ARTICLE

Sixty Years on the Margin: The Evolution of Ontario's Tree Planting Industry and Labour Force: 1945–2007

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Introduction

TREE PLANTING IS THE FIRST and last step in the process of industrial forestry, and a critical component of the forest products industry in North America. Despite the large body of technical and policy-based literature related to tree planting and silviculture, researchers have all but ignored the workers who plant the trees. In the past decade, however, a growing body of work that examines socio-economic and socio-cultural aspects of tree planting and other reforestation work in North America has emerged. Some studies focus directly on tree planting and reforestation, while others are broader in scope and include

1. Brendan Sweeney and John Holmes, "Work and Life in the Clearcut: Communities of Practice in the Northern Ontario Tree Planting Industry," The Canadian Geographer, 52 (Summer 2008), 204-221; Geoff Mann, "The State, Race, and 'Wage Slavery' in the Forest Sector of the Pacific Northwest," Journal of Peasant Studies, 29 (2001), 61-88; Vanessa Casanova and Josh McDaniel, "'No Sobra y no Falta': Recruitment Networks and Guest Workers in Southeastern U.S. Forest Industries," Urban Anthropology, 34 (2005), 45-84; Josh McDaniel and Vanessa Casanova, "Forest Management Contractors and the H-2B Guestworker Program in the Southeastern United States: an Assessment of Contractors and their Crews," Journal of Forestry, 103 (April/May 2005), 114-119; Josh McDaniel and Vanessa Casanova, "Pines in Lines: Tree Planting, H2B Guest Workers, and Rural Poverty in Alabama," Southern Rural Sociology, 19 (2003), 73-96; Beverly Brown, "The Multi-Ethnic, Nontimber Forest Workforce in the Pacific Northwest: Reconceiving the Players in Forest Management," in Deborah Salazar and Donald Alper, eds., Sustaining the Forests of the Pacific Coast: Forging Truces in the War of the Woods (Vancouver 2000); Beverly Brown, Andrea Leal-Martino, Kirsten McIlveen, and Ananda Lee Tan, Contract Forest Laborers in Canada, the U.S., and Mexico. Land Tenure, Labor, Trade, and Community Forestry: the Context for Restoration Forest Work in the NAFTA

Brendan Sweeney, "The Evolution of Ontario's Tree Planting Industry," *Labour/Le Travail*, 63 (Spring 2009), 47–78.

tree planting as a peripheral component of the broader forest products industry.² Although these works address a number of important issues, theoretical and empirical gaps remain.

This paper helps address these lacunae by examining the evolution of northern Ontario's tree planting industry and labour force since the inception of reforestation programmes following World War II.³ It is organized around four time periods: pre-1962, 1962–1979, 1980–1994, and 1994–present. Each period is marked by major changes to the political economy of the forest products industry and legislation affecting land tenure, licensing, funding, and service delivery in Ontario's forests. In a conceptual sense, the paper situates work in Ontario's tree planting industry amongst other seasonally based natural resource occupations, such as logging and agricultural work. Comparisons are made throughout the paper in order to capture the historically specific context of each industry, but a brief analytical summary of tree planting amongst logging and agricultural work appears in the conclusion.

Throughout North America, tree planters face acute marginalization and stigmatization. This occurs for a number of reasons, and not surprisingly, has major implications on the structure and organization of the industry and its labour force. Tree planting is seasonal, offers little financial security, and in particular economic contexts, is culturally inappropriate for residents of

Region (Portland 2004); John Bodner, "Slash Romance: an Ethnography and Occupational Folklife Study of an Ontario Treeplanting Camp," MA Thesis, Memorial University, 1998; Cassandra Moseley and Yolanda Reyes, "Comparing Job Quality in Logging and Forestry Service in Oregon," Journal of Forestry, 105 (September 2007), 293–300; Brinda Sarathy, "The Latinization of Forest Management Work in Southern Oregon: A Case from the Rogue Valley," Journal of Forestry, 105 (October/November 2006), 359–365.

- 2. Ken Armson, Ontario's Forests: an Historical Perspective (Toronto 2001); Ken Armson, W. Ross Grinnell and Fred Robinson "History of Reforestation in Ontario," in Robert Wagner and Stephen Colombo, eds., Regenerating the Canadian Forest: Principles and Practice for Ontario (Toronto 2001), 3–22; Ben Cashore, George Hoberg, Michael Howlett, Jeremy Rainer, and Jeremy Wilson, In Search of Sustainability: Forest Policy in British Columbia in the 1990s (Vancouver 2001); Daniel McKenney, Kathy Campbell, G. Dave Puttock, and Greg Lawrence, "Evolving Economics of Ontario Forestry," in Robert Wagner and Stephen Colombo, eds., Regenerating the Canadian Forest: Principles and Practice for Ontario (Toronto 2001), 23–33; Peter Duinker, Anne Harris, Geoff Munro, and Mike Innes, "Policy on Forest Regeneration in Ontario: Recent Trends and Future Prospects," in Robert Wagner and Stephen Colombo, eds., Regenerating the Canadian Forest: Principles and Practice for Ontario (Toronto 2001), 43–59; W. Scott Prudham, Knock on Wood: Nature as a Commodity in Douglas-Fir Country (New York 2005).
- 3. This paper has its origins in my MA research in the Department of Geography at Queen's University. In addition to the review of secondary sources, parts of this paper are based on interviews with 51 tree planters, crew bosses, supervisors, and contractors in May and June 2004, June 2007, as well as email surveys of eleven Ontario tree planting contractors in December 2004 and April 2007. Interviews are cited anonymously and designated with an alphabetical letter and date. Survey results are cited similarly.

resource-dependent communities.⁴ Additionally, and in the case of northern Ontario, the inception of tree planting programmes occurred during an era of nearly full (male) employment, and work was carried out primarily by marginalized local persons or persons from outside the region. Other factors contributing to this stigma were a long-held reliance on natural regeneration and use of workers with little forestry expertise. Tree planting contractors also tend to be much smaller than the often multinational and vertically-integrated forest products firms for whom they carry out work. This, coupled with their seasonality, renders tree planting contractors and their labour force less visible and influential, and results in active forms of sectoral and workplace exclusion.⁵

While some authors examine the marginalization and stigmatization of tree planters using a primary/secondary approach to labour markets,6 I argue that this only begins to account for the myriad factors influencing labour market segmentation. Therefore, I draw upon Jamie Peck's causal emphases of segmentation theory to examine the role of labour demand, labour supply, and the state in shaping the labour markets of Ontario's tree planting industry. 7 Segmentation by demand occurs primarily through power relationships and technology. Examples include the effects of technological requirements, market stability, labour control strategies, and industrial structure. Segmentation by supply is a product of the mutually dependent relationship of capital and labour and the fact that labour markets are socially produced (and reproduced). Examples include the gendering of work, occupational socialization, the stigmatization of certain social or ethnic groups, the influence of unions in restricting supply, and household divisions of labour. The state is also an active agent in the segmentation of labour markets through the structure of governance and institutions. Examples of segmentation by state means include education and training regimes, industrial relations and employment legislation, and social welfare systems. Peck's approach is useful because it moves beyond dualistic and overly rigid approaches to segmentation and recognizes the constellation of economic, political, and socio-cultural factors shaping and segmenting labour markets.

^{4.} Thomas Dunk, *It's a Working Man's Town: Male Working Class Culture.* Second Edition. (Montreal and Kingston 2003), 62; Brown, "The Multi-Ethnic, Nontimber Forest Workforce in the Pacific Northwest." 149.

^{5.} Jaquelyn Collinson, "Just 'Non-Academics'"?: Research Administrators and Contested Occupational Identity," *Work, Employment, and Society,* 20 (June 2006), 267–286; Brendan Sweeney, "Producing Liminal Space: Gender, Age, and Class in Northern Ontario's Tree Planting Industry," *Gender, Place, and Culture,* forthcoming.

^{6.} Casanova and McDaniel, "No Sobra y no Falta," 47.

^{7.} Jamie Peck, Work-Place: the Social Regulation of Labour Markets (New York and London 1996), 46-82.

The lack of research on Ontario's tree planting industry presents problems and limitations when writing its history. Bodner notes that tree planting in Ontario is "an industry without a printed history" and those who have previously written popular pieces relied "more on a consensus of the historical trends in the industry than on any careful collection of oral histories or an investigation using the textual records available from companies, industry, and government."8 Although the provincial (and federal) government(s) maintain some records of the amount of land harvested, planted, tended, and scarified, no comprehensive socio-economic database for tree planting or other reforestation work exists. There are two significant barriers to the compilation of such a database. First, Statistics Canada includes tree planters in the "forestry services" group, which, due to confidentiality regulations, cannot be broken down into individual job descriptions. 9 Second, tree planters work on a seasonal basis, and the majority are post-secondary students who are classified as such in census data. Additionally, tree planters were drawn from other marginal labour pools on short-term and quasi-legal bases before the widespread use of post-secondary students. These groups are unlikely to have been represented in past employment statistics concerning tree planting. The lack of employment statistics therefore limits tangible data concerning the annual number of tree planters in Ontario. References to the approximate number of tree planters working in Ontario in any given year is thus inferred by merging anecdotal estimates and any available statistics concerning the number of trees planted that year.

The Early Years: 1900-1962

At the turn of the 20th century, tree planting was carried out primarily on arid or semi-arid farmland to prevent soil damage or act as windbreaks. Little information is available regarding the tree planting labour force of this era, but we can assume that the majority of work was performed by farmers and their kin. To meet the demand for seedlings and improve planting and tending methods, a number of nurseries and research stations were built in southern and eastern Ontario, including a field station in Norfolk County for use by the newly-formed faculty of forestry at the University of Toronto. However, most projects ground to a halt at the outset of World War I.

The forest products industry expanded rapidly in northern Ontario during the years previous to World War I. In an effort to encourage development, the provincial government approved "generous concessions to pulp and paper

- 8. John Bodner, "Slash Romance," 44-5.
- 9. McKenney, Campbell, Puttock, and Lawrence, "Evolving Economics of Ontario Forestry," 27.
- 10. The Faculty of Forestry was established at the University of Toronto in 1907, the first of its kind in Canada. Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 6.

companies, and placed few restrictions on logging practices."¹¹ One of the few stipulations was that timber would be processed in the province in order to strengthen regional economies. Additionally, "in their eagerness to promote development, policy-makers passed up an opportunity to insist on tight regulations for logging operations. Instead, for decades operators were granted a virtual free hand to proceed as they wish."¹² Unplanned natural regeneration was the primary means of reforestation of this era.¹³

The first efforts at artificial reforestation qua tree planting in northern Ontario were led by industry towards the end of World War I. The Abitibi Power and Paper Company built nurseries adjacent to their newsprint mill in Iroquois Falls and grew over four million seedlings. However, most died, and only 455,000 were planted. The only other evidence of reforestation efforts in northern Ontario during this era involved the Spanish River Pulp and Paper Company. Despite emerging practical and theoretical bodies of knowledge concerning reforestation, foresters continued to rely on the convenience of natural regeneration. This, alongside the effects of the Great Depression and the reorganization of the Department of Lands and Forests in 1941, stalled reforestation programmes once more until the end of World War II.

In the decade and a half following World War II, the nature of the forest products industry in Ontario, and Canada for that matter, changed dramatically. In order to meet growing North American domestic and American demand, Ontario's pulp and paper capacity grew by 49 per cent between 1950 and 1959.¹⁷ This prompted a new system of legislation that commodified Ontario's forests by guaranteeing large corporations access to timber in exchange for investment.¹⁸ Large-scale manufacturing projects and growth in timber harvests required significant changes to forest tenure, an increase in forest management, and the reorganization of work in the woods.

- 11. Ian Radforth, Logging, Mechanization, and Ontario's Forest Environment: an Historical Overview (Toronto 1992), 47.
- 12. Radforth, Logging, Mechanization, and Ontario's Forest Environment, 35.
- 13. Duinker, Harris, Munro, and Innes, "Policy on Forest Regeneration in Ontario," 45.
- 14. Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 7-8.
- 15. Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 8.
- 16. The Department of Lands and Forests was a branch of the Ontario Ministry of Natural Resources from 1920–1972. Previous to 1920 it had been known as the Department of Lands, Mines, and Forests (1906–1920); the Crown Lands Department (1827–1905); and the Office of the Surveyor General (1792–1827). In 1941 administrative responsibility for timber, reforestation, and silviculture were separated. See Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 9.
- 17. Ian Radforth, Bushworkers and Bosses: Logging in Northern Ontario (Toronto 1987), 19.
- 18. Richard Rajala, "The Forest Industry in Eastern Canada: an Overview," in C.R. Silversides, *Broadaxe to Flying Shear: the Mechanization of Forest Harvesting East of the Rockies* (Ottawa 1997), 123.

After a number of Royal Commissions throughout Canada, including the influential Kennedy Commission of 1947, the Canada Forestry Act was passed in 1949. This, along with amendments made in Ontario to the Crown Timber Act in 1952 and 1954 that (respectively) required licensees to submit forest management plans with applications for harvesting permits and made them responsible for regeneration, led to a shift from a policy of liquidation to policies of sustained-yield forestry. 19 The primary principles of sustained-yield forestry required "forests to be managed as to ensure supplies of wood in perpetuity, making sure the resource was not only preserved, but also renewable,"20 or essentially "cutting annually no more than the yearly growth of commercially valuable species so that the forest industry could have a timber supply in perpetuity."21 Concomitantly, the Canada Forestry Act led to an era of provincial-federal cost-sharing, where the federal government could enter into agreements with provinces for "everything and anything related to forestry."22 These agreements included reforestation, silvicultural research, infrastructural development, and forest inventory calculation. Funding often prioritized the latter,²³ and what was directed to reforestation went largely to nursery development in the boreal communities of Dryden, Chapleau, Gogama, White River, and Engelhart.²⁴ In 1952 three nurseries existed in northern Ontario, but by 1960 there were nine. However, many produced stock of a poor quality, and even when seedlings initially survived in the bush, they were often choked out by competing vegetation.²⁵

The lacklustre record of early post-war reforestation programmes cannot be attributed only to poor seedling quality. Adapting nursery and reforestation programmes developed in Carolinian and Laurentian forest regions to boreal conditions proved problematic, as did recruiting, retaining, and managing workers who planted trees. Labour supply was tight in the 1950s due to rapid urban and industrial growth, and high demand in the urban centres of the south and the mining and paper- and lumber-producing communities of the north led to critical labour shortages in the logging sector. ²⁶ These shortages, in conjunction with the expansion of processing capacity in the forest

- 19. Richard Rajala, Feds, Forests, and Fire: a Century of Canadian Forestry Innovation (Ottawa 2005), 73–74; Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 10.
- 20. Jamie Swift, Cut and Run: the Assault on Canada's Forests (Toronto 1983), 270.
- 21. R.S. Lambert, Renewing Nature's Wealth (Toronto 1967), 397.
- 22. Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 10.
- 23. Rajala, Feds, Forests, and Fire, 74.
- 24. Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 10.
- 25. Armson, Ontario's Forests, 155.
- 26. Ian Radforth, "Woodsworkers and the Mechanization of the Pulpwood Logging Force in Northern Ontario, 1950–1970," in David Bercuson and David Bright. eds., *Canadian Labour History* (Toronto 1994), 323.

products industry, gave way to new systems of logging which are reviewed to contextualize the evolution of Ontario's tree planting industry and labour force alongside the broader forest products industry.

Prior to World War II, Ontario's logging industry was organized on the premises of "agri-forestry."²⁷ Timber was harvested in the winter and logs were driven on rivers to lumber mills in the spring. Loggers were drawn from three pools: general labourers who would otherwise be unemployed during the winter months, agriculturalists from marginal farms in Ontario and the prairies, and professional forest products workers who split their time between the forest and the lumber mills.²⁸ Living conditions in logging camps were rudimentary and pay was low. Work was labour-intensive, and trees were felled and bucked by hand and yarded by horses and oxen.

As the demand for timber increased alongside the growth of steady, betterpaying, and less arduous work in urban industries, labour shortages in logging camps mounted. In order to maintain production to meet the growing needs of paper and lumber mills, the logging industry underwent an intense period of mechanization. The first shift came with the advent of the gas-powered chainsaw, which quickly replaced hand saws. In 1949 chainsaws accounted for less than one per cent of timber harvested in Ontario, but by the end of the 1950s over half of Ontario's forests were logged by chainsaw or other mechanical methods.²⁹ There were some instances of resistance, but the chainsaw was inexpensive and allowed fallers – many of whom worked for piece-rates – to increase their output. However, they did little to change the nature and organization of work, as falling constitutes only one aspect of the logging process.³⁰ According to Rajala, the replacement of horse teams by the mechanized skidder was more significant, as it integrated yarding and falling operations.³¹ This system required less labour. It also made logging a more attractive occupation by providing stability, better wages, and allowed loggers to work year-round. Resistance from unions was also sparse, as they found permanently employed loggers easier to organize.

In an effort to reduce labour costs and accelerate production, attempts at mechanized tree planting occurred in the 1950s and 1960s, often with machines designed for use on agricultural land in the United States and Scandinavia.³² However, these machines proved unsuitable for the rocky, swampy, and irregular terrain common to the Canadian boreal forest. Unlike logging, the actual act of planting trees has not changed dramatically since the 1950s. Round-

- 27. Rajala, "The Forest Industry in Eastern Canada," 123.
- 28. Radforth, Bushworkers and Bosses, 28.
- 29. Armson, Ontario's Forests, 156.
- 30. Rajala, "The Forest Industry in Eastern Canada," 144.
- 31. Rajala, "The Forest Industry in Eastern Canada," 144.
- 32. Rajala, Feds, Forests, and Fire, 76.



Four Tree Planters at Work SOURCE: EMILY VIETS

tipped shovels and dibble-sticks are used to plant seedlings, which are carried in modified saddlebags or harnesses with clips for plastic cassettes. Figures 1 and 2 provide photographs of tree planters working.

Recruiting and retaining tree planters proved difficult in the 1950s. Growing urban industries, the newly mechanized logging sector, and the need for seasonal agricultural workers in southern Ontario to meet the demand for affordable food drew upon labour pools that might have potentially provided tree planters.³³ Additionally, as Armson, Grinnell, and Robinson note:

Tree planting was new for the north. For the most part foresters and technical staff, whose main activities were in timber cruising, scaling, and administering the Crown Timber Act, saw tree planting as an additional burden. Crew bosses were mainly from timber and fire organizations and generally were not interested in reforestation. The people they hired to plant trees were often recruited from the beverage rooms of northern towns and were mainly interested in earning a few dollars and then getting back to town. These were often the same people used on forest fires. Uninterested supervision, high labour turnover, poor planting stock, improper field storage [of planting stock], and often inadequate living conditions in the field were the norm rather than the exception.³⁴

^{33.} Vic Satzewich, Racism and the Incorporation of Foreign Labour: Farm Labour Migration to Canada since 1945 (New York and London 1991).

^{34.} Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 10-11.



A Tree Planter Close-Up SOURCE: EMILY VIETS

Some forest products firms did have moderate success with reforestation in the 1950s, and used tree planting as make-work programmes for loggers and forestry staff during periods of seasonal unemployment.³⁵ One of the biggest challenges was to instil tree planting as part of the occupational culture of forest workers. While company bush workers were originally reluctant to take on tree planting, the work soon became a routine part of their job and the plantations a source of pride.³⁶

35. The Spruce Falls Power and Paper Company (majority-owned by Kimberly-Clark, Kapuskasing), Dryden Paper Company (Dryden), and the Great Lakes Paper Company (Lakehead region) took on what were then the most ambitious planting programmes. These programmes were carried out on a combination of private and Crown lands. For a full review see Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 11; Bodner, "Slash Romance," 56.

36. Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 11.

Despite these instances of success, most tree planting efforts in the 1950s were haphazard. Yet the inception of reforestation programmes in the 1950s, the increase in the manufacturing capacity of Ontario's forest products industry, the subsequent increase in timber harvests, and the mechanization of logging practices were critical in shaping the need for reforestation and the governance and organization of the tree planting industry and its labour force over the next two decades.³⁷

Reforestation in Public Hands: 1962–1979

In 1962 the *Crown Timber Act* was revised, and the Ontario Ministry of Natural Resources (OMNR) assumed responsibility for regeneration of forests on Crown lands, while forest products firms maintained responsibility for management and planning. Funding for regeneration came from stumpage revenues.³⁸ The rationale for this split was to allow logging to evolve along economic lines and reforestation along biological ones.³⁹ Results were almost immediate. In 1964, over forty million trees were planted on Crown land, a record at the time.⁴⁰

The split yielded two major developments. First, the OMNR made major improvements to nurseries and planting stock. Nurseries originally grew large and hardy bare-root seedlings, which had an extremely short planting season and were difficult to ship, store, and handle. Beginning in 1966, seedlings grown in plastic tubes or "paper pots" with higher survival rates and that were lighter and easier to transport and handle replaced bare-root seedlings. 41 Second, the OMNR invested in new methods of preparing logged areas for planting through scarification. Scarification clears away slash and organic debris, or "duff," left by loggers after harvest and exposes mineral soil, making it easier for workers to plant seedlings. Early methods were rudimentary and often involved little more than dragging boulders or barrels behind a tractor or skidder. Two methods of scarification introduced in the 1960s are still widely used: the twin-trencher system, which digs pairs of shallow trenches six feet apart (the standard distance left between planted seedlings), and the brackë cultivator, which digs pairs of "scoops" or "mounds" in which seedlings are planted. Forest products firms readily invested in these machines, which could be easily modified for use in harvesting processes.⁴² Through scarification, the work systems and practices of tree planters became partially shaped

- 37. Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 13.
- 38. Fees paid by forest products firms in return for the exclusive license to harvest Ontario's Crown forests.
- 39. Ken Armson, Forest Management in Ontario (Toronto 1976), 2.
- 40. "Ontario: Closer to Industry," Canadian Forest Industries, 85 (January 1965), 31.
- 41. Armson, Ontario's Forests, 162.
- 42. Armson, Ontario's Forests, 163.

by machines. While scarification increased productivity and made tree planters' work easier, it also made supervision and evaluation more objective and wrested away some of the planters' control over their work practices.

Advances in scarification and nursery stock had immediate impacts on the labour force. As Armson, Grinnell, and Robinson note:

The earlier problems with transient labour for tree planting began to be remedied during the 1960s. Greater reliance was placed on local residents, often women, when from 1966 on, container planting became a large part of the program, and on high school and university students. Because containers could be planted virtually throughout the summer, rather than in a hectic spring rush characteristic of the bareroot planting, a more stable and dependable workforce developed. In certain areas native bands took a regular part in the tree planting. $^{\rm 43}$

By the end of the 1960s, OMNR policy explicitly sought to recruit local women, post-secondary students, and First Nations peoples in order to expand tree planting programmes. A 1972 policy statement notes that in addition to reducing adverse environmental effects, the economic benefits of an increase in tree planting were "job opportunities in rural Ontario for unskilled and semi-skilled labourers, the native population and students."

However, the same labour pools the OMNR sought to provide employment opportunities for were susceptible to exploitation. During the 1960s and 1970s, the OMNR allocated stumpage fees to general revenues rather than directing them to specific forest management or reforestation programmes. Revenue could, therefore, be used for projects with more immediate economic impacts, such as road-building, allowing firms to access virgin timber. This hindered the development of the tree planting industry, as "policy-makers and corporate leaders would exhibit more enthusiasm for exploiting the new frontier than for industry in those lands that had been stripped of commercial timber. The OMNR regularly stretched public coffers by using marginal or state-controlled workers. The use of prison labour was common during periods of labour scarcity, as was the use of women, teenagers and First Nations, who were paid a fraction of what tree planters employed directly by the OMNR received.

The use of non-standard workers marginalized and stigmatized tree planters. This was exacerbated in the 1960s due to high levels of year-round and relatively high-paying unionized employment in the lumber and paper mills, mines, railways, and logging operations of northern Ontario communities. Seasonal work was often shunned by the residents of resource-dependent

- 43. Armson, Grinell, and Robinson, "History of Reforestation in Ontario," 14.
- 44. Ontario, Ontario Ministry of Natural Resources, Forest Production Policy Options for Ontario (Toronto 1972), 4.
- 45. Bodner, "Slash Romance," 38.
- 46. Rajala, Feds, Forests, and Fire, 73.
- 47. Bodner, "Slash Romance," 38.

regions, for whom "the culturally appropriate and realistic course is often to grab onto an available job and begin to acquire some seniority and whatever benefits come along with it."⁴⁸

Post-secondary student tree planters were common in the 1960s, and became the dominant labour pool in the late 1970s, when private contractors emerged. The use of students created two more axes of difference between tree planters and permanent residents of northern Ontario. First, post-secondary students were most often from affluent middle-class backgrounds, as opposed to the working-class backgrounds of residents in regions dependent on resource-based industries. 49 Second, and possibly more importantly, student tree planters hailed from southern Ontario, and are perceived as "other" by northern Ontarians and not readily accepted as equals.⁵⁰ Additionally, the tensions between the formal levels of education held by student tree planters and the sentiments of anti-intellectualism that abound in the occupational communities of permanent forestry workers exacerbated stigmatization and marginalization. 51 However, student tree planters are marginalized in a manner far different than the local women, First Nations, and prisoners previously used in Ontario, or the migrant Latinos used throughout the United States.⁵² Students thus occupy a liminal position whereby they exist simultaneously as affluent and privileged middle-class youth and marginalized members of an industry and region in which they are only temporary and peripheral participants.⁵³ The following section describes the rationale for the inception of the Forest Management Agreement (FMA) system and the emergence of private tree planting contractors.

Forest Management Agreements, Private Contractors, and Student Workers: 1980–1994

By the 1970s, flaws appeared in Ontario's system of forest management. It seemed increasingly illogical that forest products firms would prescribe management plans only to have reforestation carried out by the OMNR. In 1976, a

- 48. Dunk, It's a Working Man's Town, 62.
- 49. In many communities with a high dependence on extractive and/or resource-based communities, the proportion of service jobs is actually higher than the proportion of extraction or processing jobs. However, the perception of these communities as "timber" or "mining" towns persists. For further discussion see Dunk, *It's a Working Man's Town*, 45–62.
- 50. Dunk, It's a Working Man's Town, 62.
- 51. Dunk, *It's a Working Man's Town*, 63; Berit Brandth and Marit Haugen, "Text, Body, and Tools: Changing Mediations of Rural Masculinity," *Men and Masculinities*, 8 (October 2005), 148–163.
- 52. Sarathy, "The Latinization of Forest Management Work in Southern Oregon," 360.
- 53. Brendan Sweeney, "Producing Liminal Space: Gender, Age, and Class in Northern Ontario's Tree Planting Industry", *Gender, Place, and Culture* (forthcoming).

report commissioned by the provincial Minister of Natural Resources ultimately led to a new system of forest tenure. ⁵⁴ Its author, Ken Armson (Ontario's Chief Forester from 1979–1986), argued that if industry assumed responsibility for the entire process of harvest and regeneration, Ontario's forests would be more ecologically and economically sound. However, the same firms were unsuccessful in carrying out reforestation during the 1950s; it was for this reason that responsibility was placed in the OMNR's hands in 1962. The system Armson proposed proved novel, as forest products firms assumed responsibility and control of forest management and reforestation, but at government expense. ⁵⁵

Amendments to the *Crown Timber Act* in 1979 created the FMA system. FMAS were geared towards the large firms that undertook the majority of logging in Ontario. FMAS are twenty year agreements subject to review every five years. A successful review garners a five year extension; for this reason FMAS are referred to as "evergreen" arrangements.⁵⁶ Firms holding FMAS are reimbursed by the OMNR's stumpage revenues for any silvicultural expenses.⁵⁷ Five FMAS were signed in 1980, and by 1986 twelve firms had entered into 26 agreements accounting for 58 per cent of licensed forest land in Ontario.⁵⁸

Amidst high unemployment and growing public environmental concerns in the early 1980s, forest management became a key policy issue. Duinker, Harris, Munro, and Innes note that:

The 1980s saw forest regeneration become a central feature of all embodiments of forest policy. Ontario had transferred the responsibility of planning and undertaking regeneration to the private sector through the Forest Management Agreements, but the government would bear the bulk of the financial burden. In an attempt the ease the alleged reforestation backlog, the federal government poured funds into forest renewal on Crown land through the Canada-Ontario Forest Resource Development Agreement [COFRDA]. ... people inside the forest sector, as well as politicians, were loudly declaring tree planting to be the answer to all problems of forest regeneration. ⁵⁹

The 1980s were, undoubtedly, the "boom" years of tree planting in Ontario. Annual levels of public funding for reforestation nearly doubled between the late 1970s and late 1980s.⁶⁰ However, capacity problems came to the fore and

- 54. Armson, Forest Management in Ontario.
- 55. Duinker, Harris, Munro, and Innes, "Policy on Forest Regeneration in Ontario," 47.
- 56. Armson, Ontario's Forests, 167.
- 57. Silvicultural expenses, such as tree planting, thinning, and herbicide application, historically, cost slightly less than the amount of revenues received from stumpage. When stumpage fees are calculated, they are done in a fashion that reflects current silvicultural costs.
- 58. Peter Morley, "Ontario's FMAs: A Positive Step," *Silviculture: Journal of the New Forest*, 1 (1986), 12–13.
- 59. Duinker, Harris, Munro, and Innes, "Policy on Forest Regeneration in Ontario," 43-44.
- 60. K.L. Campbell, Selected Forestry Statistics (OMNR Great Lakes Forestry Centre 1990), 95.

OMNR nurseries could not meet the growing demand for seedlings. They were forced to expand their network of growers, mainly through private contracts. ⁶¹ In 1983, less than ten per cent of seedlings were grown privately, but by the end of the decade this figure had grown to almost fifty per cent. ⁶² Additionally, the overall proportion of trees planted by the OMNR declined as FMA-holders and government officials supported and encouraged the use of private contractors.

Firms entering FMAs chose not only how licensed land was managed, but who undertook necessary work. The practice of contracting out tree planting began in the 1970s, when the OMNR tendered contracts in areas that were remote, had limited accessibility, or were less desirable to administer. ⁶³ By the mid-1980s the majority of planting on FMAs was done by private contractors. The OMNR viewed the use of contractors as advantageous because it limited government growth and led to greater efficiency and cost-savings. Licence-holders were supportive of contractors because they found them to be more cost-efficient than internal or OMNR crews. ⁶⁴ The OMNR remained active in lands harvested by licensees who did not hold an FMA, and in "backlog" lands deemed "not sufficiently restocked" by the COFRDA. ⁶⁵ The OMNR's direct involvement in tree planting continued declining throughout the late 1980s and early 1990s. However, it retained its role in administration and policy-making.

Tree planting contractors relied increasingly on post-secondary students during this period. A tree planting supervisor in Bodner's study noted that by "1987 we were recruiting solely from the universities" and that students:

were really excited to be [tree planting], really interested in being [tree planters]. They could deal with the hardship far more than the people who claimed to have all the experience ... we were getting people that were really happy to be out here and doing this kind of job instead of being at the Baskin-Robbins or McDonalds or whatever, who felt there was a certain degree of challenge to it. And it got them out of the city. There are lots of reasons. ⁶⁶

Over a decade after Bodner's study, a supervisor interviewed in my study spoke similarly of students:

It's an overall better contract to run oftentimes with short-term, younger student workers, for the simple reason that they're willing to do what it takes to do the job. They're more

- 61. Armson, Ontario's Forests, 167.
- 62. Armson, Ontario's Forests, 168.
- 63. Armson, Ontario's Forests, 168.
- 64. Gord Oldford, "Silvicultural Contracting: Ontario's Shift to the Private Sector," *Canadian Forest Industries*, 107 (August 1987), 454–6.
- 65. The COFRDA existed from 1984 to 1990, and was responsible for the production of 166 million seedlings and the regeneration of 110,000 hectares of not sufficiently restocked lands. See Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 19.
- 66. Bodner, "Slash Romance," 76-77.

helpful, they come in with an attitude that is pretty open, accepting, and they have a lot of fun because they're only here for a short time. ... they're willing to take part in camp, they're willing to help out with what needs to be helped with. They're not jaded, they're not tired, and they're not cynical. 67

Conversely, the fact that student workers are "willing to do what it takes to do the job" leaves them open to exploitation. This was certainly the case during the formative years of contract tree planting, and lent strength to proponents of locally based omnr tree planters. However, as the industry evolved, the least reputable contractors were forced out and replaced by larger and better managed ones. This is discussed at length below.

A number of conditions created the reliance on student tree planters. First and foremost, work occurs almost exclusively between May and August and coincides with the summer break of post-secondary students. Because students are only able to work full-time during this break, many seek to maximize their earnings. This results in what industry guru Dirk Brinkman refers to as the "crash approach," whereby tree planters work ten to twelve hours a day, six days a week.⁶⁸ While efficient, this approach is mentally and physically taxing. Roberts explains the physical strain placed on tree planters, and notes that they can expend more energy than an Olympic athlete in training.⁶⁹ Although many labour pools have withstood the rigours of tree planting work in Ontario over the years, contractors found student workers – most of whom are between the ages of 18 and 25 - the most adequately suited. Second, contractors use students as crew bosses. Hiring is generally their responsibility, and they tend to recruit from within social and academic networks. In this system, nepotism is both rampant and encouraged, and helps replicate occupational cultures in different regions of northern Ontario, and within contractors, camps, and individual crews.70 It also renders initiates accountable to the established members of their occupational communities who recommended them. Third, and as mentioned, locals shun seasonal occupations, and strive for permanent work in their home locales. This was evident in a 1994 OMNR report, where one contractor noted that "with only six weeks work available many local people are not interested in working in the tree planting field, which is understandable, it is not a career move" and "it's primarily university students from southern Ontario ... that do the bulk of the work."71 Fourth, in the 1980s,

^{67.} Interview A, May 2004.

^{68.} Brinkman is the founder of one of Canada's largest tree planting companies, Brinkman Reforestation. He is quoted in Douglas Cowell, "Trees for Tomorrow," *Silviculture: Journal of the New Forest*, 2 (1988), 14.

^{69.} Delia Roberts, "In-season Physiological and Biochemical Status of Reforestation Workers," *Journal of Occupational Environmental Medicine*, 44 (June 2002), 559–67.

^{70.} For a full review, see Sweeney and Holmes, "Work and Life in the Clearcut."

^{71.} Ontario, Ontario Ministry of Natural Resources, Environmental Assessment Act (Toronto 1994), 223.

tree planting contractors based work increasingly out of remote camps rather than commuting from towns. This further disenfranchised local workers. One contractor noted that "most of his employees are university students and he cannot hire local residents because they will not live in bush camps." Lastly, students are drawn to tree planting by what I argue are "alternative rationales" for work. The ability to work extended hours at relatively high wages during summer breaks attracts students, many of whom also view tree planting as a rite of passage and an opportunity to work with a tightly-knit community in an iconic Canadian industry.

Issues of union rights of succession arose alongside the transfer of work from the OMNR to private contractors. Most OMNR tree planters were governed by collective agreements negotiated by the Ontario Public Service Employee's Union (OPSEU). Under the *Successor Rights (Crown Transfers) Act*, previous collective agreements applied to any work transferred from the government (in this case, the OMNR) to private firms. These agreements guaranteed fair wages for tree planters, but were regarded as detrimental to the industry by contractors, foresters, and administrators. The main concerns involved payment systems. Collective agreements stipulated hourly wages rather than the piece-wages paid by contractors in an attempt to increase production. A Canadian Pulp and Paper Association study confirmed this and found that tree planters paid piece-wages were almost twice as productive as those paid on an hourly basis. The main concerns involved as those paid on an hourly basis.

Unions are generally skeptical of any payment system that supplants hourly wages. There is a fear that productivity-based payment systems result in lower pay, a more intense work schedule, and promote competition among workers. Tree planting contractors face a variety of risks and uncertainties that can undermine profitability, especially considering that production is subject to weather and other natural factors. The ability to use piece-wages to align labour costs with output is one of, if not the, principal mechanisms through which tree planting contractors can be profitable in a competitive system. The culture that permeates contracted work also promotes competition among workers, as it is perceived to increase average production. This is critical, as many tree planters seek to maximize earnings in a short work season, and because forest products firms invest significantly in seedlings that must be planted within a certain timeframe.

- 72. Ontario, Ontario Ministry of Natural Resources, Environmental Assessment Act, 223.
- 73. Sweeney, "Producing Liminal Space," forthcoming.
- 74. David Curtis, "A Legal View: Successor Rights and Subcontracting of Forest Work," Silviculture: Journal of the New Forest, 4 (1989), 30.
- 75. William Smith, "Contract Planting: A Divisional Perspective," Canadian Pulp and Paper Association, Woodlands Section, 68th Annual Meeting Preprint Book, (1987), E1–4.
- 76. Richard Chaykowski and Brian Lewis, Compensation Practices and Outcomes in Canada and the United States (Kingston 1995), 19.

The nearly universal shift to piece-wages marked one of the most significant changes to the nature of work in Ontario's tree planting industry. Where mechanization was the norm in the logging industry by the 1970s, renewed efforts at mechanized tree planting in the early 1980s proved fruitless; some firms experimented with planting machines, but they continued to be inefficient.⁷⁷ The shift to private contractors also stymied these efforts, as contractors were unlikely to invest in expensive and task-specific machinery that could only be used for two or three months each year. In this sense, forest products firms and contractors were unable to wrest control over the labour process from tree planters through mechanization, but were successful in altering the wage in a manner consistent with their need for increased production at predictable costs. Yet, as Mann notes, both capital and labour must consent to the form of the wage.⁷⁸ As mentioned, student tree planters seek to maximize earnings within a specific timeframe and are found to be able to endure the physical and mental challenge of compressed work schedules. They are thus generally consenting agents to incentive-based systems of remuneration.

We now return to the matter of unions and succession. Succession legislation is not without its merits; decrying it is not my intent here. In the case of tree planting, however, it led to unintended consequences not received well by contractors and foresters, who had seemingly found a desirable solution to the problems of labour recruitment and productivity that previously plagued the industry. Curtis summarizes concerns regarding successor legislation well, describing "a delicate balancing act between employee protection in successor rights laws and the urgent need to achieve the greatest amount of forest management for the least amount of money." OPSEU eventually ceased efforts to curtail the loss of hourly-paid tree planting work. This was partly due to the OMNR's decreasing participation in tree planting, and by the end of the decade OPSEU was almost entirely absent from the industry. 80

The decline of OPSEU involvement in tree planting was also related to the preference of students to work for piece-wages. This is similar to other forestry workers, particularly fallers.⁸¹ Radforth and Goodwin, respectively, describe the work of fallers paid on piece-wage bases:

^{77.} Stephen Fontaine, "Labour Costs Encourage the use of Mechanized Tree Planters," *Canadian Forest Industries*, 100 (April 1980), 34–36; Peter Morley, "Mechanizing Silviculture at Sault Ste. Marie," *Canadian Forest Industries*, 102 (May 1982), 35–36.

^{78.} Geoff Mann, Our Daily Bread: Wages, Workers, and the Political Economy of the American West (Chapel Hill 2007), 45.

^{79.} Curtis, "A Legal View," 30.

^{80.} Curtis, "A Legal View," 30.

^{81.} See Radforth, *Bushworkers and Bosses*, 77; Matthew Carroll, *Community and the Northwestern Logger: Continuities and Change in the Era of the Spotted Owl* (Boulder 1995), 70–72; Andrew Neufeld and Andrew Parnaby, *The IWA in Canada: The Life and Times of an Industrial Union* (Vancouver 2000), 190–193.

The results-oriented piece worker was likely to work hard for himself – and hence for his boss. And since he was paid according to his own, individual records, an important basis for solidarity and collective action was lacking. 82

[The faller's work is] one of the last bastions of true capitalism to be found today. ... He is paid for the amount of logs he produces, and the more skilful he becomes and the harder he works, the more money he makes; the reverse also being true. 83

In this system, fallers are differentiated from other loggers, paid more, work shorter hours and, in a broader sense, their interests are more closely aligned with those of their employer or client. Their skills and ability to produce are also highly valued by their occupational communities. Additionally, and similar to tree planters, they are consenting agents to the piece-wage system. Yet, as mentioned above by Radforth, this undermines solidarity, and has historically created rifts between unionized fallers and their parent labour organizations.⁸⁴

As the influence of public sector unions waned, other labour organizations became involved in tree planting. Union involvement came primarily when collective agreements covering mill and logging workers extended clauses to tree planters. In the early days of the private contract system, the Canadian Paperworkers Union (CPU⁸⁵) and the Lumber and Sawmill Worker's Union (later the Industrial Wood and Allied Workers of Canada, hereafter IWA⁸⁶) were readily involved with tree planters who worked on lands harvested by their members. However, union policies — many of which were developed during periods of high unemployment in the early 1980s — were geared more towards the use of local labour than students. For example, the CPU sought to "put as many local people to work in the forest and at the same time ... develop as much local forestry expertise as possible" with "first priority [for reforestation] given to those sites close to processing plants." The IWA proposed that

- 82. Radforth, Bushworkers and Bosses, 77.
- 83. Goodwin is quoted in Neufeld and Parnaby, The IWA in Canada, 193.
- 84. The reluctance of fallers to accept day rates, despite the willingness of other loggers and sawmill workers to return to work, resulted in a prolonged strike in British Columbia in 1972. In Ontario and the Pacific Northwest, similar union regulations concerning piece-wages led to rifts between fallers and sawmill workers, and as a consequence, resulted in some fallers becoming private contractors. See Neufeld and Parnaby, *The* IWA *in Canada*, 192–93; Carroll, *Community and the Northwestern Logger*, 71.
- 85. Now part of the Communications, Energy, and Paperworkers Union of Canada.
- 86. The IWA existed as the Industrial Woodworkers of America until 1987 when the Canadian locals ceased their affiliation with the US-based parent union. The Lumber and Sawmill Worker's Union was a branch of the US-based United Brotherhood of Carpenters and Joiners, and was the primary organization representing loggers and sawmill workers in Ontario until they merged with the IWA in 1987. For a full review see Neufeld and Parnaby, *The* IWA *in Canada*, 255.
- 87. Canadian Paperworkers Union, Forest Policy (Toronto 1986), 5.

"the huge backlog of inadequately stocked forest land be made the responsibility of the provincial forest services." (However, the IWA'S influence in northern Ontario'S forests was not realized until two years after this was published, and this policy was likely geared more towards tree planting in the western provinces.)88

The attempt to place tree planting into the hands of local workers occurred partly in reaction to the culture of student workers, which conflicted with union culture, and did not provide a strong voice in local economic or social matters. Students contributed relatively little to the development of northern communities, and as one tree planting supervisor notes, "the needs of most union members are very different than the needs of tree planters. I don't find that most of the union agreements are applicable to tree planting."89 Another believed students tree planters "don't care about most of the [union] benefits, they don't qualify because they work for too short a period of time, and they don't need [union benefits]. All they want is to be able to plant as many trees as they can."90 While the influence of public sector unions in the tree planting industry diminished in the early 1990s, tree planters in regions where other unions maintained influence were entitled to increased piece-wages, safer working conditions, and reduced camp costs.⁹¹ Collective agreements in IWA Locals 2693 and 1-2995 stipulated any contractor as a signatory to the collective agreement, and set standards for camp conditions and piece rates - which were as high as twelve cents per tree for experienced workers, a rate otherwise unheard of in Ontario – as well as bonuses for quality. Many contractors supported these agreements as they increased the return rate of tree planters and the predictability of production schedules.⁹² While most tree planters willingly accepted these terms, the IWA had difficulty maintaining influence during periods of job loss and industrial restructuring. From the

- 88. International Woodworkers of America, IWA Guide to Forest Policy (Vancouver 1985), 105.
- 89. Interview B, June 2007.
- 90. Interview A, May 2004.
- 91. Camp costs are fees charged to tree planters by contractors for the costs of food and supplies in bush camps. Today, camps costs generally range between \$20 and \$25 a day. Camp costs on unionized contracts were far less, and were generally the same as the room and board charged to company bush workers. For example, tree planters working on land governed by IWA Local 2693's collective agreement (near Thunder Bay) were charged only \$1.75 for camp costs. Tree planters working in the Spanish Forest FMA for E.B. Eddy (and later Domtar) were governed by the collective agreement negotiated by IWA Local 1-2995 paid only \$10 a day, as it was stipulated that the employer would cover 70 per cent of their room and board. See Industrial Wood and Allied Workers of Canada, "Union has set the pace for MB Tree Planters for more than 20 Years," *Lumber Worker*, 58 (March 1993), 10; Industrial Wood and Allied Workers of Canada, "Northern Ontario Local Finds Solutions to Camp Shutdowns," *Lumber Worker*, 65 (December 2000), 38.
- 92. Industrial Wood and Allied Workers of Canada, "Union has set the pace for MB Tree Planters for more than 20 Years," 10.

recession of the early 1990s to the present, Ontario's unionized loggers have come under heavy pressure, and most company-operated bush camps have closed.⁹³ In most instances where the IWA, which has since merged with the United Steelworkers, maintains a presence, clauses extended to tree planters have been removed from collective agreements.⁹⁴

Other attempts to unionize tree planters have been rare, largely because the seasonal and remote nature of production creates difficulties for organizers. A former executive of a Canadian union representing forest products workers commented on his attempts to organize tree planters:

We put \$25,000 towards organizing tree planters, but it became pretty obvious that was going to be next to impossible to do ... There were too many seasonal and part-time workers, too many contractors in the business. It was just going to be an organizing nightmare. I know that [another union] was making overtures to [tree planters] as well, but even they saw the difficulties that were going to be created in organizing them. It was going to take much, much more than \$25,000, and I don't even know if we would have been successful in getting more than one or two certifications. I don't think [tree planters] had a clear idea of how to organize. There were too many worksites, you couldn't get to them all at once. ⁹⁵

The competitive bid system of tendering contracts and the low barriers to entry and exit also hinder organizing efforts. One contractor noted that:

It doesn't take a lot to start a company. It takes a lot to have a successful one, but in terms of barriers to entry, there's not a whole hell of a lot. I don't think unions would work because there's no regulations, nothing that binds a forestry company to have long-term contracts. ... if you get involved with organizations like that ... I think it would be detrimental to your business. I'm always hesitant to get involved with unions, because at the end of the day the forest companies can bust 'em due to the nature of the agreement you have. 96

One contractor did note, however, that while the unionization of tree planters "would turn the industry upside down," it could potentially take wages out of competition and allow well-organized contractors with comprehensive safety plans and amicable labour and client relations to thrive. Despite this, the transient nature of the labour force, dispersed and ephemeral worksites, lack of organizing experience, low barriers to entry, and competition for work hinder the unionization of tree planters.

The number of tree planting contractors peaked in the 1980s and led to the formation of the Ontario Silvicultural Contractors' Association (OSCA). The OSCA was a sister association of the larger Western Silvicultural Contractors' Association (WSCA). In the latter half of the 1980s, most tree planting was

- 93. Industrial Wood and Allied Workers of Canada, "Northern Ontario Local Finds Solutions to Camp Shutdowns," 38.
- 94. United Steelworkers of America, "Woods Crews still out in Northern Ontario," *Allied Worker*, 71 (June 2006), 12.
- 95. Interview C, June 2007.
- 96. Interview B, June 2007.
- 97. Interview D, June 2007.

carried out by OSCA members.98 The OSCA was mandated to "promote the interest of members to government and industry, to foster public awareness in silviculture, and to press for the implementation of satisfactory forest management programmes in Ontario."99 The formation of the OSCA demonstrated growth and maturation in the industry, as did the eventual turnover and reduction of low-volume and inexperienced contractors in the early 1990s, many of whom were victims of cost underestimation. 100 A reduced reliance on competitive bidding for contracts - the manner in which most work was tendered at the time - was also a factor. The satisfactory completion of contracts increasingly resulted in direct awards, whereby licensees tendered work directly to contractors rather than through public bid. These contracts were often multi-year, and associated with large and reputable contractors. The stability offered by such contractors attracted more experienced tree planters, further advancing their reputation. Direct award contracts also reduced transaction costs and fostered reciprocal client-contractor relations. These relationships are beneficial, as "repeat contracting provides a means of capturing expert knowledge among reliable contractors with knowledge of the parent firms' lands and mills."101 However, just as the industry was clamouring towards maturity, recessionary times begat another round of legislative and industrial restructuring. The following section examines the effects of the 1994 Crown Forest Sustainability Act (CFSA) and the 1996 Canada-US Softwood Lumber Agreement (SLA) on the tree planting industry and its labour force. It also examines the potential for the use of guest workers through the 2002 Foreign Workers Program (FWP).

The CFSA, SLA, FWP, and New Challenges for the Tree Planting Industry: 1994–Present

The recession of the early 1990s dealt a severe blow to Ontario's tree planting industry. The COFRDA was terminated in 1990, essentially suspending replanting on backlog land. It was replaced by the Northern Ontario Development Agreement in 1991, which provided funding for reforestation, but emphasized "natural regeneration and the pursuit of social and economic uses of the forest other than timber production." The reduction in public funding also resulted

^{98.} Grant Brodeur, Public Address in: *Hansard Province of Ontario Legislature*, 31 August 1994, http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details. do?locale=en&Date=1994-08-31&ParlCommID=505&BillID=&Business=Bill+171%2C+Crown +Forest+Sustainability+Act%2C+1994#P292_78817> (4 September 2008).

^{99. &}quot;Silviculture News," Silviculture: Journal of the New Forest, 1 (1986), 6.

^{100.} Marylin Mustard, "The Evolution of the Tree Planting Programme in Ontario," MSc Thesis, Lakehead University, 1990, 77.

^{101.} Prudham, Knock on Wood, 45.

TABLE 1: Trees Planted in Ontario: 1975-2005

Year	Trees Planted (000s)	Year	Trees Planted (000s)
1975	50,775	1991	150,470
	•		,
1976	45,516	1992	126,522
1977	47,724	1993	120,028
1978	58,415	1994	100,449
1979	69,398	1995	102,707
1980	75,857	1996	91,274
1981	83,399	1997	111,992
1982	80,125	1998	134,209
1983	104,965	1999	140,804
1984	126,317	2000	145,354
1985	146,772	2001	149,625
1986	154,655	2002	134,400
1987	163,354	2003	123,634
1988	171,613	2004	127,553
1989	161,225	2005	126,526
1990	151,957	2006	125,947

Source: Canadian Council of Forest Ministries "Table 6.1"

in the closure of four OMNR nurseries in 1992, and three more in 1996. ¹⁰² The OMNR continued phasing out its influence in tree planting, and by 1997 ceased planting trees altogether. ¹⁰³ Additionally, the number of trees planted each year dropped from over 171 million in 1988 to 100 million in 1994 (Table 1). ¹⁰⁴ This resulted in a decrease in the number of tree planters. Between 4000 and 5000 tree planters were estimated to have worked in Ontario during the late 1980s – 80 per cent of whom were students. ¹⁰⁵ This number was halved by 1994. A number of contractors ceased operations, crippling the budget of the osca and leading to its eventual demise.

Legislative changes to Ontario's forest management regime were again required. In 1994 the *Crown Timber Act* was replaced by the CFSA. Under the CFSA, FMAS became Sustainable Forest Licenses, which were applied to all of Ontario's Crown forest licenses. The OMNR also created the Forest Renewal Trust Fund for harvested land and the Forestry Futures Trust for

^{102.} Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 19.

^{103.} Armson, Ontario's Forests, 180.

^{104.} Canadian Council of Forest Ministers, "Table 6.1: Silvicultural Statistics by Province/ Territory, 1975–2006," http://nfdp.ccfm.org/compendium/data/2008_06/tables/com61e.htm (9 August 2008).

^{105.} Brodeur, "Public Address."

lands destroyed by fires or other natural disturbances. ¹⁰⁶ These were funded by stumpage fees, but rather than the previous practice of allocating funds to general coffers, they were reserved exclusively for reforestation. The new legislation also linked licensees' allowable annual harvests to the amount of land reforested in the previous year, providing further incentive for responsible forest management. The CFSA, along with the stable demand schedule created by the SLA, led to a partial recovery of the tree planting industry.

Since the late 1990s Canada's forest products industry has witnessed a large number of mergers and acquisitions, and multinational firms supplanted many locally based ones. These firms required larger multi-divisional tree planting contractors in order to meet their extensive needs. During this era, the largest contractors grew, while the networks of smaller contractors who carried out work for locally based firms shrank. The reach of a small number of contractors became province-wide, and many continued to grow through the acquisition of work abandoned by defunct contractors. The use of multi-year contracts also reduced the amount of work available for bid on a yearly basis. Smaller family-owned or "upstart" entrepreneurial contractors, who played a key role in the 1980s, were few and far between by the late 1990s.

The most visible change to the labour force in this era was the increasing proportion of females. This is especially significant considering that most forestry work — especially jobs that require workers to live in bush camps — is male-dominated. The proportion of female tree planters increased alongside the increase in student tree planters, and the presence of females soon became unique amongst most other forestry work. As one female tree planter noted, "when I first started [in the late 1990s] we'd have five girls in camp in total. Now it's almost 50-50."¹⁰⁷ Many contractors, supervisors, and crew bosses currently make explicit attempts to hire equal numbers of males and females. Tree planters of both genders are receptive of these strategies, especially considering that tree planters live in close proximity while working, which blurs the lines between work and social life. As a male crew boss noted:

You wouldn't want all guys [in a camp], it wouldn't make for a good working environment ... if the girls are few and far between there will be tension in the camp ... I think that the more balanced ratio, male to female, the better the camp. 108

It also became more common to see females in front-line managerial positions, such as crew bosses. One female crew boss who began planting in the mid-1990s noted that in "[2004] our management team is comprised of three girls and three guys and a male supervisor ... I never saw a girl in management for my first couple of years."¹⁰⁹ A male supervisor who began working in the

- 106. Armson, Grinnell, and Robinson, "History of Reforestation in Ontario," 20.
- 107. Interview E, May 2004.
- 108. Interview F, June 2004.
- 109. Interview G, June 2004.

early 1990s noted that in this sense, contract tree planting is "shifting away from its original macho image and allowing more opportunities for anyone to shine."¹¹⁰ Many female tree planters are more willing to work with female crew bosses than with male crew bosses. One noted that "from a female point of view it's good to have a female crew boss, especially when you know she was a good planter."¹¹¹ Another believed it is "good to be on the same page as [a crew boss] and not have to think about the sexual differences."¹¹² In short, as equal gender ratios in tree planting camps become more common, so do equal ratios in managerial positions. For female tree planters, female crew bosses provide mentorship, reduce gender- or sexually based tension, and are often perceived to be less intimidating than male crew bosses.

Although the incidence of female crew bosses has increased in the past decade, the incidence of female supervisors has not. ¹¹³ Interview subjects were admittedly vague and unsure of the underlying reasons for this. One supervisor noted:

A general tendency to promote males over females. I think it depends on the situation. I know that lots of these cases, due to an "old boys" network in the company, there was a certain amount of gender discrimination and assumptions that women couldn't handle the work. To become a supervisor you certainly need the drive to become one, you have to want to do it. I don't know if many female crew bosses were ever pushing to become supervisors. That said, maybe they weren't because they thought they wouldn't get it because they were girls. 114

Institutionalized factors may be the most significant hindrance to the promotion of females. Supervisors work closely with client representatives, and although gender equality is relatively advanced in the tree planting industry, forest products remains a predominantly male enterprise. Contractors may be unwilling to use females as their primary client liaison because, similar to logging contractors in a study by Reed, they fear that doing so may result in a loss of "male advantage." The competitive nature of tendering contracts entrenches this, as contractors must provide management teams that cater to their client's needs. According to a female crew boss, however, clients "still feel they can relate better to a male supervisor." Temporality is also a consideration. Supervisors generally have a minimum of five years of combined

- 110. Interview H, May 2004.
- 111. Interview I, May 2004.
- 112. Interview J, June 2004.
- 113. The supervisor is the most senior position in a tree planting camp. A supervisor's duties include operations management, scheduling, budgeting, and client relations.
- 114. Interview K, May 2004.
- 115. Maureen Reed, "Marginality and Gender at Work in Forestry Communities in British Columbia, Canada," *Journal of Rural Studies*, 19 (2003), 378.
- 116. Interview E, May 2004.

tree planting and managerial experience. Because significant numbers of female crew bosses are a recent phenomenon, they are placed at a disadvantage. Despite this, there is some expectation that the managerial experience of females will soon be nearly on par with male counterparts, and that more females will assume supervisory positions. One supervisor noted that " ... as business evolves – a very slow progression of course – certain systems are standardized that allows the industry to draw from a larger pool of people." However, the promotion of females to supervisory positions can only occur if the upper management of contractors are willing to promote them, and if there is a continued demand for and regular turnover of existing supervisors.

By the end of the 1990s, the volume of trees planted in Ontario was similar to that of the late 1980s (Table 1). Large contractors were the norm, and the labour force was estimated to be over 90 per cent students. Piece-wages, however, had stagnated since the early 1980s. In addition, the most productive forest lands and timber close to towns had long since been harvested and planted. Tree planters were forced to follow logging into steeper, rockier, and increasingly remote terrain where production rates were lower. These factors contributed to an exodus of experienced tree planters and new labour market concerns in Ontario's tree planting industry.

Increased fuel and insurance costs since 11 September 2001, the expiration of the SLA in the same year, and the ensuing trade dispute with the United States also presented challenges to Ontario's tree planting contractors. In 2001, nearly 142 million trees were planted, but by 2004 this figure fell to 105 million. ¹²¹ In a fashion similar to the early 1990s, many contractors ceased operating. Those remaining were embroiled in an industry more competitive than ever. According to one contractor, the industry is currently marked by "fierce bidding between contractors to obtain work at any cost." Another noted that:

Over the past four years there has been a fifteen per cent decrease annually in available contracts on which to bid. It used to be that all were open to bid, however now we see that companies will negotiate a long-term (>3 years) once they get their foot in the door. 123

Competition affects the labour force directly. One contractor summed the situation up well:

- 117. Interview H, May 2004.
- 118. Sweeney and Holmes, "Work and Life in the Clearcut," 206.
- 119. Bodner, "Slash Romance," 82.
- 120. Elizabeth May, At the Cutting Edge: The Crisis in Canada's Forests (Toronto 1998), 135.
- 121. Canadian Council of Forest Ministers, "Table 6.1."
- 122. Survey results, Contractor A, December 2004.
- 123. Survey results, Contractor B, December 2004.

Contractors get pressed again and again to shave off a dollar here and a dollar there to get down to the bottom price, because that's what gets the bids. This results in a lower price for the planter, which results in veteran planters going elsewhere or just plain retiring, while leaving only rookies. This increases the length of the plant, due to loss of production, and nobody wins [and] the company will end up paying about \$1000–\$1500 extra per day for every day they run over schedule. 124

Another contractor discussed recruitment and retention. She believed that:

The biggest problem that we as a company face is the work force that we have to choose from. I feel as though the applicants that we get are lacking in work ethic and take less responsibility for their performance and the outcome of their success as a tree planter.¹²⁵

Competitive pressures have forced contractors to reduce costs in order to win bids and increase or maintain market share. However, this causes experienced tree planters to be more selective regarding the contractor for whom, or the contracts on which, they work.

Most contractors surveyed in 2004 and 2007 agreed that recruitment and retention posed the most pressing challenges to the industry. The loss of workers to tree planting contractors in British Columbia is a particular concern. However, British Columbia's contractors face their own challenges. Oil and gas, mining, and construction employers in western Canada are experiencing a period of growth, and have lured tree planters – renowned for their work ethic – with higher wages and better living conditions. The average age of tree planters in British Columbia fell from 27 to 23 in less than a decade and the number of "career" tree planters has been reduced by almost half. The mountain pine beetle epidemic also increased annual harvests by almost 30 per cent, creating further demand for tree planting. British Columbia's tree planting contractors have responded to these challenges by recruiting recent immigrants and experienced tree planters from Ontario. This reduces the talent pool available to Ontario's contractors. One contractor noted that:

There appears to be a higher demand for planters in the western provinces, which is drawing the labour pool out of Ontario. Beginning in 2006, we started seeing rookie planters being

- 124. Survey results, Contractor B, December 2004.
- 125. Survey results, Contractor C, December 2004.
- 126. Dave Wilson, "Loss of Workforce Experience Results in Shrinking Capacity and Increased Costs," *Canadian Silviculture*, 7 (Summer 2006), 4.
- 127. Jordan Tesluk, "Health and Safety in the Tree Planting Workforce," MA Thesis, Simon Fraser University, 2006, 78–80.
- 128. Wilson, "Loss of Workforce Experience Results in Shrinking Capacity and Increased Costs," 4.
- 129. It is estimated that between 10 and 15 per cent of tree planters in British Columbia are recent immigrants: Brown, Leal-Martino, McIlveen, and Tan, *Contract Forest Laborers in Canada, the U.S., and Mexico*, 20.

hired on by western companies. Also we are losing experienced planters after only one year when before they went out west after 3 or 4 years. $^{\rm 130}$

This poses a threat not only to sectoral capacity and profitability, but also to workplace health and safety, an area where significant improvements made in the past two decades may be threatened if contractors are required to rely on inexperienced workers.

There is some speculation that contractors may turn to guest workers if their labour woes continue. This is a common practice in the United States, where most tree planters are Mexican or Guatemalan migrant workers. In the southeast and Pacific Northwest – the two primary wood-producing regions of the United States – Latin American migrants began to replace white workers as early as the 1970s.¹³¹ Migrants were recruited by industrial landowners and contractors, many of whom were former tree planters, to break the power of tree planting co-operatives. 132 Many migrants had previous experience in the United States as agricultural workers, 133 and although most were originally undocumented, the majority currently hold H-2B visas. Tree planting in the southeast and Pacific Northwest generally occurs between January and April and hiring students is not an option. It is also offset from the agricultural season, allowing migrants to extend their work season. However, many regions where tree planting occurs in the United States have high levels of unemployment and contractors note that recruiting H-2B workers is time- and cost-intensive. 134 Why then, are local workers used only sparingly? In a study by Casanova and McDaniel, one contractor noted that "there is not a cost advantage to bringing in migrant labor in terms of wages. We bring in migrants because they will actually do the work as opposed to American workers who will not last more than one week on the job." Another noted that "without the migrant workers, agriculture and forestry would die in this country. I guess if you raised wages high enough you could find local workers, but it wouldn't be economical for landowners to get involved in forestry."135

Under the Canadian Seasonal Agricultural Workers Program (CSAWP), guest workers from the Caribbean appeared on Ontario's farms in 1966. The

- 130. Survey results, Contractor D, April 2007.
- 131. Prudham, Knock on Wood, 88-9; Casanova and McDaniel, 'No Sobra y no Falta,' 48.
- 132. Prudham, Knock on Wood, 89; Casanova and McDaniel, 'No Sobra y no Falta,' 48.
- 133. Prudham, Knock on Wood, 89.
- 134. Casanova and McDaniel, 'No Sobra y no Falta,' 71-72.
- 135. Casanova and McDaniel, 'No Sobra y no Falta,' 72.
- 136. For reviews of seasonal farm workers in Canada see: Satzewich, *Racism and the Incorporation of Foreign Labour*; Tanya Basok, *Tortillas and Tomatoes: Transmigrant Mexican Harvesters in Canada* (Kingston and Montreal 2002); John Butovsky and Murray Smith, "Beyond Social Unionism: Farmworkers in Ontario and some Lessons from Labour History," *Labour/Le Travail*, 59 (Spring 2007), 69–98.

CSAWP was extended to include Mexican workers in 1974. Its intent was to address chronic labour shortages in Ontario's agricultural sector while maintaining a docile and inexpensive workforce. The irony here is that many of the regions of Ontario in which CSAWP workers were destined suffer from high rates of unemployment, but local workers were unwilling to take on agricultural work and farmers were reluctant to hire them. The factors leading to concurrent labour shortages and unemployment, according to Basok, include the price of labour, the expectations of workers, systemic needs (e.g. inexpensive food in urban/industrial centres), the need for docile labour, and technical divisions of labour. Begulty and temporally constrained to one employer, region, and industry, and lack the ability to freely enter and exit the labour force.

A number of similarities can be drawn between tree planting and agricultural work, most of which has a direct impact on the labour force. First, both require a large number of efficient and docile seasonal workers in order to meet rigid production schedules that are susceptible to disruption by climate and weather. As Basok notes, "during the harvest season, the crops cannot wait for the workers to return to work."140 Tree planting is similar in that production occurs within specific temporal windows and to do otherwise is to sacrifice seedlings to the elements. The very nature of the work therefore limits the flexibility that can be afforded to workers. Second, the employment season of agricultural guest workers and student tree planters is limited. Many are willing to accept exploitative working conditions in order to maximize earnings and curry favour with employers, and covert forms of resistance or solidarity are thus rendered difficult. 141 Third, the first season working is often viewed as an investment, and incentives to work for multiple seasons exist. Agricultural guest workers use initial earnings to repay previously held debts or those accrued in order to obtain work in and travel to Canada, and tree planters invest in gear specific to the workplace (e.g. tree planting and camping equipment) and earn far less in their first season than in subsequent ones. 142 Fourth, both are essentially unfree to circulate in local labour markets, although the degree to which this occurs varies widely. Guest workers are legally and spatially bound to employers and their only other realistic option is to return home. Tree planters are not legally bound to employers, but to quit is to sacrifice any money spent on gear and travel, lose

- 137. Butovsky and Smith, "Beyond Social Unionism," 76.
- 138. Basok, Tortillas and Tomatoes, 10-12.
- 139. Satzewich, Racism and the Incorporation of Foreign Labour, 42.
- 140. Basok, Tortillas and Tomatoes, 17.
- 141. Basok, Tortillas and Tomatoes, 114.
- 142. In the author's experience, take-home pay after the first season tree planting was approximately \$4,000, whereas subsequent seasons ranged between \$8,000 and \$10,000.

face amongst their occupational community, and risk returning to southern Ontario only to find the most prized summer jobs filled. The option of finding work elsewhere in northern Ontario is equally unattractive, as most southern Ontarians lack knowledge of local labour markets, accommodations, and the few prized summer jobs in pulp or lumber mills that remain are reserved for the children of permanent workers. ¹⁴³ Finally, social life is constrained within the occupational community. ¹⁴⁴ Interaction with local people is limited and often impersonal and task-specific. ¹⁴⁵

In the past decade, the incidence of guest workers on Canadian farms has increased. In 2006, over 20,000 agricultural workers came to Canada under the CSAWP. Most worked in farms and greenhouses that produced sod, tobacco, fruits and vegetables, and ginseng. Over 55 per cent originated from Mexico, and just under 30 per cent from Jamaica. Over 16,000 worked in Ontario and approximately 2,700 in Quebec. ¹⁴⁶ Other agricultural employers made use of the 2002 Foreign Worker Program (FWP), which was initiated to recruit lowand medium-skilled workers from outside of Canada. Unlike the CSAWP, the FWP does not require bi-lateral agreements, and allows workers to remain in Canada for up to 24 months. ¹⁴⁷ Many farmers in Quebec recruit Guatemalan workers through the FWP, as they are not eligible under the CSAWP. ¹⁴⁸

In a recent conference paper, Valarezo and I examine the likelihood that Ontario's tree planting contractors will adopt strategies similar to their American counterparts and recruit guest workers through the FWP. 149 At the moment, the notion is purely speculative. However, a number of contractors have considered using the FWP if their labour woes continue. One predicted two potential directions for Ontario's tree planting workforce. He noted that "piecework rates will have to increase to keep planting in Ontario more attrac-

- 143. Steven High and David Lewis, Corporate Wasteland: The Landscape and Memory of Deindustrialization (Ithaca 2007), 52.
- 144. Basok, Tortillas and Tomatoes, 123; Sweeney, "Producing Liminal Space", forthcoming.
- 145. Basok, Tortillas and Tomatoes, 125.
- 146. Wayne Hanley, *UFCW Report on the Status of Migrant Farm Workers in Canada*, 2006–2007 (Toronto 2007), 5.
- 147. Ann Weston and Luigi Scarpa de Masellis, Canada's Seasonal Agricultural Workers Program as a Model of Best Practices in Migrant Worker Participation in the Benefits of Economic Globalization Project (Ottawa 2004), 6.
- 148. While Ontario is generally the focus of research on agricultural guest workers in Canada, Valarezo shifts the focus to Quebec, where she examines Guatemalan workers recruited through the FWP. See Giselle Valarezo, "Out of Necessity and Into the Fields: Migrant Farmworkers in St. Remi, Quebec," MA Thesis, Queen's University, 2007.
- 149. Brendan Sweeney and Giselle Valarezo, "Tree Planters and Farmworkers in Canada and the United States: A Shift from Domestic to Migrant Workers?" Conference Paper, *Annual Meetings of the Canadian Association of Geographers*, Saskatoon, June 2007.

tive. An alternative would be to bring in foreign workers."150 To examine the likelihood of FWP tree planters, we drew upon Sassen-Koob's alternatives to guest workers: increasing imports, mobilizing marginal workers, capital substitution, and the export of productive activities. We concluded that none of these strategies are likely to work. First, because the capacity of Canada's forest products industry exceeds domestic demand, it is unlikely that imports will increase. Second, with the exception of students, the past mobilization of marginal workers has been met with limited success. Recent immigrants may be the most likely candidates; like immigrant agricultural workers in the 1950s and 1960s, however, most will ultimately strive for permanent employment in urban areas. 151 Recent immigrants are also targeted as employees for resourcebased industries in western Canada. Third, attempts at mechanization have been unsuccessful, and manual planting tends to reduce maintenance costs such as herbicide application and pre-commercial thinning. Finally, the export of tree planting beyond the Canadian border is neither possible nor applicable. In short, if the volume of trees planted in Ontario is maintained and the price contractors receive for work does not increase (with a subsequent increase in piece-wages), the rate of experienced student tree planters will continue to fall and the possibility of FWP tree planters will become more likely.

Conclusion

The purposes of this paper are twofold: to draw upon Peck's causal emphases of labour market segmentation to examine the evolution of Ontario's tree planting industry and labour force, and to better situate tree planting amongst other seasonal and forestry work. In doing so, it addresses theoretical and empirical lacunae related to an industry critical to the economic and ecological sustainability of industrial forestry in North America.

Peck's causal emphases of labour market segmentation — labour demand, labour supply, and the state — allow for a dynamic examination of segmentation that transcends primary/secondary and core/periphery binaries. The forest products industry expanded throughout the first half of the 20th century, but timber was abundant. No notable demand for tree planters occurred until the rise of the pulp and paper industry after World War II, the subsequent increase in harvest levels, and requisite changes to legislation that commodified forests and mandated sustained-yield policy. During the 1950s, labour supply was tight, as growing urban and natural resource industries provided stable, long-term employment at family wages. Mechanization also made logging a year-round venture, and the tree planting workforce was comprised primarily of marginal local men, which stigmatized the occupation.

^{150.} Survey results, Contractor E, April 2007.

^{151.} Satzewich, Racism and the Incorporation of Foreign Labour, 110.

In 1962 the omnr assumed control of reforestation. Tight labour markets persisted, and government policy explicitly sought to provide employment for non-standard workers: local women, students, and First Nations peoples. The omnr also invested in nurseries and scarification. Advances in these fields made work less onerous, increased the predictability of production schedules, and made supervision easier and more objective. However, forest resources remained relatively abundant, and both industry and state prioritized harvesting and processing over reforestation. This was reflected in state expenditures as well as the public perception of tree planting and its workforce, which was exacerbated by the tendency of the omnr to stretch reforestation funding by using state-controlled and quasi-legal labour. This reinforced the stigma attached to tree planters, an occupation that was now reserved only for those on the margins of northern Ontario's labour force.

The inception of the FMA system in 1979 was the first step in divesting the state of direct responsibility for reforestation, as licensees chose who carried out any tree planting they were responsible for. Most opted for private contractors, who were found to be more time- and cost-efficient. Recessions in the early 1980s and early 1990s increased labour supply, but local residents were unwilling to take on tree planting work, a legacy of previous stigmatization. Contractors found post-secondary student tree planters to be the most mentally and physically fit, and revelled in their priorities of maximizing earnings in a short-period of time and concomitant willingness to work extended hours. Contractors also found that students engaged differently with the occupational culture of tree planting, and many enjoyed or were certainly willing to tolerate the experience of communal and rudimentary living in bush camps. Recessionary times also limited the volume of seasonal work available to students in mills and factories, thus increasing the supply of labour in a period of sectoral growth. A growing public concern over reforestation also came to the fore, and new pools of funding from various levels of government further increased the demand for tree planting services.

Contractors generally paid piece-wages in order to align production and labour costs. Contractors, foresters, and student tree planters were all consenting agents to this system of remuneration, which led to increased wages and production rates. Opseu — representing tree planters employed and formerly employed by the OMNR — was skeptical of piece-wages, as were the CPU and IWA, which had extended clauses to tree planters in collective agreements that covered loggers and mill workers. Unions in this era also strove for more local involvement, yet northern residents remained reluctant to take on tree planting. A compromise was eventually made whereby the IWA and CPU accepted the contract system, but bargained for better working conditions, lower camp costs, and increased piece-wages. However, many of Ontario's loggers and mill workers have been forced into concessionary bargaining since the early 1990s, and clauses extended to tree planters often proved the first to be jettisoned in new rounds of tougher bargaining.

The recession of the early 1990s devastated many of the programmes that funded tree planting and the industry at large. The CFSA and the 1996 SLA provided some recovery through new forms of funding and stable demand for Ontario's forest products. Most of the benefits were concentrated in the hands of a few large contractors. In this era, contractors relied almost exclusively on student labour. The proportion of female tree planters also grew to almost half of the labour force during this era. Many contractors aimed to employ equal numbers of male and female tree planters in an effort to reproduce occupational cultures and attract young adult workers. After the expiration of the SLA in 2001, the volume of trees planted in Ontario decreased once more. Competition between contractors was fierce, piece-wages stagnated, production rates fell as work occurred increasingly on marginal lands, and tree planting became less attractive for workers, many of whom were lured west.

In a conceptual sense, the occupation of tree planting falls somewhere between piece-wage fallers and seasonal agricultural workers. Like fallers, tree planters rely heavily on tacit knowledge, are willingly remunerated on an incentive basis, and their interests are often more closely aligned with management and clients than with other forestry workers. Unions have been present in the past, but incentive-based pay presents a barrier to traditional inter- and intrasectoral solidarity. However, tree planting differs from falling as it is purely seasonal - further undermining solidarity - and past attempts at mechanization have failed. Tree planting is similar to agricultural work primarily because production occurs exclusively within a specific timeframe. Because of this, a stable and docile labour force willing to sacrifice freedom in exchange for relatively high remuneration is required. Student tree planters thus suggest that in an uncertain future, contractors in the reforestation sector may turn to guest workers to resolve their problem of labour recruitment. In any case, the workforce in tree planting will not be comprised of permanent residents of the regions in which production occurs. It is therefore stigmatized with an "outsider" status, subject to specific disincentives if it chooses to leave work early or resist the practices of their employer or occupational community. Tree planting thus highlights a range of issues common to capitalism's penchant for flexible adaptation to markets. As such it illuminates many challenges facing workers in our times.

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