are mentioned.
- K. Local foods: None of the standards mentions local foods, reducing food miles, minimising distance to slaughter.

The treatment of the last two objectives primarily depends on interpretation:

- H. Access to nutritious food and accurate information about it: we have assumed that LRT produce is no more or less nutritious than that produced under no (or more stringent) standards, so the standard would have no impact on nutrition.
- J. Working environment. We assume that the standards' emphasis on cleanliness and safety will have a side-benefit for the workforce. Most of the standards mention that workers need to be trained to handle animals, administer medicine etc. However none specifically mention the working environment or social welfare, hence the single tick for all of them.

3.2 Analysis of "Yellow and brown layers"

We analysed the more detailed "yellow layer" standards used by inspectors for 1. the generic protocol for fruit, vegetables and salad, plus the specific standards for carrots and cabbages; and 2. the English standard for beef and lamb. Fruit/veg was chosen because, of the six main parts of the LRT scheme, it seemed the most sustainable at the "orange layer" (see Table 1). Beef/lamb were chosen because, at the "orange layer", it seemed relatively unsustainable, and also seemed to make some claims that were useful to test at the more detailed "yellow" layer. Between them, the schemes also cover both

animals and plants. We also analysed the "brown layer" standards and guidance provided by AFS⁷.

3.3 "Yellow and brown layers": Fruit, vegetables, salad

The Assured Produce Scheme (APS) for fruit, vegetables and salad consists of one generic protocol (87 pages), plus 44 specific protocols, one per type of fruit or vegetable. We considered the generic protocol plus the specific protocols for one typical root and one typical leaf vegetable: carrots (37 pages) and cabbages (68 pages).

The protocols consist of two types of standards:

- Critical Failure Point (here called "must" standards): these standards must be complied with for full APS membership
- strongly recommended (here called "should" standards): these are verified during Assured Produce assessments and their compliance forms part of the certification decision. According to AFS, depending on the protocol, between 95% and 100% of the "should" standards are expected to be complied with.

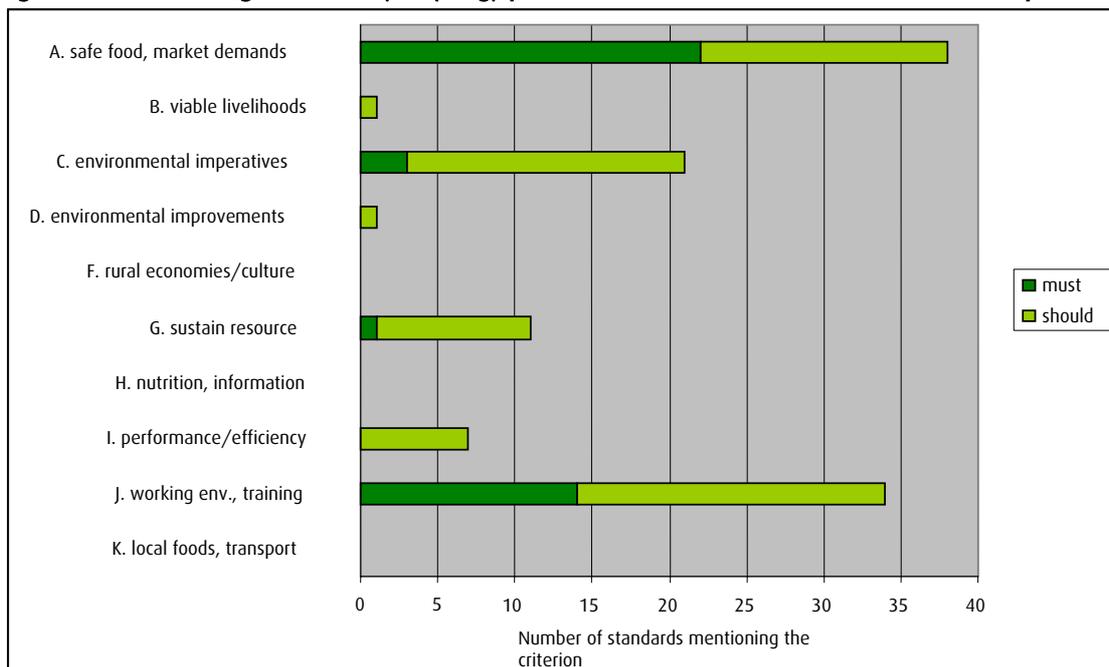
The protocols also include recommendations for good practice, which are verified during the assessment process but whose compliance does not form part of the certification decision. Here only the "must" and "should" standards are analysed, since they are the basis for whether a producer becomes accredited or not.

Figure 2 shows how many of the generic protocol's several hundred standards relate to the various SDC sustainability criteria (some others do not clearly fall into these categories and are not recorded here). Table 2 gives examples of these standards. Clearly the protocol promotes safe food (A), good working environments (J), and to a lesser extent environmental imperatives (C). A and C are very much in keeping with the LRT's main three remits, and good working environments help to achieve food safety.

The protocols for carrots and cabbages each include 1-2 additional "should" standards in each of the categories A, C and I. All of the rest of these protocols consist of good practice guidance. In other words, these two specific protocols, at least, do little to

⁷ These are: Assessor Guidance Notes relating to carrots and cabbage; the recommended form of veterinary medicine administration and purchase records; guidance on how to prepare manure management plans; and inspector guidance on manure management plans, veterinary medicines and traceability.

Figure 2. Number of generic APS (fruit/veg) protocol standards related to SDC sustainability criteria



* Criterion E (animal health & welfare) is not applicable for fruit, vegetables and salad

Table 2. Examples of generic APS (fruit/veg) protocol standards

Criterion*	Examples of standards
A. Produce safe, healthy food & non-food products in response to market demands , now & in the future	<p>Members must:</p> <ul style="list-style-type: none"> ensure that food traceability is possible not misuse the APS logo inform customers of GMO related activities use human sewage sludge on land only when adequately treated service pesticide application equipment at least annually comply with statutory provisions for pesticide applications use water of drinking water standard for final product washing test the pesticide residues of their produce using an accredited laboratory put in place procedures to avoid foreign bodies (e.g. knives) being found subsequently in final packaging provide staff with adequate toilet facilities <p>Members should:</p> <ul style="list-style-type: none"> keep relevant records, e.g. fertilizer stocks, guarantees for plant stock hold copies of relevant statutes and reference sources
B. Enable viable livelihoods to be made from sustainable land management, taking account of payments for public benefits provided	<p>Members should, where applicable, notify beekeepers in advance of pesticide applications</p>
C. Operate within biophysical constraints & conform to other environmental imperatives	<p>Members must:</p> <ul style="list-style-type: none"> use crop protection products appropriate for the control required carry out a Local Environment Risk Assessment for Pesticides for pesticides with a 'buffer zone' requirement be able to retain any spillages of chemicals or have an adequate sump to prevent contamination of watercourses <p>Members should:</p> <ul style="list-style-type: none"> keep documents of fertiliser and pesticide applications, results of crop inspections, why chemical soil fumigants (if used) are used use suitable machinery and keep it in good condition take precautions when applying nutrients or spray to protect non-target areas comply with water extraction licences

	<ul style="list-style-type: none"> • achieve crop protection through non-chemical methods and with minimal reliance on pesticides • follow handling and filling instructions stated on the spray mix labels, and use the correct quantity of spray mix • document a plan which identifies potential pollutants and what measures are in place to prevent pollution of the local environment
D. Provide environmental improvements & other benefits that the public wants – such as re-creation of habitats & access to land	Members should "have a plan for the management of wildlife and conservation of the environment on their own property that is compatible with sustainable commercial agricultural production and minimised environmental impact. A key aim should be the enhancement of environmental biodiversity on the farm through positive conservation management."
F. Support the vitality of rural economies & the diversity of rural culture	(none)
G. Sustain the resource available for growing food & supplying other public benefits over time, except where alternative land uses are essential in order to meet other needs of society	Members should: <ul style="list-style-type: none"> • use crop rotation whenever possible • undertake tests to ascertain pest and disease layers in the soil and help schedule crop rotations • manage the soil to minimise soil erosion, compaction and waterlogging • grow varieties resistant to commercially important pests and diseases, if these are available and commercially acceptable
H. Ensure that all consumers have access to nutritious food , & to accurate information about food products	(none)
I. Achieve the highest standards of environmental performance by reducing energy consumption, minimising resource inputs, & using renewable energy wherever possible	Members should: <ul style="list-style-type: none"> • calculate fertiliser rates based on the nutrient requirements of the crop and regular analysis of nutrient layers in soil, plant or nutrient solution • keep nutrient applications within the limits recommended by DEFRA • have and implement a plan that lists all wastes; and "measures taken to reduce wastage and, whenever possible, recycle to avoid using of landfill or burning. Organic crop debris may be composted on the farm and reused for soil conditioning where there is no risk of disease carry-over" • have a written energy policy if they use significant amounts of energy
J. Ensure a safe & hygienic working environment & high social welfare & training for all employees involved in the food chain, here & overseas	Members must: <ul style="list-style-type: none"> • ensure and be able to demonstrate the competence of their staff and advisers regarding plant protection products • ensure that all sprayer operators have appropriate training • have appropriate and operational personal protective equipment for all operations involving chemicals • have emergency facilities to deal with accidental spillages of chemicals and with operator contamination • have an emergency plan • train staff in hygiene requirements for handling of fresh produce • carry out a COSHH Assessment Members should: <ul style="list-style-type: none"> • ensure that pesticide application operators can contact assistance easily in the event of an accident • limit access to the pesticide store to staff with adequate training • have a Health and Safety at Work Policy and a Risk Assessment • ensure an adequate layers of trained first aid personnel and equipment • ensure that on site living quarters are habitable and have basic services • ensure that staff are trained to prepare/apply nutrients/fertilisers
K. Minimise food miles, minimise distance to slaughter, promote a short food chain, promote local foods	(none)

* Criterion E (animal health & welfare) is not applicable for fruit, vegetables and salad

change the broad trends set in the generic protocol. They are thus not discussed further here.

The generic protocol recommends (but does not require) various ways of reducing resource inputs (I), for instance having an energy policy (though not necessarily implementing it), using pesticides and fertilizers only when necessary, and having a waste policy that aims to reduce wastage and implementing it. Renewable energy is not mentioned. The APS

generic and specific standards also offer considerable guidance on various aspects of sustainability, although this is not mandatory: Boxes 2 and 3 show two examples.

Box 4 gives an example of the “brown layer” assessor guidance notes for cabbage. It shows the level of detail in which assessors consider a given farm’s operations.

Box 2. Cabbage standard guidance on Nitrate Vulnerable Zones (in full)

Certain vegetable production areas within the U.K. may be located in designated nitrate vulnerable zones (NVZs). These are areas where growers are asked to observe a programme of measures, designed to reduce nitrate loss from the land and help reduce nitrate layers in water.

Key action points relevant to brassica growers are:

- i) Do not apply inorganic nitrogen fertiliser between 1 September and 1 February unless there is a specific crop requirement during that time.
- ii) Do not exceed crop requirement for quantity of nitrogen fertiliser on each field every year, taking account of crop uptake and soil supply from soil organic matter, crop residues and organic manures.
- iii) Application of organic manures should not exceed 210 kg/ha of total nitrogen averaged over the farm area each year.
- iv) Do not apply fertiliser or manures when the soil is waterlogged, flooded, frozen hard or covered in snow
- v) Consider a cover crop to use up excess nitrogen over the winter months, ryegrass, is a good choice as it does not involve a 'green bridge'. Sowing must be completed before September 15th to be of any value.

Box 3. Generic APS protocol guidance on environmental enhancement (in full)

Sound environmental management is not only the maintenance and enhancement of wildlife and habitats, but also the management of the soil, air and water. It is the positive management of these factors that leads to a better use of resources with a consequent reduction in waste and lessens the risk of pollution. All reasonable pro-active efforts should be made to conserve the environment.

All legislation relevant to the conservation of the environment should also be observed, by following the guidance given in DEFRA's "Environmental Matters" series of Codes of Good Agricultural Practice for the protection of water, air and soil (see Appendix A).

Members may find it useful to refer to specialist booklets and information sources on specific subjects e.g. 'Controlling Soil Erosion' an advisory booklet from DEFRA (see Appendix A).

In the light of consumer concern, members should understand and assess the impact that their growing activity has on the environment, and consider how they can enhance the environment for the benefit of the local community and flora and fauna.

It is strongly recommended that each member have a plan for the management of wildlife and conservation of the environment on their own property that is compatible with sustainable commercial agricultural production and minimised environmental impact. A key aim should be the enhancement of environmental biodiversity on the farm through positive conservation management.

Key elements could be to:

- Conduct a baseline audit to understand existing animal and plant diversity on the farm. Conservation organisations such as FWAG can help conduct surveys to measure biodiversity and identify areas of concern.
- Take action to avoid damage and deterioration of habitats.
- Create an action plan to enhance habitats and increase biodiversity on the farm.

Consideration should be given to the conversion of unproductive sites such as low lying wet areas, woodlands, headland strip or areas of impoverished soil, to conservation areas for the encouragement of natural flora and fauna wherever possible.

Box 4. Extracts from AP 2004/2005 Assessor Guidance Notes - Cabbage

Check for evidence that shows the grower has taken soil type	Record lack of evidence
--	-------------------------

and variety into consideration when planning fertiliser application.	
Check the grower uses a nitrogen prediction system such as WELL – N to calculate crop nitrogen requirement.	Record if grower does not use a nitrogen prediction system.
Check for evidence that the grower considers the use of seed treatments in preference to module drenches or granule treatments for the control of Cabbage Root Fly.	Record if the grower does not consider seed treatments in preference to other Cabbage Root Fly treatments.
Check the grower can provide evidence to show the use of the minimum number of sprays necessary for control of ringspot, Alternaria and white blister.	Record if absence of evidence that sprays have been minimised.
Check that all polythene waste is disposed of or recycled in the most appropriate manner.	Record if no procedure for appropriate disposal of polythene waste.

3.4 “Yellow and brown layers”: Beef and lamb⁸

There are separate standards for Wales and Northern Ireland, but they are not discussed here. The ABM standards are again of two types. The first, Critical Failure Point (“must”) standards must be complied with in full. The others (“should”) are verified during assessments, but non-adherence does not necessarily lead to disqualification. Unlike the fruit/vegetable protocols, the ABM standards do not include additional recommendations for good practice. Altogether, the ABM standards are fewer, shorter and less detailed than those of the APS.

Figure 3 shows how many of the ABM standards relate to the various SDC sustainability criteria, again split into “must” and “should”. Table 3 gives examples of these standards. Box 5 gives an example of the “brown layer” standards for beef and lamb, showing the much greater level of detail that they go into than the “yellow layer”.

Again, the priorities of the ABM standards clearly reflect the entire scheme’s priorities: safe food (A), animal welfare (E), environmental imperatives (C), and to a lesser extent good working environments(J), again probably as a way of ensuring the safety of food.

Neither the fruit/veg nor the beef and lamb standards cover:

- B. Viable livelihoods. The only reference to livelihoods in the standards analysed is the fruit/veg recommendation (not requirement) that beekeepers should be contacted before pesticides are sprayed. None of the standards analysed mention pay, local employment, or any other aspect of viable livelihoods
- D. Providing environmental improvements, other than the fruit/veg standard that

farmers should have an environmental management plan

- F. Rural culture and economies
- H. Access to nutritious food and accurate information about it
- K. Local foods.

Environmental performance (I) is not discussed at all in the beef/lamb standards but it comes up several times in the fruit/veg standard. Interestingly, the provision of a safe working environment and appropriate employee training (J) is not an emphasis of the orange layer, but is reasonably well covered by the yellow and brown layers.

3.5 Conclusions

In terms of their coverage, the LRT standards do a good job of fulfilling the LRT’s own main remits, namely food safety, animal welfare and to a lesser extent environmental imperatives. They also generally cover safe working environments and appropriate training where these relate to food safety. The LRT scheme does not cover other key aspects of sustainability – viable livelihoods, environmental improvements, rural cultures and economies, nutritious food, accurate information about food, and local foods.

⁸ This section of the report refers to the English Assured British Meat standard. This was superseded in September 2004 by the ESFIS-FABB Farm Assurance Scheme Beef and Lamb Standard. Nevertheless, this ‘new’ standard is licensed to Assured British meat and demands the essentially the same requirements as the previous one. The analysis here is therefore still valid.

Figure 3. Number of generic protocol standards related to SDC sustainability criteria

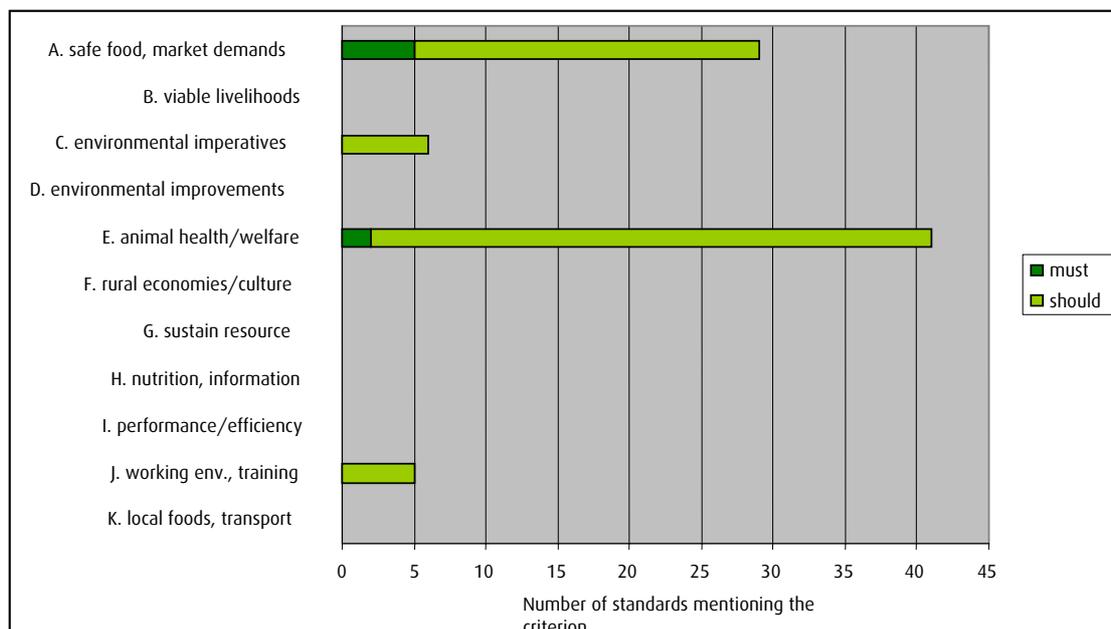


Table 3. Examples of ABM (beef/lamb) standards

Criterion	Examples of standards
A. Produce safe, healthy food & non-food products in response to market demands , now & in the future	Members must: <ul style="list-style-type: none"> keep records of on-farm movements not falsely describe animals as Farm Assured feed animals only legally permitted products, and no product of mammalian or avian origin except dairy products adhere to withdrawal periods for veterinary medicines maintain records of medicine purchases and administration for three years Members should: <ul style="list-style-type: none"> keep records of how treated animals are identified; the disposal of fallen stock; feed suppliers etc. obtain feed from approved sources store feed in accordance with good practice transport animals according to current legislation, using approved hauliers
B. Enable viable livelihoods to be made from sustainable land management, taking account of payments for public benefits provided	(none)
C. Operate within biophysical constraints & conform to other environmental imperatives	Members should: <ul style="list-style-type: none"> hold copies of the DEFRA Codes of Good Agricultural Practice, and follow them re. application of fertilisers to grazing land store and dispose of animal waste so as to minimise the spread of disease and environmental pollution dispose of sheep dip and dead sheep as required by legislation have a written manure management plan and "be able to demonstrate that appropriate action is taken to avoid pollution of the environment by animal manures"
D. Provide environmental improvements & other benefits that the public wants – such as re-creation of habitats & access to land	(none)

E. Achieve the highest standards of animal health & welfare compatible with society's right of access to food at a fair price	Members must: <ul style="list-style-type: none"> • treat and handle animals in such a way as to avoid injury and minimise stress • have a named veterinary practice for each unit Members should: <ul style="list-style-type: none"> • give animals access to sufficient clean water • have surgical operations carried out only by a competent stockman or vet • inspect livestock regularly • give all stock "a daily diet which is adequate to maintain health and vigour" • provide well-constructed housing "of sufficient size" (including an indication of stocking densities) • give suitable protection to outdoor animals (windbreaks, well-drained lying areas, backup food) • use medicines only when necessary and in accordance with legislation • transport animals in appropriate vehicles at appropriate densities
F. Support the vitality of rural economies & the diversity of rural culture	(none)
G. Sustain the resource available for growing food & supplying other public benefits over time, except where alternative land uses are essential in order to meet other needs of society	(none)
H. Ensure that all consumers have access to nutritious food , & to accurate information about food products	(none)
I. Achieve the highest standards of environmental performance by reducing energy consumption, minimising resource inputs, & using renewable energy wherever possible	(none)
J. Ensure a safe & hygienic working environment & high social welfare & training for all employees involved in the food chain, here & overseas	Members should: <ul style="list-style-type: none"> • maintain records of staff training and experience • ensure that staff administering animal medication are competent to do so • have a procedure for dealing with needles
K. Minimise food miles, minimise distance to slaughter, promote a short food chain, promote local foods	(none)

4. Rigour of the Little Red Tractor standards

As highlighted by the SDC (see Section 1), to fully promote sustainability, food standards should not only *mention* various aspects of sustainability, but should

1. provide standards that demonstrably address the various dimensions of sustainable development as applied to food products
2. be properly regulated and inspected, and
3. be properly communicated to the public so that consumers understand what they were paying for.

This section analyses whether the Little Red Tractor scheme fulfils these criteria.

4.1 Level and type of standards

Level

Ideally all food assurance standards would be set at levels that are environmentally and socially sustainable, as well as providing a fair return for the producer, processor and retailer. The goals to be met might include reduction of greenhouse gas emissions from agriculture by 60-90%, large increases in the concentration of organic matter in arable topsoils, large increases – to several times their current populations – in farmland bird populations, and large increases in the lengths of hedges and walls.

Box 5. Example of “brown layer” inspector guidance for beef/lamb: veterinary medicines		
Standard	Producer guidance	Inspector guidance
Each unit must maintain up to date and legal medicine purchase and administration records which must include: <i>records of veterinary medicines purchased, details of supplier, the batch number, date administered, identity of animal/group treated, number treated, total quantity of medicine used, date treatment finished, date withdrawal period ended, name of person who administered medicine.</i> They must be available for inspection.	All treatments including vaccinations, anaesthetic, worming and dipping must be recorded for all animals. Please note ABM demands more than the legal requirement. The record should be kept for 3 years. See Appendix 6 for example of medicine administration and purchase records. Critical Failure Point	Check medicine record for entries. If during the inspection recently treated stock have been seen then check the medicine book for appropriate entries. Inspectors should especially check that all worming vaccination, anaesthetics and dipping treatments are recorded. Inspectors need to be aware that the ABM and Legal Requirements are DIFFERENT. The ABM standards require more information to be recorded than the law which are currently covered under “The Animals and Animal Products (Examination for Residues and Maximum Residues Limits) Regulations 1997. Legally, producers have to record the following: <i>Date of Administration, Identity of Medicine Administered, Quantity of Medicine Administered, Name of supplier of Medicine, Identification of Animal or Batch of Animals Treated.</i> The record must be kept for 3 years. <u>Non-conformance reports</u> If inspectors find that producers are not recording <u>all</u> the items listed in the standard or <u>all</u> treatments then the non-conformance report must specify exactly what is not recorded. Statements such as: “Up to date medicine record to be kept from now on” “do not specify enough detail as to what the non-conformance was” <ul style="list-style-type: none"> • <i>If <u>all</u> the information required is recorded but it is not in an official format (i.e. in a diary / management notebook) then this is not a non-conformance</i> • <i>Minor non-conformances should be recorded if the batch number and/or withdrawal date and/or name of person who administered medicine are not recorded</i> • <i>Minor non-conformance if records are kept, but the recording of the withdrawal period is in days rather than date</i> • <i>Minor non-conformance if no purchase record (often available on supplier invoice)</i> • <i>If more than these or any treatments (i.e. antibiotics, worming or dipping) are not recorded then a Major non-conformance should be recorded</i> • <i>If an anaesthetic treatment is not recorded then a minor non-conformance should be recorded.</i>

However such rigorous standards can have several limitations:

- They may be prohibitively costly, or at least perceived by farmers as being so⁹
- Very few farmers will be willing to join such an exigent scheme even if the costs are manageable because they don't have to do it and because the market does not call for it
- Achievement of some of the more exigent standards may threaten the achievement of others. For instance promoting the use of antibiotics in chickens is good for food safety but not necessarily for animal welfare; and biosecurity arrangements aimed at reducing the exposure of chickens

⁹ There is a difference. Fearne and Walters (2004) suggest that many of the actual costs of complying with the AFS scheme are, in fact, considerably less than the costs perceived by farmers.

to *Campylobacter* infection are more difficult to apply in extensive than intensive production systems (Advisory Committee on the Microbiological Safety of Food, 2003)

- It may be difficult to come to an agreement about the level of the standards.

The LRT standards generally correspond to regulatory minimum requirements, for instance provision of information about any genetically modified crops grown, use of only approved plant protection products, and feeding animals only legally permitted foodstuffs. These standards are not high.

The LRT standards for animal welfare have been criticised (e.g. by Compassion in World Farming, 2002), for instance for allowing high stocking densities and tail docking of pigs.

Some LRT standards do exceed legal minimum requirements, particularly those for which there is considerable public interest. Examples are the

requirement for a veterinary health plan, salmonella vaccinations in chickens, the development of a protocol for use of sewage sludge in agriculture which has since become legislation, banning growth promoters in chickens two years ahead of EU legislation, high biosecurity measures for pigs, and the requirement to have a handwash basin in every broiler shed (David Clarke, AFS, pers. comm.). Arguably some of these will be overridden anyway by the cross-compliance measures required as part of the CAP reform¹⁰.

However even if LRT standards remain at the legal minimum requirements, they can still provide considerable "value added". The mere fact that inspectors visit farms helps to ensure that the legal standards are met where otherwise they might not be, and arguably the AFS inspectors visit considerably more frequently than government inspectors otherwise would. Furthermore the standards cover the whole chain of food production, not just the farm level: they cross-reference with feed schemes, haulier schemes, and abattoir standards. They also help farmers to effectively demonstrate compliance with legal requirements (Fearne and Walters, 2004). Assured Food Standards perceive the LRT scheme as a "baseline" which provides a mechanism for change, to standards set by others, and not as a principal driver for change itself. It is our understanding that they do not intend themselves to make the scheme considerably more rigorous. This is because their potentially dominant position in the UK market puts them in a peculiar position. The majority of UK food production is potentially covered by the LRT scheme¹¹, and there are considerable costs to those farmers who are not in the scheme:

"in a 'normal' trading environment, the message from downstream processors and retailers is loud and clear – farm assurance

¹⁰ Under 2003 reforms to the Common Agricultural Policy, instead of having to produce particular products to obtain subsidy, farmers are able to choose what to produce. However farmers in receipt of subsidy have to comply with a range of European regulatory requirements covering the environment, food safety, animal and plant health and animal welfare responsibilities towards the protection of the environment, animal health and welfare, and public health. In addition, to receive the Single Farm Payment, farmers need to keep the land in good agricultural and environmental condition as described by Member States. These two sets of requirements are known as "cross compliance".

¹¹ For instance, more than 90% of milk, chicken and pig production is covered by the standards. Note that the percentage volume produced under the scheme is not the same as the percentage of farmers involved in the scheme.

is a market qualifier (an entry requirement) but by itself cannot and does not justify a premium although in effect there is a premium as non-assured livestock are invariably traded at a discount." (Fearne and Walters, 2004)

In other words, UK retailers essentially require farmers to be members of the LRT scheme, so that the scheme holds a quasi-monopoly position.

If AFS want to continue to remain the basic UK food standard, and for farmers to essentially be forced to be in this "voluntary" scheme, then they become subject to the Competition Act 1998. Farmers have already complained to the Competition Commission that, within the meaning of this act, the AFS scheme is anti-competitive because it places burdens on producers that would not ordinarily exist. Although retailers typically require AFS-equivalent standards of producers from other countries, they may be less exigent when cheaper imported meat becomes available at certain times, and it is difficult to compare different countries' standards and inspection arrangements (Fearne and Walters, 2004; FAWC, 2001). A derogation within the Competition Act says that, if an agreement that may otherwise be regarded as anti-competitive promotes progress while allowing consumers a fair share of the resulting benefits, then it is permissible (see Box 6). However "yellow-plating" the LRT scheme by requiring standards consistently above legal requirements would make them clearly anti-competitive and thus subject to further complaints.

The LRT standards are basically market-led: they reflect retailers' priorities, which in turn reflect what consumers want. And for some issues, consumers want no more than the minimum legal requirement. For instance, in late 2001, Assured Food Standards, in association with the main environmental bodies, commissioned work on environmental standards that could potentially be integrated in the LRT scheme. Land Use Consultants (2002) proposed some simple standards for countryside, natural resources and rural society. The results were market tested and rejected because the retailers argued that neither they nor their customers were concerned enough.¹²

¹² Update 13.1.05: A recent attempt by the Race to the Top Alliance to establish benchmarks for Corporate Social Responsibility and sustainability in the UK supermarket sector also foundered due to the lack of involvement of the key supermarket chains. The summary report about the initiative concludes that:

"The supermarket sector prides itself on being consumer-oriented in the extreme. But this has reached a point at

Box 6. Application of the Competition Act 1998 to farm assurance schemes

"The following is prohibited under competition law:

- agreements between undertakings, decisions by associations of undertakings and concerted practices which have as their object or effect to prevent, restrict or distort competition (Chapter I of the Competition Act), and
- abuse of a dominant position by one or more undertaking(s) (Chapter II of the Competition Act)...

An agreement will not be prohibited under the Competition Act if it satisfies the criteria in section 9(1). It must:

- (a) contribute to
 - (i) improving production or distribution, or
 - (ii) promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit; and
- (b) not:
 - (iii) impose on the undertakings concerned restrictions which are not indispensable to the attainment of those objectives, or
 - (iv) afford the undertakings concerned the possibility of eliminating competition in respect of a substantial part of the products in question...

The OFT does not consider that farm assurance schemes restrict competition if they are voluntary and do not involve obliging buyers to buy only from that particular scheme. Schemes must be open to anyone wanting to join... and the membership terms should be transparent..., proportionate, non-discriminatory and based on objective standards"

Office of Fair Trading (2004) *Frequently asked questions: how does co-operation between farm businesses fit in with competition law*, Report OFT740, www.offt.gov.uk.

In summary, we understand AFS are concerned that, if they wanted to promote a more rigorous, exigent scheme then they would lose their role as a unifying baseline standard, both because the Competition Commission would probably prohibit it and because farmers would leave the scheme. We understand AFS have no plans to put in place a separate "LRT-plus" scheme which is more sustainable.

The levels of the current LRT standards do not provide customers with an assurance that products

which it is in danger of crowding out the interests of some other stakeholder groups... the drive to a more competitive regulatory environment in the UK, as in many other countries, has handed regulatory responsibility for important areas of the food system to supermarkets themselves. Having supermarkets in the driving seat can only be successful for those areas that create consumer value – and even then, only in certain segments of the market. Those aspects of sustainability that do not resonate with most consumers fall into a governance gap that is simply not addressed by the current mode of self-regulation. The conclusion is clear: in such a relentlessly consumer-oriented industry, self-regulation and voluntary initiatives are only likely to be appropriate for issues that are in line with the consumer interest. Creating incentives for supermarkets to drive positive change on other aspects of sustainability implies a more robust role for the state" (Fox and Vorley, 2004).

marked with the logo are "sustainable food products", and it is uncertain at the moment whether AFS intends to seek improvements in the standards to meet consumers' wider expectations.

Input v. outcome standards

Whilst it may be easier or more politically expedient to specify actions that help to achieve sustainability ("inputs"), what really matters is sustainability itself ("outcomes"). This is the distinction between the OECD's pressure/state/response indicators, where "state" is the outcome and "response" is the input. In a more limited sphere, a similar distinction is made by FAWC (2001) between 'quality assurance' of products and 'farm assurance' of how those products are produced.

The LRT standards focus heavily on keeping records, and putting processes into place and implementing them ("input"), not on actual results ("outcome"). For instance:

outcome that standard aims to achieve (but does not require)	input that the beef/lamb standards recommend (not require)
No fertiliser pollution of watercourses	"DEFRA Codes of Good Agricultural Practice for the Protection of Air, Soil and Water must be followed" with respect to fertilisers applied to grazing land.
No pollution of groundwater	"If [sheep] dipping is carried out on-farm a responsible person in the unit must have the National Proficiency Test Certificate of Competence in the safe use of sheep dips. If used dip is disposed of on the land, then the farm must be registered with the Environment Agency as required under The Ground Water Regulations 1999."

Other examples from the fruit/veg standard are that farmers are:

- recommended to have an energy policy - not tested on their energy consumption
- recommended to have accident and emergency procedures - not tested on the injuries received by their workers
- recommended to have "soil management [that] aims to minimise soil erosion" - not tested on whether erosion is occurring.

The inputs may well help to achieve the wished-for outcomes. For instance, one farmer interviewed by Fearne and Walters (2004) explained

"I have improved the management of my cattle/sheep enterprise as a result of joining ACCS [one of the LRT standards] due to better record keeping. It has helped me to become more focused on my management practices, which has improved the management of stock."

David Clarke (AFS) supported this view by noting that, for instance, tests carried out at abattoirs (required by input standards) identify problems with product safety (outcome) which are fed back to the farmer; routine surveillance against salmonella in chickens has achieved a dramatic drop in the incidence of salmonella; and the lack of recent food scares (outcome) is an unsung outcome of the whole AFS scheme (input).

However, by testing inputs rather than outcomes the LRT schemes can only *assure* that certain processes are being followed, not that animals are healthy, the environment protected, workers are safe etc. As another of Fearne and Walters' (2004) interviewees noted:

"FABBL [one of the LRT standards] is too paperwork driven, he (the inspector) was not that interested in seeing the stock"

In summary, *the LRT scheme's emphasis on inputs rather than outcomes weakens its ability to promote sustainability.*

4.2 Regulation and inspection of standards

Robust regulation and inspection of standards helps to ensure that they are fully implemented. All LRT schemes now operate to the International Standard Organisation's ISO Guide 65 (European standard EN 45011). This means that the certification bodies must be independent from the organisations and activities that they inspect; that inspectors are properly qualified, experienced and competent; that documented inspection procedures are used; and that inspectors from the UK Accreditation Service (UKAS) supervise the inspectors' work.

In her analysis of the situation in 2002, prior to the LRT schemes' full achievement of the ISO standards, Kirk-Wilson (2002) suggests that inspections could be improved through better assessor expertise, more regular inspections, more unannounced inspections, and better information about the most common forms of non-compliance. No more recent information was available, and none of the remaining literature that we analysed suggests that the AFS inspections are anything other than impartial and rigorous. Furthermore, the limited data that we have seen regarding compliance with the standards suggests that, overall, they are subject to a high level of compliance.

The limited range of "brown layer" standards that we have seen have also impressed us with their detail and range, and clarified just how much information – for farmers, inspectors, certifiers – over what a wide range of topics is needed for an "umbrella" standard to function. Overall *the LRT scheme's approach to the regulation and inspection of standards seems to be robust and effective.*

4.3 Communication of standards

Clear communication of food assurance standards is needed so that customers can understand what they are buying, and thus play an informed role in promoting sustainability.

How information about food standards is conveyed has been subject to several rulings by the

Advertising Standards Authority, which seems to take the line that 1. provision of publicly-available proof is a prerequisite to making claims about standards, and 2. as long as the detailed standards are transparent, the wording of the claims surrounding them does not have to be unmistakably precise, and can be expected to be subject to interpretation by the customer (see Box 7).

Box 7. Advertising Standards Authority (ASA) rulings about food standards

The Food Commission objected to the ASA in 2000 about claims made about the National Farmers' Union's British Farm Standard. The Food Commission challenged the claims made in a brochure entitled *The British Farm Standard. Your natural choice*, in particular the brochure's claims that 1. the British Farm Standard represents "the highest standard of food", 2. the food "has been produced to meet exacting food safety, environmental and animal welfare standards" and 3. "food is always... produced with the interests of livestock and the environment in mind". The ASA determined on 6 December 2000 that readers would interpret the claim "the highest standard of food" in the context of the explanation of farm assurance schemes provided by the brochure; that the NFU had provided evidence of clear, written standards for food safety, environmental responsibility and animal welfare that had to be met by participating assurance schemes; and that because these criteria were transparent and available to consumers, people buying produce with the BFS logo would not be misled into believing that the BFS standard was the same as, or superior to, other food production standards.

In 2003, West Sussex County Council objected to the Soil Association's claim that "Soil Association organic animal welfare standards are the best around". The Soil Association provided considerable evidence which showed that their standards compared favourably with other standards. However the ASA ruled on 1 October 2003 that they "did not consider that the advertisers had shown that, at the time when the leaflet was published, they had valid independent documentary evidence demonstrating that the advertisers' animal welfare standards were superior to those of all other organic and non-organic schemes".

(<http://www.asa.org.uk/asa/adjudications/>)

Full public access to the LRT standards down to the "yellow level" is provided on www.littleredtractor.org.uk. Such access to information can easily be taken for granted: the standards for several other major food labels are not on the Internet (see Appendix B). So the LRT scheme's transparency is already a benefit.

On the other hand, data on how customers perceive the LRT logo suggests that the Advertising Standards Authority's trust in the transparency of standards and the consumer's willingness to critically analyse them may be misplaced. Research by Fearne and Walters (2004) involving two focus groups and a survey of more than 1000 red meat consumers gives no indication that customers that buy foods with the LRT logo go to the detailed standards to determine what they mean. Rather, it suggests that many food buyers don't notice the LRT logo at all, or interpret it to mean that the food comes from British farms¹³. The factors

¹³ Where buyers do think about the standard in more depth, they believe that the food was produced in accordance with

that gave people confidence in the safety of their red meat (and presumably food generally) were:

- the belief that their supermarket does all that it can to ensure that the meat it sells is safe to eat (44%),
- the fact that the meat is British (41%),
- the belief that the Food Standards Agency is effectively regulating the red meat industry (36%)... and only then
- the fact that it is 'farm assured' (32%)

A similar hierarchy emerged for people's confidence in the environmental standards relating to the production of red meat, but with lower levels of trust (29-35%) for all of them (Fearne and Walters, 2004). In all cases, people trusted supermarkets more than

strict food safety standards, is British, can be traced back to the farm of origin, and is produced in accordance with strict environmental and animal welfare standards: this is broadly consistent with the AFS's messages.

any other groups: in practice, the supermarket often seems to play the role of the LRT logo in "proving" the safety of food to the consumer.

Given this lack of critical analysis by the consumer, were consumers to further investigate the LRT scheme, we are concerned that the first, "red and orange layer" information that they would find on the LRT website suggests that the LRT standards are more exigent than they really are. In early 2004, the LRT website began with the statement:

"When you buy food carrying the Little Red Tractor stamp of approval, you can be sure it has been produced to stringent standards that are independently inspected. They cover all aspects of production on the farm from looking after the countryside to food hygiene and safety, what animals are fed and how they are cared for."

This has since been altered to the less strong:

"When you buy food carrying the Little Red Tractor stamp of approval, you can be sure it has been produced to standards that have been independently inspected. They cover all aspects of production on the farm from looking after the countryside to food hygiene and safety, what animals are fed and how they are cared for."

Nevertheless, some of the schemes under the Little Red Tractor logo still use the stronger statement on their websites. Assured British Chickens, for example, still use the stronger wording¹⁴, and Assured British Meat's website says that the LRT logo "ensures consumers that it has been produced to stringent standards that are independently inspected"¹⁵.

Faced with these words, many customers might reach the conclusion that the resulting food is safe, that farmers' operations are sustainable, and that the standards are rigorous and consistent. However a more detailed analysis of the "orange layer", and particularly of the specific standards in the "yellow layer", suggests that the "stringent standards" are set at rather lower levels than people might expect of products compatible with sustainable development principles. This could be seen as a misrepresentation of what the LRT scheme actually does.

Tables 4 and 5 summarise key differences between the orange and yellow layers. Key differences are shown in red, numbered and discussed in Table 6.

In sum, *although the LRT's transparency in making its standards public is commendable, we feel that the information provided in the LRT website may well mislead customers into believing that the LRT scheme is a symbol of food produced to standards compatible with sustainable development principles.*

¹⁴ <http://www.assuredchicken.org.uk/chickens/links.asp> - accessed 11 January 2005.

¹⁵ <http://www.abm.org.uk/abm/> - accessed 11 January 2005

Table 4. Orange v. yellow layer for beef and lamb	orange layer	yellow layer	key differences between them (see Table 6)
A. Produce safe, healthy food & non-food products in response to market demands , now & in the future	✓✓	✓✓	
B. Enable viable livelihoods to be made from sustainable land management, taking account of payments for public benefits provided	0	0	
C. Operate within biophysical constraints & conform to other environmental imperatives	✓✓✓	✓	yes: 1
D. Provide environmental improvements & other benefits that the public wants – such as re-creation of habitats & access to land	✓	0	yes: 2
F. Support the vitality of rural economies & the diversity of rural culture	0	0	
G. Sustain the resource available for growing food & supplying other public benefits over time, except where alternative land uses are essential in order to meet other needs of society	✓	✓	
H. Ensure that all consumers have access to nutritious food , & to accurate information about food products	✓	0	*
I. Achieve the highest standards of environmental performance by reducing energy consumption, minimising resource inputs, & using renewable energy wherever possible	✓✓	✓	yes: 3
J Ensure a safe & hygienic working environment & high social welfare & training for all employees involved in the food chain, here & overseas	✓	✓✓	
K. Minimise food miles, minimise distance to slaughter, promote a short food chain, promote local foods	0	0	

Table 5. Orange v. yellow layer for beef and lamb	orange layer	yellow layer	key differences between them (see Table 6)
A. Produce safe, healthy food & non-food products in response to market demands , now & in the future	✓✓	✓✓	
B. Enable viable livelihoods to be made from sustainable land management, taking account of payments for public benefits provided	0	0	yes: 4
C. Operate within biophysical constraints & conform to other environmental imperatives	✓✓	✓	yes: 5
D. Provide environmental improvements & other benefits that the public wants – such as re-creation of habitats & access to land	0	0	
E. Achieve the highest standards of animal health & welfare compatible with society's right of access to food at a fair price	✓✓	✓✓	
F. Support the vitality of rural economies & the diversity of rural culture	✓	0	yes: 4
G. Sustain the resource available for growing food & supplying other public benefits over time, except where alternative land uses are essential in order to meet other needs of society	0	0	
H. Ensure that all consumers have access to nutritious food , & to accurate information about food products	?	0	*
I. Achieve the highest standards of environmental performance by reducing energy consumption, minimising resource inputs, & using renewable energy wherever possible	0	0	
J Ensure a safe & hygienic working environment & high social welfare & training for all employees involved in the food chain, here & overseas	✓	✓	
K. Minimise food miles, minimise distance to slaughter, promote a short food chain, promote local foods	0	0	

Table 6. Where the orange layer looks better than the yellow layer (see Tables 4 & 5)

	what the orange layer says	what the yellow layer requires
1	"Farmers have to be able to demonstrate to inspectors how they follow the DEFRA Codes of Practice for Air, Soil and Water"	Farmers must have a copy of the codes available for inspection, and adhere to the standards in terms of storing and labelling fertilisers, and having holding areas for diesel tanks and waste. Further guidance (not standards) – shown in Box 2 – notes that "All legislation relevant to the conservation of the environment should also be observed"
2	<p>More than one-quarter of the text of the "orange layer" fruit/veg standard is about environmental enhancement:</p> <p>"Wildlife Every grower should have a policy for managing wildlife and conservation on their property. Simple measures taken start with erecting bat and bird boxes. Growers are encouraged to get expert advice from specialists in developing their conservation plans.</p> <p>Alternative methods <u>Crop rotation</u>: Alternating crops so that a field might be planted with leeks one year and onions the next. This stops disease building up and also prevents the field from being stripped of specific nutrients. Taking good care of the soil is key to producing quality food and maintaining a thriving countryside. <u>Variety selection</u>: Choosing robust seed varieties that are best suited to the climate and soil increases a crop's immunity naturally. <u>Natural predators</u>: Using predatory insects to control pests. Predators can be bought in commercially. However conservation features like beetle banks, buffer strips and conservation headlands are increasingly used because they act as natural reservoirs for these predators as well as providing havens for wildlife.</p> <ul style="list-style-type: none"> • Beetle bank: A strip of grassland running across the middle of a cultivated field to provide shelter for predatory insects. • Buffer strip: A 6-18m section at the edge of a field is left uncultivated and sown instead with grass, creating a 'buffer' zone between the crop and habitats, watercourses or hedgerows. • Conservation headlands: Part of the crop, usually a 6m wide band at the edge, is allowed to grow wild creating a 'buffer' zone between the cultivated crop and the hedge bordering it." 	<p>About 1.1% of the text of the generic protocol – and 0% of its "must" standards - discuss environmental enhancement.</p> <p>Box 2 (p.12 of this report) gives the full text of the generic protocol's guidance on environmental enhancement. The carrot and cabbage standards do not add to this. The only <i>standard</i> in the protocol relating to environmental imperatives (standards are denoted in the protocol by the terms "strongly recommended" ("should" standards) or "must" ("must" standards)) is: <i>"It is strongly recommended that each member have a plan for the management of wildlife and conservation of the environment on their own property that is compatible with sustainable commercial agricultural production and minimised environmental impact."</i> No standards exist on any of the alternative measures discussed in the orange layer.</p>
3	"Water management plans are adopted to ensure that water is saved, re-used or recycled where possible and that water quality is protected.	No standards exist on water management plans, only guidance: "consideration should be given to a

	<p>All forms of energy are used as efficiently as possible to benefit both the environment and business performance.</p> <p>In some parts of the country, like Cumbria and Wales, there are recycling schemes collecting fertiliser bags, silage wrap and plastic crop cover. The recycled plastic is then made into items like garden furniture and bin liners."</p>	<p>water management plan..."</p> <p>The only standard relating to energy – a "should" standard - recommends that businesses with high energy requirements should have (not necessarily implement) an energy policy.</p> <p>No standards exist on recycling, only guidance: "Recycling of inert substrates should be undertaken, where possible, and documented. Members should be able to justify not recycling inert substrates."</p>
4	"The majority of beef and sheep are grazed outdoors which helps to maintain and shape the patchwork of fields and pastures which make up our treasured landscape, the bedrock of the tourist industry. Despite the worst farming crisis in living memory, many beef and sheep farmers play a vital role in maintaining and enhancing habitats for the benefit of wildlife, the environment and future generations".	The standards include no requirements for outdoor grazing, no mention of the tourist industry, and no requirements for environmental maintenance much less enhancement.
5	"Farmers have to be able to demonstrate to inspectors how they follow the DEFRA Codes of Practice for Air, Soil and Water"	Farmers must have a copy of the codes available for inspection, and adhere to one aspect of the code (fertilizer applied to grazing land).

5. Conclusions

This section summarises the report's findings to date and suggests possible next steps.

5.1 Summary of findings

The Sustainable Development Commission has called for assurance schemes that

- embrace the whole sustainable development agenda
- provide standards that are significantly above the legal minimum
- be properly regulated and inspected, and
- be properly communicated to the public so that consumers understand what they are paying for.

We have analysed the Little Red Tractor scheme, focusing on the red and orange "layers" of the scheme, plus two "yellow" layers (fruit/veg and beef/lamb) and a limited selection of "brown" layer standards. We have also read relevant reports and discussed the scheme with Assured Food Standards.

We believe that the current LRT scheme does not, and accept that it has never professed to, provide a basis for sustainable food production:

- In terms of their *coverage*, the LRT standards promote food safety, animal welfare, to a lesser extent environmental imperatives, and also safe working environments where these relate to food safety. However they do not cover other key aspects of sustainability – viable livelihoods, environmental protection standards, rural cultures and economies, nutritious content and local production.
- The *levels* that the LRT standards are set at do not provide a basis for sustainable food production, as envisaged by the Sustainable Development Commission
- The LRT scheme's emphasis on *inputs rather than outcomes* weakens its ability to promote sustainability.
- Although the LRT's *transparency* in making its standards public is commendable, the *information provided* in the LRT website could lead customers to believe that the LRT scheme is more sustainable than it really is.

On the other hand the LRT scheme's approach to the *regulation and inspection* of standards seems to be robust and effective, and a good model for other schemes.

if the customer looks to the LRT scheme to...	then this analysis suggests that it...
provide assurance to buyers about the safety of their food	probably does OK
certify that farmers' operations are sustainable, ethical, etc	fails; might lead consumers to <i>think</i> that LRT-accredited farms do this, but in fact does not require them to
set a standard that makes farmers significantly improve their practices	fails, except for farmers that don't even meet legal requirements, and there are no plans to improve this
provide a starting point for improving farmers' activities through steady expansion/strengthening of standards	does just fine, but now the standards would need to be expanded and strengthened

5.2 Next steps

We understand from discussions with Assured Food Standards that the LRT is unlikely to be considerably amended in part because of concerns about anti-competitiveness (due to the scheme's dominant market position), and in part because it is seen as a market-led scheme and the market is not demanding much stricter standards. Neither would a parallel, stronger, "LRT-plus" style scheme be considered. This suggests that the LRT scheme is not the best basis for a standard for sustainable food production in the UK.

An alternative approach is needed. Such an approach could be freestanding, but with standards set comprehensively at levels compatible with sustainable development principles. Or it might be worth looking at the more specialist, more exigent assurance schemes such as those of:

- the Soil Association and other organic bodies, which focus on good soil and environmental management
- Fairtrade, which aims to improve the position of disadvantaged producers in the developing countries
- RSPCA Freedom Food which promotes animal welfare of farm animals
- Linking Environment and Farming (LEAF), which focuses on the environment and wildlife.

Appendix B gives further details of these schemes¹⁶. It would be important to look at each of these against the criteria used in this report, and also to look at the overall impact on the market price of food, since sustainable development clearly encompasses the provision of nutritious food at a reasonable price to all sectors of society.

¹⁶ Other food or farm assurance schemes exist, for instance Lion Quality Scheme eggs, Scottish Quality Salmon, Quality Meat Scotland, EUREPGAP and Danish Bacon, but these are all baseline, not "higher level" schemes (Kirk-Wilson, 2002).

The environmental standards in food production recommended by Land Use Consultants (2002) could also be considered. Oxford, Swindon and Gloucester Co-Op's "Project Local Harvest" could also provide a model for sourcing local foods.

Either these schemes themselves (plus perhaps a "filler" scheme that covers sustainability issues not covered by these schemes¹⁷) could be promoted, or an umbrella scheme that incorporates the best practices from these schemes could be set up. Issues that would need to be borne in mind in devising sustainability standards include:

- The level of the standards. Many current farming practices clearly fall far short of sustainability. However at some point the additional value of strengthening the standards will start to fall. For instance, at some point giving chickens still more space will not improve their welfare but will start to impose unacceptable costs on farmers. These levels are already subject to enormous debate (e.g. Compassion in World Farming Trust, 2002). They would need to be agreed in discussions with a wide range of stakeholders to ensure that they are feasible and fair as well as sustainable.

The Fairtrade and proposed Land Use Consultants (2002) schemes have multiple levels of exigency: a "baseline" plus one or two higher levels. This multi-level approach may be a useful way of combining the benefits of a wide, baseline takeup plus a more aspirational level that farmers can aim towards.

- The compatibility of the standards. Some standards may only be achieved at the

¹⁷ We have not had time to compare these schemes against the SDC's objectives to determine what issues they do not cover between them, but this would be a simple exercise to carry out.

expense of others. For instance, some of the LRT standards already are a balance between human safety and animal welfare (see Section 4.1). More obviously, standards that support farmers in developing countries will conflict with standards that promote local foods: it is not possible to buy Fairtrade and locally. It may be necessary to rank the standards (e.g. local food is more important than Fairtrade or vice-versa), or to allow one standard *or* another to be achieved.

- “Input” versus “outcome”. “Input” standards that specify procedures and production methods may be easier to set than “outcome” standards of sustainability, and are used by most assurance schemes. However the latter may be a more appropriate way to ensure that the food really is sustainable.
- Adherence to World Trade Organisation etc. rules. Standards used in government procurement must adhere to WTO and other competition rules which allow government organisations to specify only standards for the product, not for the production process employed. These rules are a considerable constraint. This is a very complex topic which will require legal advice. The SDC may wish to consider whether it wants to challenge, rather than abide by, these rules.
- Documentation, support and transparency. Our analysis of the LRT scheme has shown just how complicated an overarching, multi-topic assurance scheme needs to be. It needs to provide different types and levels of detail of information for farmers, inspectors, evaluators and the public. Different standards will be required for different foods; and for foods from other countries (e.g. cocoa, bananas) as well as indigenous foods. The standards and claims around them need to be phrased extremely carefully – see Box 7 – and should all be made available on the Internet.
- Quality of inspection. The analysis of the LRT standards suggests that inspection bodies should operate to International Standard Organisation’s ISO Guide 65 (European standard EN 45011).

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Appendix A. Detailed analysis of “orange layer”

Beef and Lamb

Three different schemes: for England, Wales and N I. Not available on the web: i.e. not a transparent scheme. Also seems like a very minimal standard: possibly the lowest common denominator between the three schemes?

LRT+ could include separate requirements for indoors and outdoors, requirement for outdoor grazing plus standards on grazing densities (i.e. not over-grazing), plus support of local labour/suppliers/market, reduction of resource use, etc.

A. Produce safe, healthy food & non-food products in response to market demands , now & in the future	✓✓	Animals are tagged and records of their movements kept. They eat "grass mainly supplemented with protein, vitamins and minerals". They are not fed Meat and Bone Meal (BMB), nor do they receive artificial growth hormones. Animals on medication do not enter the food chain.
B. Enable viable livelihoods to be made from sustainable land management, taking account of payments for public benefits provided	✓	Supports viable livelihoods by increasing public confidence in British food without imposing unduly onerous requirements on food producers.
C. Operate within biophysical constraints & conform to other environmental imperatives	✓✓	Growers must demonstrate compliance with DEFRA Codes of Practice for Air, Soil and Water.
D. Provide environmental improvements & other benefits that the public wants – such as re-creation of habitats & access to land	0	Landscape seen as byproduct of the industry (see F). No special measures taken to improve it.
E. Achieve the highest standards of animal health & welfare compatible with society's right of access to food at a fair price	✓✓	Much of standard is about animal welfare: freedom from hunger and thirst, discomfort etc. But CIWF report suggests that the standard falls short of the "highest standard" (e.g. allows growth promoters, no access to outdoors, no litter): it meets 7 of their 15 criteria, compared to Soil Association standard which meets 11 (lamb) or 12 (beef) out of 15.
F. Support the vitality of rural economies & the diversity of rural culture	✓	"The majority of beef and sheep are grazed outdoors which helps to maintain and shape the patchwork of fields and pastures which make up our treasured landscape, the bedrock of the tourist industry... many beef and sheep farmers play a vital role in maintaining and enhancing habitats for the benefit of wildlife, the environment and future generations". No support of viability/diversity of rural economies.
G. Sustain the resource available for growing food & supplying other public benefits over time, except where alternative land uses are essential in order to meet other needs of society	0	
H. Ensure that all consumers have access to nutritious food , & to accurate information about food products	?	Assuming that LRT beef/lamb is no more or less nutritious than that produced under no (or more stringent) standards, then no impact on nutrition. LRT standard provides information about how animals are treated, but arguably are set so low as to make the standard questionable (at least in animal welfare terms) and thus may give unwarranted confidence to the public.
I. Achieve the highest standards of environmental performance by reducing energy consumption, minimising resource inputs, & using renewable energy wherever possible	0	Nothing re. use of manure as fertilizer, management of land etc.
J. Ensure a safe & hygienic working environment & high social welfare & training for all employees involved in the food chain, here & overseas	✓	Safety/hygiene requirements would have side-benefits for staff. Only staff trained under a recognized scheme are allowed to handle animal medicine. But nothing more proactive about staff training, safety etc.
K. Minimise food miles, minimise distance to slaughter, promote a short food chain, promote local foods	0	Farms must be registered with the British Cattle Movement Service (part of DEFRA), but this is essentially a cattle passport service and says nothing about distance transported.

Cereals, Oilseeds and Pulses

Much of the wording of this standard is very similar to that for fruit, vegetables and salads, though this standard puts less emphasis on environmental management. Emphasis is on safety. Gives examples of alternative methods of food production and environmental management (e.g. buffer strips, bat boxes) but doesn't seem to require them. Over 80% of UK cereals, oilseeds and pulses are grown under the scheme.

LRT+ could include, at minimum, some of the requirements for fruit etc., i.e. on soil management, waste management... plus requirements for environmental enhancement, layers of pesticide/herbicide use, other ways of sustaining environmental resource base, local labour/supply/market etc.

A. Produce safe, healthy food & non-food products in response to market demands , now & in the future	✓✓	Fertilizers and pesticides are to be used "as sparingly and accurately as possible in order to produce healthy crops". Harvesting must be in accordance with Food Safety Regulations. Arguably the layers of the standards are set to allow farmers to produce reasonably cheap cereals etc., in turn responding to market demand.
B. Enable viable livelihoods to be made from sustainable land management, taking account of payments for public benefits provided	✓	Arguably supports viable livelihoods by increasing public confidence in British food without imposing unduly onerous requirements on food producers.
C. Operate within biophysical constraints & conform to other environmental imperatives	✓✓	Growers must demonstrate compliance with DEFRA Codes of Practice for Air, Soil and Water (deal with management of manure, slurry, silage effluent, fertilizers, pesticides, soil, etc.). Gives examples of alternative methods of controlling pests, diseases and weeds (e.g. crop rotation, buffer strips) but does not seem to require them.
D. Provide environmental improvements & other benefits that the public wants – such as re-creation of habitats & access to land	✓	Growers are "encouraged to have a plan for managing wildlife and conservation on their property", but don't seem to be required to have one.
E. Achieve the highest standards of animal health & welfare compatible with society's right of access to food at a fair price	N/A	
F. Support the vitality of rural economies & the diversity of rural culture	0	See B. No mention/support of diversity or more general viability of rural economies.
G. Sustain the resource available for growing food & supplying other public benefits over time, except where alternative land uses are essential in order to meet other needs of society	✓	See C. Mentions alternative agricultural techniques but they don't seem to be required.
H. Ensure that all consumers have access to nutritious food , & to accurate information about food products	✓	Assuming that LRT cereals, oilseeds and pulses are no more or less nutritious than those produced under no (or more stringent) standards, then no impact on nutrition.
I. Achieve the highest standards of environmental performance by reducing energy consumption, minimising resource inputs, & using renewable energy wherever possible	0	Fertilizers/pesticides are used sparingly (essentially as byproduct of safety concerns). No mention of other resource inputs.
J. Ensure a safe & hygienic working environment & high social welfare & training for all employees involved in the food chain, here & overseas	✓	Only properly trained staff are allowed to operate equipment, and equipment must be regularly serviced.
K. Minimise food miles, minimise distance to slaughter, promote a short food chain, promote local foods	0	

Dairy

Standard is almost solely about hygiene and animal welfare. Landscape and associated tourism are seen as side-benefit of cows grazing outdoors, but cattle are not required to be allowed to graze outdoors. Animal welfare standard is low according to CIWF. More than 85% of milk from British farms covered by standard.

LRT+ could include requirements for outdoor grazing, along with standards on grazing densities (i.e. not over-grazing), support of local labour/suppliers/market, reduction of resource use, adherence to DEFRA Codes of Practice for Air, Water and Soil, etc..

A. Produce safe, healthy food & non-food products in response to market demands , now & in the future	✓✓	Standard emphasises cleanliness, e.g. through clean milking parlour, milk collection area, milk tanks, "common sense measures" to keep cows clean. Animals do not receive artificial growth hormones. Standard does not prevent feeding Meat & Bone Meal (MBM). Arguably the layer of the standard is set to allow farmers to produce reasonably cheap milk, in turn responding to market demand.
B. Enable viable livelihoods to be made from sustainable land management, taking account of payments for public benefits provided	✓	Supports viable livelihoods by increasing public confidence in British food without imposing unduly onerous requirements on food producers.
C. Operate within biophysical constraints & conform to other environmental imperatives	0	
D. Provide environmental improvements & other benefits that the public wants – such as re-creation of habitats & access to land	0	Landscape seen as byproduct of the industry (see F). No special measures taken to improve it.
E. Achieve the highest standards of animal health & welfare compatible with society's right of access to food at a fair price	✓✓	Much of standard is about animal welfare: freedom from hunger, thirst, discomfort etc. But CIWF report suggests that standard falls well short of the "highest standard" (e.g. allows insufficient feed to satisfy hunger, no access to outdoors, genetic engineering): it meets 5 of their 15 criteria, compared to Soil Association standard which meets 11 out of 15.
F. Support the vitality of rural economies & the diversity of rural culture	✓	"Dairy cows graze outdoors for much of the year, maintaining and shaping our treasured landscape which, with its patchwork of fields and pastures, forms the bedrock of the tourist industry". No mention/support of diversity or more general viability of rural economies.
G. Sustain the resource available for growing food & supplying other public benefits over time, except where alternative land uses are essential in order to meet other needs of society	0	Nothing re. use of manure as fertilizer, management of grazing land etc.
H. Ensure that all consumers have access to nutritious food , & to accurate information about food products	?	Assuming that LRT milk is no more or less nutritious than that produced under no (or more stringent) standards, then no impact on nutrition. LRT standard provides information about how cattle are treated, but arguably are set so low as to make the standard questionable (at least in animal welfare terms) and thus may give unwarranted confidence to the public.
I. Achieve the highest standards of environmental performance by reducing energy consumption, minimising resource inputs, & using renewable energy wherever possible	0	
J. Ensure a safe & hygienic working environment & high social welfare & training for all employees involved in the food chain, here & overseas	✓	Safety/hygiene requirements would have side-benefits for staff. Staff must wear appropriate clothes and be in good health. But nothing proactive about staff training, safety etc.
K. Minimise food miles, minimise distance to slaughter, promote a short food chain, promote local foods	0	

Fruit, Vegetables, Salad

45 different standards, each for a different crop: complex! Includes more than the other standards about resource use, waste minimisation, soil management. Doesn't eliminate pesticide/herbicide use, but encourages their sensible use. Gives examples of alternative methods of food production and environmental management (e.g. buffer strips, bat boxes) but doesn't seem to require them. 70% of

UK fruit, vegetables and salads are covered by standard.

LRT+ could include requirements for environmental enhancement, layers of pesticide/herbicide use (this may already be set in more detailed standards), other ways of sustaining environmental resource base, local labour/supply/market etc.

A. Produce safe, healthy food & non-food products in response to market demands , now & in the future	✓✓	Fertilizers and pesticides are to be used "as sparingly and accurately as possible in order to produce healthy crops". Harvesting must be in accordance with Food Safety Regulations. Arguably the layers of the standards are set to allow farmers to produce reasonably cheap fruit/veg/salad, in turn responding to market demand.
B. Enable viable livelihoods to be made from sustainable land management, taking account of payments for public benefits provided	✓	Arguably supports viable livelihoods by increasing public confidence in British food without imposing unduly onerous requirements on food producers.
C. Operate within biophysical constraints & conform to other environmental imperatives	✓✓✓	Growers must demonstrate compliance with DEFRA Codes of Practice for Air, Soil and Water (see cereals). "Soil is carefully managed" and farmers must "pay attention to how a field is ploughed with the aim of protecting and maintaining soil quality". "Reduce, reuse, recycle" approach used for hygiene/safety and rubbish. Water management plans adopted. Gives examples of alternative methods (e.g. crop rotation, buffer strips) but does not seem to require them.
D. Provide environmental improvements & other benefits that the public wants – such as re-creation of habitats & access to land	✓	Growers "should have a policy for managing wildlife and conservation on their property"... though it is unclear whether they actually <i>do</i> have one.
E. Achieve the highest standards of animal health & welfare compatible with society's right of access to food at a fair price	N/A	
F. Support the vitality of rural economies & the diversity of rural culture	0	See B. No mention/support of diversity or more general viability of rural economies.
G. Sustain the resource available for growing food & supplying other public benefits over time, except where alternative land uses are essential in order to meet other needs of society	✓	See C. Mentions alternative agricultural techniques but they don't seem to be required.
H. Ensure that all consumers have access to nutritious food , & to accurate information about food products	✓	Assuming that LRT fruit, vegetables and salads are no more or less nutritious than those produced under no (or more stringent) standards, then no impact on nutrition.
I. Achieve the highest standards of environmental performance by reducing energy consumption, minimising resource inputs, & using renewable energy wherever possible	✓✓	"All forms of energy are used as efficiently as possible", "Fertilizers and pesticides are used sparingly" and "alternative methods of controlling pests, diseases and weeds are used wherever possible". No mention of other resource inputs. Mentions – but does not require – recycling schemes.
J. Ensure a safe & hygienic working environment & high social welfare & training for all employees involved in the food chain, here & overseas	✓	Only properly trained staff are allowed to operate equipment, and equipment must be regularly serviced.
K. Minimise food miles, minimise distance to slaughter, promote a short food chain, promote local foods	0	

Pork

Quite a minimal standard. Split into indoor and outdoor (which seems to give more possibilities for fine-tuning of standard). Includes transport and slaughter, though no detail. Nothing on resource use, food miles, local community etc. 85-88% of pork/ham/bacon in England and Wales, and 60% of pig mean in NI covered by scheme.

LRT+ could include more detailed requirements generally; also more on resource use, local foods, and better animal welfare, plus adherence to DEFRA Codes of Practice for Air, Water and Soil, etc.

A. Produce safe, healthy food & non-food products in response to market demands , now & in the future	✓✓✓	Standard has considerable information on safety and hygiene, not just at grower but also by hauliers, abattoirs and processors. Arguably the layer of the standard is set to allow farmers to produce reasonably cheap pork, in turn responding to market demand.
B. Enable viable livelihoods to be made from sustainable land management, taking account of payments for public benefits provided	✓	Supports viable livelihoods by increasing public confidence in British food without imposing unduly onerous requirements on food producers.
C. Operate within biophysical constraints & conform to other environmental imperatives	0	
D. Provide environmental improvements & other benefits that the public wants – such as re-creation of habitats & access to land	0	
E. Achieve the highest standards of animal health & welfare compatible with society's right of access to food at a fair price	✓✓	Much of standard is about animal welfare. But CIWF report suggests that the standard falls well short of the "highest standard" (e.g. allows insufficient feed to satisfy hunger, growth promoters, high densities, no access to outdoors etc): it meets 4 of their 14 criteria, compared to Soil Association standard which meets 13.
F. Support the vitality of rural economies & the diversity of rural culture	0	See B. No mention/support of diversity or more general viability of rural economies.
G. Sustain the resource available for growing food & supplying other public benefits over time, except where alternative land uses are essential in order to meet other needs of society	0	Nothing re. use of manure as fertilizer, management of land etc.
H. Ensure that all consumers have access to nutritious food , & to accurate information about food products	?	Assuming that LRT pork is no more or less nutritious than that produced under no (or more stringent) standards, then no impact on nutrition. LRT standard provides information about how pigs are treated, but arguably is set so low as to make the standard questionable (at least in animal welfare terms) and thus may give unwarranted confidence to the public.
I. Achieve the highest standards of environmental performance by reducing energy consumption, minimising resource inputs, & using renewable energy wherever possible	0	
J. Ensure a safe & hygienic working environment & high social welfare & training for all employees involved in the food chain, here & overseas	✓	Safety/hygiene requirements would have side-benefits for staff. "Staff who care for the pigs are trained in all aspects of animal health and welfare, food safety and hygiene, and human health and welfare"
K. Minimise food miles, minimise distance to slaughter, promote a short food chain, promote local foods	0	

Poultry

Standard is almost solely about hygiene and animal welfare. It includes nothing about sourcing of materials and labour, support of the local community, use of resources, shortening of the food chain etc. Animal welfare standard is low according to CIWF report. More than 80% of chickens reared in Britain covered by standard.

LRT+ could include higher animal welfare standard, support of local labour/suppliers/ market, reduction of resource use.

A. Produce safe, healthy food & non-food products in response to market demands , now & in the future	✓✓✓	Health of food assured by e.g. easy to clean surfaces, good drainage, feed not containing meat & bone meal (MBM) or poultry by-products, testing for salmonella, birds on medication not entering the food chain, disinfecting housing between flocks. Arguably the layer of the standards is set to allow farmers to produce reasonably cheap poultry, in turn responding to market demand.
B. Enable viable livelihoods to be made from sustainable land management, taking account of payments for public benefits provided	✓	Supports viable livelihoods by increasing public confidence in British food without imposing unduly onerous requirements on food producers.
C. Operate within biophysical constraints & conform to other environmental imperatives	✓✓	Farmers need to demonstrate compliance with DEFRA Code of Practice for Air, Soil and Water
D. Provide environmental improvements & other benefits that the public wants – such as re-creation of habitats & access to land	0	
E. Achieve the highest standards of animal health & welfare compatible with society's right of access to food at a fair price	✓✓	Much of the standards is about animal welfare: insulation, light, protection from rain, lack of sharp edges that might hurt the birds, enough room to flap, stretch wings etc. But CIWF report suggests that the standard falls well short of the "highest standard" (e.g. allows debeaking, insufficient feed to satisfy hunger, no access to outdoors etc): it meets 5 of their 13 criteria, compared to Soil Association standard which meets 14 out of 14.
F. Support the vitality of rural economies & the diversity of rural culture	0	See B. No mention/support of diversity or more general viability of rural economies.
G. Sustain the resource available for growing food & supplying other public benefits over time, except where alternative land uses are essential in order to meet other needs of society	0	
H. Ensure that all consumers have access to nutritious food , & to accurate information about food products	?	Assuming that LRT poultry/eggs are no more or less nutritious than those produced under no (or more stringent) standards, then no impact on nutrition. LRT standard provides information about how poultry were raised, but arguably is set so low as to make the standard questionable (at least in animal welfare terms) and thus may give unwarranted confidence to the public.
I. Achieve the highest standards of environmental performance by reducing energy consumption, minimising resource inputs, & using renewable energy wherever possible	0	
J. Ensure a safe & hygienic working environment & high social welfare & training for all employees involved in the food chain, here & overseas	✓	Only trained staff are allowed to handle medicine. Safety/hygiene standards for birds would also provide safety for workers. "Staff are trained in all aspects of caring for birds".
K. Minimise food miles, minimise distance to slaughter, promote a short food chain, promote local foods	0	

Appendix B. Overview of other assurance schemes

Fairtrade

(www.fairtrade.net)

“The aim of Fairtrade Labelling Organization International is to improve the position of disadvantaged producers in the developing countries”.

Fairtrade has two sets of generic producer standards, one for smallholders organised in organisations with a democratic, participative structure, and one for workers on plantations and in factories. As an example, the smallholder standards cover:

1. Social development (4 standards: adds development potential; members are small producers; democracy, participation, transparency; non-discrimination)
2. Economic development (3 standards: Fairtrade premium; export ability; economic strengthening of the organisation)
3. Environmental development (1 standard: environmental protection (integrated crop management))
4. Labour conditions (4 standards: forced labour and child labour; freedom of association and collective bargaining; conditions of employment; occupational health and safety)

The generic standards distinguish between minimum requirements, which producers must meet to be certified, and progress requirements that encourage producer organisations to continuously improve their operations.

Additional trading standards stipulate that traders have to pay a price to producers that covers the costs of sustainable production and living; pay a premium that producers can invest in development; partially pay in advance, when producers ask for it; and sign contracts that allow for long-term planning and sustainable production practices.

A few product-specific Fairtrade standards for each product determine e.g. minimum quality, price, and processing requirements that have to be complied with.

Linking Environment and Farming (LEAF)

(www.leafuk.org)

“Following LEAF farming principles brings benefits to wildlife, reduces the risk of pollution and helps you demonstrate that you produce safe, high quality, environment-friendly food”.

Achieving the LEAF Marque requires farmers to show that they have fulfilled 95 standards in the categories:

1. organisation and planning (13 standards)
2. soil management and crop nutrition (12)

3. crop protection (20)
4. pollution control and waste management (12)
5. energy and water efficiency (6)
6. wildlife and landscape (23)
7. animal husbandry and environment (9)

The standards distinguish between critical standards where failure results in farmers not achieving the Marque, and advisory standards. The standards relate to inputs (e.g. pollution management plans) rather than outcomes (e.g. levels of pollution emitted).

RSPCA Freedom Food

(www.freedomfood.co.uk)

“The aim of [Freedom Food is] to improve the lives of as many farm animals as possible.”

The Freedom Food standards are not available on the Internet. We understand that multiple standards exist, e.g. detailed standards for laying hens. The standards promote:

- Freedom from fear and distress - by providing conditions and care that avoid unnecessary fear and distress
- Freedom from hunger and thirst - by providing a satisfying, appropriate and safe diet as well as consistent access to adequate fresh water
- Freedom from discomfort - by providing an appropriate environment including shelter and a comfortable resting area
- Freedom from pain injury and disease - by prevention or rapid diagnosis and treatment using good veterinary care when required. The environment must be well maintained to provide good health
- Freedom to express normal behaviour - by providing enough space, appropriate environmental enrichment and company of the animals own kind.

The standards specify levels of e.g. stocking density, nest box provision, perch space.

Soil Association

(www.soilassociation.org)

“Organic systems recognise that our health is directly connected to the health of the food we eat and, ultimately, the health of the soil.”

The Soil Association standards are not available on the Internet. The standards include:

- Conversion: most farms will first need to go through a two year conversion period where

the land is managed organically, but crops and livestock may not be marketed as organic

- Soil fertility: the focus is on crop rotations and the use of animal manures and compost to maintain natural soil fertility, without the use of artificial/synthetic fertilisers
- Pest, disease and weed control: this is achieved through rotation, choice of varieties, timings of cultivations and habitat management to encourage natural predators. All herbicides are prohibited. Where direct intervention is required a small range of approved inputs like sulphur may be used in a controlled manner
- Conservation: the standards encourage the development of a healthy environment, enhancing landscape features, wild plants and animal species by, for example, maintaining hedges as an important wildlife habitat.
- Livestock: the livestock standards cover livestock conversion, animal feed, housing and stocking densities, veterinary treatments and animal welfare. The emphasis is on a positive system of livestock management to maintain healthy stock and a balanced system
- Genetically modified organisms: GMOs and their derivatives are strictly prohibited at every stage of production.