Written Submission from Alastair Nairn

Having read the contents of the climate change plan for agriculture,

I would like to make the following comments...

I would say that great caution must be given to get this right and all pluses and minuses taken into equation. As far as I’m aware Scotland now imports in excess of 50% of our food - so therefore the carbon footprint of that figure lies overseas - or to put it another way, we are exporting our carbon footprint abroad.

This is morally wrong, what we need to do is produce our food as close to the centres of the population as possible. Transporting food products from farms to centralised processing and distribution centres, and then further transportation of processed and packaged products back to retail outlets throughout Scotland is extremely detrimental to reducing emissions of greenhouse gases.

A classic example is the closure of the milk processing facility at Aberdeen. Milk is now transported from farms to the central belt of Scotland for processing and then transported back to Aberdeen and beyond. Surely from a carbon emissions point of view this cannot be right and should be addressed without delay.

Sources of emissions from agriculture

I note that emissions have dropped by 25% since 1990 - this is entirely due to a drop in agricultural output.

Livestock numbers have reduced as quoted but no mention of food imports rising correspondingly as mentioned earlier. Reductions in fertiliser use is also stated due to increased cost of product - true - but I must add livestock farmers have become more aware of the benefits of livestock manures and slurries to cut down fertiliser usage.

On another angle, in the past there has been an abundant supply of distillery byproducts (draff etc) commensurate with the vast increases in whisky production. Livestock farmers have utilised these feed resources to the maximum - thus saving on purchased fertiliser, less silage production and corresponding fuel usage - all carbon friendly.

Now with the increase in A.D. and Biomass Plants, subsidised by government incentives - distilleries are finding it far more lucrative to feed into these plants the protein and energy byproducts in the quest for reduction of their own carbon footprint. Consequently availability of draff etc to farmers will become extremely scarce - it is already happening. End result - farmers will have to grow more silage etc with expensive artificial fertilisers to compensate for the loss of distillery byproducts increasing their carbon footprint accordingly whilst distilleries reduce theirs.

The other alternative is to reduce livestock numbers on the back of historic reductions already. Pressure on agricultural support mechanisms post 2019 will probably lead to further declines in numbers leading to further imports (extra food
miles and added carbon emissions). I must point out that farming activity declines are not easily reversed.

**Livestock and the Scottish context**

I am glad it has been recognised that only 8% classified as the best arable land is mostly used for vegetables and high value food crops. A further 20% used to grow cereals and the remaining 72% devoted to grassland and rough grazing. Of huge concern going forward, is the increasing amount of good arable land given over to growing energy crops for A.D. Plants. This will have growing ramifications for the remaining 72% of less favoured area land.

Livestock farmers need the byproducts from the arable sector (namely straw, cereals and protein) to supplement the production of beef and lamb. All sectors of agriculture are interlinked and when you interfere with one sector then it has a knock on effect on the others, this has now become clearly evident.

Growing pressure on livestock farms to grow more crops at home obviously increases their carbon footprint as said earlier. I must go back to the increasing amount of good arable land given over to growing energy crops for A.D. plants and give further comment... Any tenant in a short-term tenancy agreement, within a 10-12 mile radius of these A.D. Plants will be under severe pressure from land owners to ratchet up rental values on the back of extremely lucrative deals to grow crops for the A.D. Plants.

On the subject of proteins and multiplication of A.D. Plants are having a serious effect on protein availability to farmers. Europe is short of protein, Scotland is short of protein... and this must be recognised. Transportation of increasing shortfalls from across the world e.g. South America is certainly not carbon emission efficient.

Recent developments indicate a major supermarket chain is going to ban products containing G.M. orientated protein sources and it is strongly anticipated that other supermarkets will follow suit. It is also worth noting that 80% of soya coming into Europe is genetically modified with the remaining 20% non G.M. attaining substantial premiums.

It naturally follows that feeding A.D. Plants with protein products is morally wrong.

**Farming for a better climate**

I note that the four climate change focus farms reduced their carbon footprint by around 10%, saving £3,000 to £12,000 annually. I wonder what percentage of livestock was on these farms? You will probably have assumed by reading so far that I am negative to change - not true - livestock farmers can play their part and produce carbon efficient meat and dairy products as is reasonably possible, finishing beef cattle on cereal based protein diets contributes to this. Also achieving best performance from cows and bulls, high health status, leading to slaughter age timescales reduction.

Achievement of the above goals would be best delivered by four farms across the country, with particular emphasis on livestock production. Use of existing Q.M.S
monitor farms would also act as a springboard. SRUC would be crucial to expanding the audience base and promoting knowledge transfer.

I think the above approach will contribute to the goals going forward and be much more appetising for farmers than costly compulsory carbon audit approaches etc. So many costs have been heaped onto farm businesses that are already struggling to cope financially - a situation that could be further compounded with the probable demise of agricultural support post 2020. Many farmers do not understand the benefits of carbon reduction and I think it would be much better to introduce an education programme in the first instance.

A good number of farmers already complete a carbon audit to satisfy their customers so the carbon awareness is starting to evolve.

**Forestry**

Mention is made for tree planting to increase dramatically - agricultural land being the target! Increased tree planting should only take place on the most marginal land. It has been pointed out that the forestry industry has a huge amount of badly managed land. There is little point in planting trees if they are not going to be properly managed. I am told that the forestry industry is now worth a billion pounds a year - but no one seems to be able to tell me the amount of public money that has been invested in forestry over the passed 100 years.

Many mistakes have been made in forestry in my lifetime and a lot of timber is only fit for biomass. We are felling our forests at a remarkable rate and I am well informed that this is not sustainable. The pressures to attain more virgin land for planting would be far less if the industry made better use of the land they already have. The facts are – much of our forests are a mis-managed national disgrace. The 10,000 hectare planting target per annum is seriously questionable.

Biomass at the moment is a useful tool for the forestry industry to consume timber that is unfit for the purposes it was originally planted for. Going forward large scale biomass is unsustainable as it will have used up all homegrown supplies in a number of years, become even more dependant on imported timber with a higher global carbon footprint.

As far as I am aware Forestry Commission Scotland has a policy at the moment of selling off stands of semi-mature timber to large industry bodies and possible supermarket chains. This allows these establishments to claim that they are reducing their carbon footprint. If this is correct, nothing could be further from the truth and their real carbon emissions are being hidden and not addressed, as touched on at the start of my reply.

Forestry commission raises around 10 million pounds per annum from these sales and this money is used to buy more upland farms for planting to the detriment of food production which in turn will mean more imports in the future.

All the points made above are extremely relevant but I do appreciate their is scope for small scale planting within the farming industry (shelter belts etc) - but at the moment tree planting grants are not available for small scale – that needs to change.
Soils and sequestration

Correct PH of soils is a must, leading to optimum nutrient availability and carbon efficiency, I question if soil testing should be compulsory. Nothing wrong with sending farmers a booklet on soil management and PH awareness.

SRUC could also get involved through knowledge transfer but I have to say in the majority of farmers eyes you would be preaching to the converted. Most farmers are already soil testing and adjusting fertiliser inputs accordingly.

Nitrogen use

Farmers are fully aware of the benefits of clover and are already adjusting their applications of expensive purchased fertilisers, commensurate with the amount of clover in the swards. On the subject of grass reseeds or undersown cereal crops it is extremely disappointing that clover - safe herbicides have been withdrawn which were used to combat weed infestation. Now farmers are having to sow reseeds without clover where weed populations are high - spray weeds with herbicides after grass has established and then direct drill or grass harrow clover in the following year - all tractor fuel usage and carbon negative.

Manures and slurries

In a less favoured area context where main stream livestock production prevails it is not practical or carbon efficient to transport to A.D. Plants. Best benefit is to utilise manures and slurries on farm as has always been done to promote fertility in the soils which will in turn enhance growth and capture more carbon and also have the added benefit of less purchased high carbon footprint fertiliser. The notion of moving cows to arable areas does not stack up as the management and stock man expertise lies at home. Livestock progeny off the cows could possibly fit into the idea more sensibly, utilising part cereal diets depending on age which in turn would produce lower methane emissions per animal.

Nitrogen budgets for Scotland

Reading through this part makes me extremely irritated. The present economics of farming dictates farmers have to scrutinise the use of expensive fertilisers very carefully. They are extremely adept at drawing advantage from manures and slurries, minimum tillage and shallow ploughing to guarantee maximum growth potential near the surface of growing crops. This goes hand in hand with soil analysis and proper targeting of inputs as mentioned previously.

Mentioning fertiliser reduction targets and the threat of nitrogen rationing does not show much respect for farmers managing their land at present. Remember we are only approximately 40% self sufficient in food.

Summary

In summary parts of the climate change plan makes good sense, but every aspect of the plan has to be thought through very carefully in a balanced way.
Carbon footprint savings have to be balanced with consequences of actions whether in Scotland or abroad taken into account to determine if the savings are positive, neutral or even negative. Also agriculture is not the sole target.

All industrial sectors, road and freight transport, distilleries, forestry, supermarkets, processors etc have to be accountable and seen to be addressing their footprint in every aspect of their business portfolio.

Food security has also to be at the top of the agenda. We have to address seriously declining self-sufficiency in food products as a matter of urgency - who knows what might be round the corner in this volatile world that we live in.

A.D. and Biomass Plants expansion has to be curtailed, food versus renewable power! Climate change is real and we have to do our part, but from an agricultural perspective you have to be very careful where you go with this. With A.D. Plant concerns, 10,000 hectares per annum planting targets and already excessive amounts of food imports – you could be in danger of creating a monster with dire consequences.