

## Tree Planting Over 117 Years

During the recent Tree Growers Information Day we had the opportunity to view and discuss the evolution of reforestation efforts in this part of Ontario over the last century or so. The first efforts were driven by a desire to reclaim land which was turning into deserts following forest removal and attempted farming. The reforestation efforts from 1906 until the late 1960s were driven by the desire to make the blowing sand areas productive again and to supply product to the sawmills and pulp mills which were major contributors to the Ontario economy. So coniferous species -particularly red pine and white pine -were the most common species planted. At the same time the province had a program where it would pay half the cost of land acquisition and all the reforestation costs for properties purchased by municipalities or Conservation Authorities. When I started working for the Sydenham Valley Conservation Authority in 1971 the only deciduous species we could get from provincial tree nurseries was black walnut. The two Ausable Bayfield Conservation Authority (ABCA) plantations we observed from the bus were part of this effort. The last stop of the day highlighted an interim step between single tree species selection and multiple species. Originally the plantings were blocks of single trees – white cedar in one area and white pine in another but the squirrels planted black walnuts throughout the white pine and eventually the walnut started saturating the soil with Juglone which killed off the white pine. Since the mid 1960s it was common practice by the conservation Authorities and Ministry of Natural Resources (MNR) to plant plantations with 25-50 % walnut and 50-75% white pine. The pine would shade and kill the lower limbs on the walnut and then at age 25-30 the walnut would kill the pine so the plantation manager did not have to spend time or money on side branch pruning for crop tree release.

However, public opinion, which was starting to refer to these massive one or two species plantations as “biological deserts”, was resulting in the addition of wildlife shrubs to enhance wildlife values in the plantations. Unfortunately, the wildlife shrubs which survived best were not native and turned out to be invasive, including multiflora rose, autumn olive and European highbush cranberry. In the late 1960s the Federal government, through the Canadian Forest Service, sent Fred Von Althen to Southern Ontario to try to find ways to establish deciduous tree plantations. Because they had so much open land around the Parkhill Reservoir, Fred conducted a lot of his experiments with the Ausable Bayfield CA. He tried a number of things including cover crops and planting autumn olive to try to produce nitrogen for the adjacent tree species. What he found that worked best was removing the herbaceous plants especially grasses from the plantations for 3-4 years until the trees were about 10-15 feet tall. This led to a change in nursery production to commercially valuable deciduous species like the oaks, soft maple, and ash species in addition to walnut. But the price of land was increasing and municipalities were not acquiring new land so much of the increased deciduous production was being planted on private lands. These tended to be smaller plantings on steep slopes, wet sites and wind breaks like the Smeekens’ stop on the tour where the earliest plantings were pure pine plantations and later plantings incorporated commercially valuable oaks as well as diversity for wildlife and aesthetic reasons.

The latest planting at the Smeekens property and the plantings at the Warner property are typical for plantings we see in this part of Ontario today where there are several species, and the planters try to match to the conditions on the site. The emphasis is on native trees particularly “Carolinian species” but some species like red pine and white pine from the Great

Lakes St Lawrence Forest Region and even white birch, tamarack and trembling aspen from the Boreal Forest Region are included because they were here before European settlement.

The next change in planting projects may have been showcased at the start of the tour where the Forest Gene Conservation Association is conducting an assisted migration study in cooperation with the SCRCA . Its purpose is to determine if we can and should be collecting seed of our native species from farther south to try to move those genetics farther North to help the species deal with the warming climate .

From my perspective at least it was an interesting tour highlighting changes in reforestation and forest management in this part of Ontario over the last 117 years .