This paper seeks to stimulate a discussion on the role of conifers in England, their current status and their future potential, especially in relation to new planting.

Recently the truth has dawned on me, we just don't want any more conifers in England. I've been a bit slow to catch on but the stats prove it, the grant system underlines it and the market ensures it. If society valued conifers then we would have support mechanisms to get more of them, or perhaps we would do the unthinkable and just go out and plant them. The cold hard truth is that without a fundamental shift in political thinking the idea of more conifers in England is simply a non starter, but it shouldn't be.

The history of conifer plantations in England is, surprisingly, hard to trace very accurately. The available Forestry Commission's statistics go back to 1980 and give an uncertain and changing picture suggesting that where we once had a peak of 411,000 hectares in 2011 we now only have 339,000 hectares and that in 2012 the private sector area suddenly dropped by 13,000 hectares (6.4%). Neither adjustment is due to a change in actual tree cover, it is due to a change in the way we measure and account for it and the subsequent revision of the figures. Any detailed and meaningful analysis of the historical figures is therefore almost impossible but using the latest data [1] it does seem fair to say that since 1980:

- The extent of English conifers has stayed close (+/- 3%) to 345,000 hectares.
- The proportion of state owned conifers has steadily declined from 55% to 45%.
- The private sector share of ownership has mirrored state ownership and risen from 45% to 55%.
- The Forestry Commission have planted 4,300 hectares of conifers but none at all since 2003.
- The private sector has planted 15,700 hectares but only 1,100 hectares since 2003.

These statistics do not suggest an expanding interest in conifers, on either side of the ownership fence. They underline the idea that society has just about had enough of conifers and no more are required thank you. Which is a shame given that Confor's recent studies in Wales [2] and Eskdalemuir in Scotland [3] concluded that farming comes a poor second to established productive conifers, as the table below shows.

Table 1: How Established Productive Conifers Compare With Farming

Measure	Wales	Scotland
Economic output	Almost 5 times that of farming	3 times that of farming
Economic spend	More than double that of farming	Double that of farming
Trading status	Surplus, whilst farming does not	Surplus, whilst farming does not
Employment	Supports 60% more jobs than farming	Supports the same number of jobs as farming but 11% more direct employment and 30% more total employment than agriculture on equivalent land areas.
Subsidy	 Farming requires a subsidy of £21,895/employee to survive. Forestry receives 1/5 of farming's contribution for the provision of public benefits 	 Farming requires a public subsidy of £22,600/employee to survive. Forestry receives 1/6 of farming's contribution for the provision of public benefits

We have to ask, what more does anybody want?

As the data suggests, in the growing-game commercial conifers come, at best, a distant second to agriculture. We might feel that conifers hold the moral high ground with their environmental credentials and their economic multipliers but they are dwarfed by the sheer scale and presence of agriculture and its ability to flex with the changing times, not to mention its political clout. The government has £3 billion to spend over five years to enhance England's countryside [4] whilst over the same period allocating £90 million for woodland creation [5]; so that's 97% to the countryside and 3% to woodland creation. And by woodland creation it doesn't really mean productive conifers, it could do but its not so likely given the new scheme's competitive allocation process and their stated priorities [6] of:

- biodiversity;
- water (quality and flooding); and
- climate change

This policy is far more likely to produce broadleaved woodland or small areas of mixed-species woodland which is undeniably worthwhile, but it's not commercial conifers. Still, not to worry, the government "remains strongly supportive of sector-led initiatives.... to grow demand for wood by further developing and

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strengthening the woodland economy from ground level up" [2]. Its just that you can't really do that with mixed woodland planted primarily for non-commercial reasons.

In the race to occupy land how can productive conifers, with their inexorably slow pace, expand their footprint, let alone out compete agriculture when the political rules change more quickly than the forest's developmental stages. That's a lot of change over the course of a rotation. The pace of nature, of soil, of land and of long lived woody plants is simply not the pace of politics, how could it ever be.

If only politics were the only problem, land prices lock us out well before we get to the details of the current political climate. Agriculture brings monetary value to land but if we felt at a disadvantage to agriculture then we are as nothing in comparison to development land where market values are quite literally 100 times greater; so when there is competition, there is no choice. Along with land prices come the wider economics and since the success of conifers is all about economics, if the economics aren't right then conifers just don't work, especially if you want to plant new ones.

Successful planting comes easily when there is some certainty in the picture especially if it's of the economic type. Without certainty there is only risk and when there is only risk the players are either benevolent, well-off or fool hardy. If we want more conifers then we, and investors, need to feel more economic certainty. Grants get investors through the initial stages but from there on in they live, as other investors do, in the world of the crystal ball.

To get more commercial conifers planted we would also need a change in society's thinking and a move away from "conifers are bad, broadleaves are good", an attitude which, depressingly, still lingers on in so many places. Broadleaf woodland is what its all about for many, if only we could get people to see the full role of conifers in all their dimensions, especially economic, things might be different.

Given that we are not going to change the land market anytime soon why don't we behave like agriculturalists and develop super fast growing conifer crops so we could grow timber quickly, capture carbon quickly, create habitats quickly and quickly adapt to the changing world around us. Adaptation away from blunt monoculture is a sensible strategy but quickly rustling up a wide range of well-understood improved conifer crops is still, unfortunately, the stuff of dreams. With Sitka we are well on our way but with other species we are living in the stone age, marvelling at our ability to simply have different species never mind properly understanding their provenances and their silvicultural potential and requirements in an environment which is itself undergoing complex and powerful change. The only solution is research, and lots of it.

To address our knowledge gap we would need a 21st century turbo-charged research programme driven by the impressive developments in genetic understanding, tree breeding and plant propagation made in recent decades. The holy grail of being able to guarantee the quality of a conifer crop's key traits at the end of its rotation is as far from our grasp as the Grail itself.

In the meantime, the processing industry cannot expect the world to fit neatly around them, they must also continue to adapt in a changing world and live off what we have now rather than what we would like to have. The march of the dreaded *P.ram* in larch has admirably demonstrated the industry's initiative and the market's flexibility, both of which have had to run against the historical grain. Long term survival will require processors to cope with multiple species, odd dimensions, small parcel sizes and changing conditions; no small task in a traditional and capital intensive industry. Unfortunately it's no longer a simple one dimensional, one species world.

So that's three impossible asks then; one economic, one sociological and one technical and just to be sure, all are infused with incurable politics and volatile public opinion. Is that it? Should we give up entirely on conifers and settle back into a cosy world of nurturing broadleaf habitat? Not at all, we must rise to the challenge of strengthening our forest based economy but we must also face the uncomfortable truths and know our place in a wider world that doesn't actually have much time for commercial conifers in England. As so many life forms before us have discovered, the only winning strategy is to adapt or die.

REFFERENCES

- [1] Revised historical data provided directly from the Forestry Commission Statistics office Edinburgh 10 august 2015.
- [2] Upland forestry WALES study Welsh Analysis of Land-use Economics & Subsidies by Julian Bell, SAC Consulting. Published by Confor June 2015.
- [3] Eskdalemuir: A comparison of forestry and hill farming; productivity and economic impact. by Julian Bell, SAC Consulting. Published by Confor February 2014.
- [4] Written answer by Rory Stewart on behalf of DEFRA, 7 July 2015
- [5] Written answer by Rory Stewart on behalf of DEFRA, 18 June 2015
- [6] Guide to Countryside Stewardship: woodland capital grants 2015, section 1.5, Published 17 February 2015 (at <u>https://www.gov.uk/government/publications/guide-to-countryside-stewardship-woodland-capital-grants-2015/guide-to-countryside-stewar</u>