

# Towards reduced herbicide use in forest vegetation management

K.M. Little<sup>1\*</sup>, I. Willoughby<sup>2</sup>, R.G. Wagner<sup>3</sup>, P. Adams<sup>4</sup>, H. Frochot<sup>5</sup>,  
J. Gava<sup>6</sup>, S. Gous<sup>7</sup>, R.A. Lautenschlager<sup>8</sup>, G. Örlander<sup>9</sup>, K.V.  
Sankaran<sup>10</sup> and R.P. Wei<sup>11</sup>

<sup>1</sup> Institute for Commercial Forestry Research, PO Box 100281, Scottsville, South Africa, 3209

<sup>2</sup> Forestry Commission Research Agency, Alice Holt Lodge, Farnham, Surrey GU10 4LH, United Kingdom

<sup>3</sup> University of Maine, 5755 Nutting Hall, Orono, Maine, USA, 04469

<sup>4</sup> Forestry Tasmania, 79 Melville Street, Hobart, Tasmania, 7000

<sup>5</sup> Lerfob, UMR INRA-ENGREF, CR INRA de Nancy 54280 Champenoux, France

<sup>6</sup> Cia.Suzano de Paper e Cellulose, Tavares, Km 169, Cx Postal 228, CEP 18.200-000, Itapetininga – SP

<sup>7</sup> Forest Health and Protection, Forest Research, Private Bag 3020, Rotorua, New Zealand

<sup>8</sup> Atlanta Canada Conservation Data Centre, PO Box 6416, Sackville, NB E4L 1G6

<sup>9</sup> Växjö University, SE-351 95 VÄXJÖ, Sweden

<sup>10</sup> Kerala Forest Research Institute, Peechi-680 653, Kerala, India

<sup>11</sup> Sino-Forest Corporation, 3129-40, 31/F., Sun Hung Kai Centre, 30 Harbour Road, Wanchai, Hong Kong

\* Corresponding author. E-mail: keith@icfr.unp.ac.za

## SYNOPSIS

Mechanical, manual, thermal, biological and chemical methods of managing forest vegetation have, to a large extent, been developed independently. The effectiveness and relatively low cost of chemical herbicides, however, have led to systems of vegetation management that rely on their continued availability and the near exclusion of non-herbicide methods for controlling forest weeds. Greater public concern, perceptions of risk, and pressures exerted by some forest certification systems, have increased the need to provide a wider array of alternative methods that can reduce dependence on herbicides. In response, forest vegetation management research has widened to include investigations of alternatives to herbicides, along with initiatives aimed at reducing chemical use. An international review of progress indicates that reduced herbicide use may already be possible in many countries. There are however, a number of commercial, economic and social issues associated with the practical application of this knowledge, notwithstanding the fact that a more integrated approach is required to combine relevant methods of vegetation management, rather than attempting to practise alternative techniques in isolation from other silvicultural practices. This paper, together with appropriate examples, reviews pressures to reduce herbicide use as well as past and current research to develop alternatives to herbicides in eleven different countries, as well as identifying instances of the successful or unsuccessful implementation of this technology.

**Keywords:** Weed control, integrated forest vegetation management, herbicide alternatives, certification.

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