

# 和歌山県護摩壇山における針葉樹人工林の間伐処理方法の 違いが広葉樹の更新に及ぼす影響

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和歌山県林業試験場

**Effects of different thinning treatment methods on broad-leaved tree regeneration in conifer plantations on Mt Gomadanzan, Wakayama Prefecture, Japan.**

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## Abstract

We investigated the effects of different thinning treatments on tree regeneration in *Cryptomeria japonica* and *Chamaecyparis obtusa* plantations on Mt. Gomadanzan, Wakayama Prefecture, Japan. Experimental plots were established for group thinning and line thinning, with or without mammal exclusion fencing, tree extraction, or felled trees placed horizontally. At 3–5 years after thinning, there were 32 tree species in the experimental plots, comprising 29 hardwood and three conifer species. The number of species and tree density (individuals/100 m<sup>2</sup>) were highest in the group thinning and felled tree extraction treatments, followed by the fenced group thinning treatment. There were more tree density of tall tree species in the group thinning and felled tree extraction treatments, whereas density of sub-tall tree species were more abundant in all other plots. The growth of tall trees may have been inhibited by shading by raspberry bushes in the fenced group thinning and fenced line thinning treatments. Both number of species and tree density were highest in a fenced plot following felled tree extraction after group thinning situated on a ridge adjacent to a natural forest, implying that these conditions were highly effective for natural broad-leaved tree regeneration.

## 摘 要

和歌山県田辺市にある護摩壇山のスギ・ヒノキ人工林において、各種間伐後の更新状況を調べた。間伐方法、防獣ネット柵の有無、伐倒木の処理方法によって試験区を設定した。間伐から3～5年経過後に更新した樹種は32種（広葉樹29種、針葉樹3種）で、種数と100 m<sup>2</sup>あたりの本数は群状間伐・搬出区で特に多く、群状間伐・柵有区が続いた。群状間伐・搬出区では高木種の本数が小高木種よりも多かったが、それ以外の区では高木種よりも小高木種の本数が多かった。群状間伐・柵有区、列状間伐・柵有区ではキイチゴ類の繁茂が更新木の生育を阻害している可能性が考えられた。本地域の針葉樹人工林において、広葉樹天然林に隣接した尾根部で群状間伐を行い、伐倒木搬出後に防獣ネット柵を設置した場合、更新木の種数・本数のどちらも多く、広葉樹の天然更新に有効であると考えられた。

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