

# Can we plant 22 million trees a year?

Updated / Thursday, 19 Sep 2019 09:48



"In the past there was a strong bias against forestry in Ireland"

By [Aoife Ryan-Christensen](#)

## **Analysis: the government's ambitious plan to plant 440 million trees by 2040 to tackle emissions faces significant barriers**

The government recently announced plans to plant [440 million trees by 2040](#) in an effort to tackle our greenhouse gas emissions, a third of which come from agriculture. That's 22 million newly planted trees a year and, to the uninitiated, it sounds like a lot. So can it be done?

"It could be done. If it is to be useful, we have to think about the lifespan of CO<sub>2</sub> in the atmosphere - so when we plant these forests we have to see them as something that won't be shifted for 500 years and that's an extraordinary commitment," says [Dr Ken Boyle](#), lecturer at the School of Planning and Environmental Management in [TU Dublin](#).

"I think if we're looking at this as some kind of genuine [carbon sink](#), we need to be thinking that these trees are there for the long haul and we're making a radical change to the landscape. We're moving from agriculture, grassland production and so on, into forestry and there are opportunities there to create something that isn't just commercial forestry."

*From RTÉ Radio 1's Countrywide, Suzanne Campbell visits Co. Meath farmer Gerard Deegan to find out why he left dairy farming to plant trees*

"The business as usual model isn't really what we should be thinking about, we should be thinking about other ways in which we can get trees onto the landscape and how to co-exist with those trees."

Historical evidence would suggest that we haven't exactly had a habit of co-existing with our natural forests. After centuries of [steady exploitation and destruction](#) from human activity, forest cover in Ireland dwindled from 80% to 1% in the 1920s, after the formation of the Free State. Now, forest cover is estimated to be at a [350-year high](#) (p.4), but this still makes us the country with the [second lowest forest cover in the EU](#) at 11%, compared to a European average of 30%, and we've got a long way to go to reach the goal of 18% as outlined in the plan.

Other countries are along for the ride with us. In Ethiopia, they managed to plant [350 million trees in one day](#). In Denmark, television channel TV2 just hosted what is believed to be the [world's first television fundraiser for trees](#), with the goal of raising enough money to plant one million trees in Denmark. They raised roughly 18.2 million danish kroner (€2.4m), [enough for 914,233 trees](#).

In Ireland, the aim in the government's [Climate Action Plan 2019](#) is to plant an average of 8,000 hectares a year, the size of around 5,000 [Croke Park](#) pitches. But the national afforestation programme [hasn't had the desired effect lately](#) and tree planting in Ireland has more than halved in the last two decades to just [4,025 hectares in 2018](#) (p.28) - half of what we need to be planting.

***From RTÉ Radio 1 Morning Ireland, IFA claims up to 100 farmers have experienced problems with delayed payments, poor communication, and land mismanagement as part of agreements with Coillte***

How forestry is viewed in Ireland, particularly by the farming community, has played a role in this. "Farmers want to make a living. There is a cultural thing about forestry in Ireland, it's not the same as it was twenty or thirty years ago, but certainly in the past there was a strong bias against forestry in Ireland, especially among farmers," Boyle says.

Minister of State for forestry, [Andrew Doyle](#), previously said that forestry is [seen as a failure](#) and that the 'fear factor' has to be eliminated to get landowners to change their mind, something which won't happen overnight.

"The whole grant scheme really brought farmers into forestry", says Boyle. "The payments were quite significant, but the levels of planting now have fallen and this might reflect farmers - which farmers have been taking up these payments? What type of land has gone into forestry over the last two decades? It's not prime agricultural land".

Leitrim and Wicklow are the two most afforested counties in Ireland, but with two very different stories. While forest is an accepted part of the landscape in Wicklow and has been historically, in part because of older estates, Leitrim's forest cover is recent and all of the same age, with a limited species mix.

"It's predominantly conifers, [Sitka Spruce](#), and in some ways it might seem quite alien in that landscape," Boyle says. "But there's that push-back in Leitrim now against forestry in some cases and I suppose it's a matter of acceptance. I think the way forward is to plant a variety of species, focus on native species and so on."

Using native species brings in other native plants and animal into the ecosystem. But right now 51% of Ireland's trees are Sitka Spruce, a non-native conifer species which is favoured

commercially but which some groups, including [Save Leitrim](#), say are damaging the natural habitat.

***From RTÉ Radio 1's Drivetime, Suzanne Campbell talks to Save Leitrim campaigners who highlight the negative impact of the mass plantation Sitka Spruce in Leitrim***

Ireland's forests are overall remarkably young: nearly three quarters of forest area is [less than 30 years of age](#) (p.10). For forestry to become an accepted part of the landscape countrywide and for it to be part of a longterm solution in tackling carbon emissions, Boyle believes a lot of thought has to go into what type of tree species we plant, where we plant them, in what soil and for what purpose. These decisions have implications for biodiversity, habitats and ecosystems, as well as how successful it will be in trapping carbon.

**What species of trees are in our forests?**

The Sitka Spruce is a non-native broadleaf conifer

Species	Area (ha)	%
Sitka spruce	343,310	51
Norway spruce	25,770	4
Scots pine	7,660	1
Other pine spp.	64,890	10
Douglas fir	10,380	2
Larch spp.	24,490	4
Other conifers	3,030	0
Pedunculate and sessile oak	17,880	3
Beech	10,030	2
Ash	25,280	4
Sycamore	10,100	2
Birch spp.	47,270	7
Alder spp.	17,910	3
Other short living broadleaves	53,280	8
Other long living broadleaves	11,820	2

*National Forest Inventory, 2017*

"Forestry is a solution, but it's not the total solution," he says. "We've got to think about, is it going to be conifers or is it going to be broadleaves? What impact will those trees have on the soil? Because the trees are important for holding carbon, but the soils are really important, too... In existing Irish forests, the soils are a significant reservoir for carbon. Something like 80% of the carbon that's stored in forests is stored in the forest soils."

Boyle says more carbon is lost from soils in agriculture, for example from tilling, than from soils in forestry, which means taking land out of agriculture and into forestry could be a good, positive thing from the perspective of controlling emissions and storing carbon. "But that would obviously create a certain tension between the agricultural sector and the rest of society," he adds.

"It's a huge commitment. I think there has to be some kind of sell on this initially, because this is not going to be your conventional forest cover I think. We'd have to see it as land that is permanently committed to forestry and there are already tensions there about afforestation."

*Whether rates of planting will increase again is "crystal ball gazing"*

Those tensions are there both for farmers and for non-farmers, like in Leitrim. "If it's all conifers, people will see this as just another form of farming. It's tree production," Boyle says. "But if it's a mix of species maybe and it's got other values - it's got recreation values, it's got landscape values, it's got biodiversity values and it's storing carbon - the there are other benefits coming from it, it's not just simply a commercial forest. It'll have to be considered like that if it's going to be a real carbon store."

This more nuanced approach could have a whole range of values for local communities, and tourism, but could also be combined with sheep or cattle grazing in the [understory](#) and some level of harvesting of materials for construction, a sustainable way of doing things that has a long European history. "All of that goes back to the culture of forestry in Ireland and the acceptance of forestry in the Irish landscape and the nature of Irish agriculture", Boyle says. "All those things have to be considered in the shake-up".

*From RTÉ Radio 1 News At One, Gerard Murphy from Coillte talks about nine forests being redesigned for recreational use*

We have reached levels of tree planting way above 8,000 hectares a year in the past, but the issue with forestry from the point of view of the farmer is that it's a long-term crop, says [Niall Farrelly](#), Senior Research Officer in forestry with [Teagasc](#). Farmers could be waiting years to see returns on forestry, which is where the [afforestation grant scheme](#) comes in, to [compensate for loss of income](#) and reward farmers for making the decision.

"To put it in a nutshell, the opportunities are there, the land bank is there, the grant systems are there. But whether rates of planting will increase again is "crystal ball gazing," Farrelly says. "Certainly, the schemes are attractive, they are competitive. Who knows what'll happen, but it certainly does require farmers to consider forestry as a viable land use."

### **Who owns our forests?**

**Private (non grant-aided) :** private forests not in receipt of grant-aid post 1980. Includes areas semi-natural forests that have regenerated naturally and other long- standing plantations on private estate holdings. (14%)

**Private (grant-aided) :** private forests not in receipt of grant-aid post 1980. Includes areas semi-natural forests that have regenerated naturally and other long- standing plantations on private estate holdings.≈ (35%)

**Public:** all State owned forests (mainly Coillte) (51%)

But for farmers to do that, there are barriers that will need to be overcome. Success of the plan depends in part on whether or not farmers will get on-board and judging by difficulties in the past it could be an uphill battle. [Analysis from Teagasc](#), referenced in the [Climate Action Plan](#), has highlighted that there are considerable barriers to uptake within the farming community. A [survey](#) of farmers' attitudes to afforestation showed that 84% would not consider planting in the future regardless of the financial incentives offered.

So what needs to be done to get more farmers to consider forestry? "I've been asked that question many times," Farrelly says. He believes farmers are more aware of not just the economic benefits of forestry, but also climate and carbon aspects, as well as biodiversity and ecosystems. Farmers have different motivations and some may see forestry as a pension investment, a way to plan for retirement, or a way to pass on their portfolio, be it commercial forestry, or planting native woodland or [riparian](#) planting, Farrelly says.

***From RTÉ Radio 1 Drivetime, One Tree per Child is a global movement which has seen a quarter of a million trees planted by school children in nine countries, including Ireland, across four continents***

The idea that farmers might be using forestry as a retirement or pension plan seems to be supported in data from the [Department of Agriculture](#) (p.24), which shows that the age of entrants to the afforestation scheme is increasing. In 2018, 53% of afforested land areas were owned by people over 60.

One way of increasing interest would be to encourage farmers to diversify, with forestry as one part of the farm. "You might have certain farms that are mixed farms, they might have a bit of dairy, they might have a bit of beef, they might have a little bit of forestry", says Farrelly. "It's about optimising the returns on your farm and I'm sure there's opportunities for that. Integrating forestry into farms, maybe deliver ecosystem services, carbon services, timber services."

**Read: [6 alternative ways for Irish farmers to use their land](#)**

Based on [analysis from Teagasc](#), the 8,000 hectares of yearly planting, alongside sustainable management of existing forest land, has the potential to deliver a cumulative 21 MtCO<sub>2</sub>eq (metric tons of carbon dioxide equivalent) [abatment by 2030](#) (p.104). It's one part of the overall goal, but to maintain that and to ensure it happens, Farrelly says management of the forest is essential and the forest has to be protected and resilient.

"It's a very good land use option, it's a very good package and the message can be quite a positive one, I think. Trees are all positive. For a country which has very low forest cover, there's great opportunities there."

**[RTÉ Brainstorm](#) is one of [hundreds of worldwide news outlets](#) taking part in [Covering Climate Now](#), a project headed by the [Columbia Journalism Review](#), [The Nation](#) and [The Guardian](#) to strengthen the media's focus on the climate crisis in the lead-up to the [United Nations Climate Action Summit](#) in New York on September 23rd.**

**The views expressed here are those of the author and do not represent or reflect the views of RTÉ**