

Forestry at the edge

Piers Maclaren*

At the field day, the farmer scrutinised me with a critical eye. "You're from The Forestry," he grunted. "Sort of," I replied. "I'm qualified in forestry". I could tell what was going through his mind: he had pigeonholed me as a spruced-up Bogor. Contract tree-planter, forester, forestry scientist, is there a difference and who cares? "You don't need a degree to do forestry," the farmer opined, "you just whack the trees in the ground and cut them down later. Simple."

"One question," he continued, "edge trees, what do we do with them? I mean, do we prune and thin, same as the others?" A dozen possible answers flashed through my mind. All that empty space on one side promotes large branches, which gives rise to large stem diameters. Edge trees can occur on the outside boundary or from canopy gaps within the stand and, to be sure, they can be a headache. For a start, they create at least two new log-sorts on the skid – unpruned logs with extra large branches, and pruned logs with extra-large small-end diameters. Within reason, the latter are welcome, but on some fertile sites trees are starting to exceed maximum acceptable sizes for some mills.

The farmer's main concern, however, was large branches that sprawl over the paddock. They shade the pasture and create an unsightly and unsanitary place for stock to camp. Every gale crashes at least one branch onto the fence, which has to be repaired at great inconvenience. If there is good access, you can use a hedge-trimmer to control the branches, but why spend money and waste good tree growth?

One solution is to prune edge trees harder and higher and thereby keep diameters small. Upper logs are still inferior, because specs are based on the largest branches rather than the average branch. No point in pruning higher than about 8 metres, because you will just end up with lower volumes of clearwood. Pruned logs will be longer, but also skinnier. Also ultra-high pruning may involve special pruning visits, specialist equipment (eg Morris platforms), not to mention OSH inspectors.

I have also encountered the opposite view – don't prune your edge trees at all! The theory here is that these trees are malformed anyway – short, leaning, swept and often forked – and act as an important windbreak for the rest. Sounds good, although I know that wind doesn't always work that way, even on flat ground. Wind is quite capable of skipping the first few rows and scooping out pockets of trees from within the forest. Then again, you could achieve much the same effect by planting and growing edge trees at higher stockings. Prune all the trees as normal, but at the edge reduce the between-tree distances. Solves the butt-log problem, if it is a problem, but again doesn't totally deal with the top logs. Another thing – it can be hard to persuade contract

workers to select crop-trees differently according to the particular situation, and harder still to calculate a fair compensation for their work. It's far easier, operationally, to pretend that the stand is completely uniform and have simple rules.

Another approach is to surround the block with sacrificial trees. Accept that the edge trees are going to be a nuisance, and plant something that will suppress the branches of the main crop, will not threaten the fence, will look pretty, attract bell-birds and can be used for firewood when it's done its job.

"Well," I began tentatively, "Tricky question. There are quite a few conflicting opinions...."

"Don't think he knows," said the farmer, turning to his neighbour, "and what do you think?"

I then meditated on the observation that the "hard" sciences like physics or chemistry, tend to carry more academic prestige than the "soft" sciences like sociology or anthropology, or applied sciences, like forestry. I'm told that in Germany the word "hauptfoerster", or head-forester, carries the same social status as "doctor". Certainly doesn't in New Zealand.

There is no question that biology is more complex than black-and-white physics or chemistry. Mix in some expertise in economics, statistics, soil science, meteorology, engineering, and – for good measure – a sprinkling of aesthetic and cultural values, and you may come up with a forester. But because the subject is so complex, there are no cut-and-dried answers. *Ipso facto*, anyone's opinion is as good as anyone else's. Particularly in forestry, it's hard to be proved right or wrong. By the time the trees are grown, everyone has lost interest, forgotten the original arguments, or died of old age.

So a person's credibility has come to be important in forestry. It's as if it doesn't matter what you say, so long as you say it with *authority*. But forestry is also about Science, which is the antithesis of Authority. Ever since Aristotle was exiled or Galileo was silenced, science has been in constant conflict with charismatic leaders, traditional beliefs or sacred scriptures. The only authority that counts is that of hard data, particularly from controlled, replicated experiments reported in the academic literature and confirmed by independent researchers. This world-view is difficult to explain to a practical farmer, in a few words, on a windswept hillside in the rain. Oh well...

* Piers Maclaren is a Registered Forestry Consultant and a former Forest Research scientist. His column appears regularly in the Journal.

