Draft Minister's Order

Forest Act
(R.S.Q., c. F-4.1)

Value of silvicultural treatments

Notice is thereby given that Minister's Order of the Minister of Natural Resources respecting the value of silvicultural treatments, the text of which appears below, may be made by the Minister, with or without amendment, upon the expiry of 45 days following this publication.

Any person having comments to make on this matter is asked to send them in writing, before the expiry of the 45-day period, to Mr. Marc Ledoux, Associate Deputy Minister for Forests, Ministère des Ressources naturelles, 880, chemin Sainte-Foy, 10e étage, Québec (Québec) G1S 4X4.

JACQUES BRASSARD,
Minister of Natural Resources

Order of the Minister of Natural Resources respecting the value of silvicultural treatments

Forest Act
(R.S.Q., c. F-4.1, ss. 73.1 and 73.3)

1. The silvicultural treatments described in Schedule I shall be admitted as payment of the dues prescribed by the Minister responsible for the administration of the Forest Act for the 1999-2000 fiscal year as determined by the production priority groups described in Schedule II.

The silvicultural treatments are realized on the forest areas where the priority production has to be performed.

2. The values of such silvicultural treatments are those established in Schedule III.

3. This Minister's Order replaces Minister's Order 9700417 of the Minister of Natural Resources, published in Part 2 of the *Gazette officielle du Québec* of 18 March 1998.

4. This Minister's Order of the Minister of Natural Resources comes into force on 1 April 1999.

SCHEDULE I
(s.1)

SILVICULTURAL TREATMENTS ADMITTED FOR THE 1999-2000 FISCAL YEAR

1. Site preparation: site preparation consists of any of the following five operations:

(1) scarification: loosening the soil to promote natural or artificial regeneration of desired species of trees;

(2) clearing: windrowing or piling non-commercial ligneous matter to facilitate the planting of seedlings or the passage of a scarifier;

(3) winter shear-blading: clearing frozen ground with a shear-blade-equipped tractor in order to eliminate all vegetation and remove excessively thick organic matter;

(4) ploughing and harrowing: loosening the soil by means of a plough and a harrow to promote the planting of tolerant hardwoods or hybrid poplars;

(5) prescribed burning: intentional burning of forest fuels left lying in a forest management area after the felling of commercial timber carried out in weather conditions that enable fire to spread freely within the selected area.

2. Release treatment: the controlling of competing vegetation by spraying herbicides registered for forestry, such as glyphosate, or by using mechanical means, preferably a stripper over a chain saw, in order to promote the natural or artificial regeneration of desired species.

3. Precommercial thinning: the felling of trees that impede the growth of selected trees in a young stand, by equalizing the spacing between them.

4. Commercial thinning: the felling or harvesting of trees in an even-aged stand that has not yet reached cutting age, in such a way as to accelerate the diameter growth of the remaining trees and to improve the quality of the stand.

5. Drainage: the digging of ditches to lower soil humidity by draining away surface run-off and seepage, in order to improve tree growth and to promote natural and artificial regeneration.

6. Fertilization: the application of chemical or organic fertilizers to increase the production capacity of the soil.

7. Natural regeneration reinforcement planting: the planting of seedlings in an area where natural regeneration is insufficient, in order to obtain a number of evenly distributed trees of the principal species in that area.

8. Progressive seed cutting: the felling or harvesting of trees at the time of the first of a series of successive regeneration cuts in an even-aged stand that has reached cutting age, thus permitting the opening of the forest cover and the elimination of overtopped trees, and promoting natural regeneration from seeds produced by dominant and codominant trees left as seed bearers.

9. Strip cutting with regeneration and soil protection: felling or harvesting in a stand, in strips no more than 60 metres wide, leaving a distance between each strip at least equal to the width of the strip harvested. In the strips, all trees of commercial species whose diameter has reached 10 centimetres or more at 1.30 metres above the highest ground level are harvested. Cutting must allow the harvesting of not less than 75 % of the basal area or the reduction of the forest cover to less than 25 %. Felling or hauling roads must be spaced and every precaution must be taken to avoid damaging advance regeneration and to protect the soil.

10. Planting: the setting in the soil of cuttings, sets, bare-root seedlings or container seedlings in order to produce ligneous matter.

11. Enrichment planting: the introduction of or an increase in the number of white pine, red oak, American ash or yellow birch in a stand, through planting.

12. Spreading commercial thinning: commercial thinning which promote the lumber production of birch before cutting with regeneration.

13. Improvement cutting: the felling or harvesting of trees in a degraded uneven-aged high forest whose diameter is equal to or greater than the diameter determined for each species, while maintaining the percentage of the basal area of Quality 1 trees after treatment.

14. Selection cutting: the periodic felling or harvesting of trees selected individually or in small groups in an uneven-aged high forest, taking into account all the species and diameter classes of trees in a stand, as well as their strength and quality. A balanced selection structure must be obtained or maintained in the stand by ensuring that growing trees receive the necessary tending and by favouring seed establishment.

15. Selection cutting by patches: the felling or harvesting of trees selected individually or in small groups in an uneven-aged stand, in order to obtain or maintain a balanced structure while carrying out the silvicultural treatment required by growing trees, favouring seed establishment and taking into account all the diameter classes in the stand. During the operations, regeneration and saplings must be protected. Each patch must measure between 500 m^2 and 1,500 m^2 in order to promote the regeneration of shade intolerant species. In the long term, 50 % of the area in question will be placed under an uneven-aged management system.

16. Selection and regeneration cutting by patches: the felling or harvesting of trees selected individually or in small groups in an uneven-aged stand, in order to obtain or maintain a balanced structure while carrying out the silvicultural treatment required by growing trees, favouring seed establishment and taking into account all the diameter classes in the stand. During the operations, regeneration and saplings must be protected. The enclosures, measuring between one and two hectares each, are treated so as to promote the regeneration of shade intolerant species and the constitution of an uneven-aged stand.

17. Preselection cutting: the felling or harvesting of trees selected individually or in small groups in an uneven-aged high forest, taking into account all the species and diameter classes of trees in a stand, as well as their strength and quality. A structure conducive to selection must be obtained in the stand by ensuring that growing trees receive the necessary tending and by favouring seed establishment.

18. Pine seeding: the aerial or ground seeding of jack pine seed or the seeding of jack pine or white pine in funnels.

SCHEDULE II
(s.1)

SILVICULTURAL TREATMENTS ADMISSIBLE BY PRODUCTION PRIORITY GROUPS

Silvicultural treatments admissible	**Production priority groups**													
	Fir, spruce, jack pine, tamarack	Thuya	Poplar	White birch	Birch1 or Oak or intermediary tol.hard.	Pine	Maple or tsuga or tol. hard.	Pine-Birch (Pine)1	Pine-Birch (Birch)1	Mixed S-int.hard (S) or S-int.hard. (hard.)	Mixed S-Birch (S)1	Mixed S-Birch (hard.)1	Mixed S-Maple (S) or S-tol.hard. (S)	Mixed S-Maple (hard.) or S-int.hard. (hard.)
Precommercial thinning	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fertilization	X													
Commercial thinning	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Spreading commercial thinning					X							X		
Pine seeding	X					X		X	X					
Improvement cutting		X												
Selection cutting		X					X							X
Selection cutting by patches					X				X			X		
Selection and regeneration cutting by patches					X				X			X		
Preselection cutting							X							X
Strip cutting with regeneration and soil protection	X	X			X	X		X	X		X	X		
Progressive seed cutting	X	X		X	X	X	X	X	X	X	X	X	X	X
Planting	X	X	X	X	X	X	X				X			
Site preparation, natural regeneration reinforcement planting and release treatment	X	X			X	X		X	X	X	X	X	X	X
Drainage	X	X												
Enrichment planting					X	X		X	X					

1 For these priority productions, the yellow birch prevails on the white birch as the principal objective species.

SCHEDULE III
(s.2)

VALUES OF SILVICULTURAL TREATMENTS ADMITTED AS PAYMENT OF DUES FOR THE 1999-2000 FISCAL YEAR

1. SITE PREPARATION

Scarification	
Anchor chains	105 $/ha
Shark-fin barrels and chains	295 $/ha
Hydraulic cone trenchers (Wadell type)	235 $/ha
Hydraulic disk trenchers (TTS hydraulic and Donaren types)	190 $/ha
Rake scarifier (shark)	190 $/ha
Batch scarifier (Bracke), disk trencher (TTS type)	135 $/ha
Batch scarifier mounder (Bracke mounder)	185 $/ha
"V" blade batch scarifier (Bracke) or disk trencher	370 $/ha
Cutter-type portable scarifier	325 $/1 000 microsites
forest mattock	
Forest harrows (Rome et Crabe types)	
Single pass	215 $/ha
Double pass	380 $/ha
Létourneau tree crusher	330 $/ha
Winter shear-blading with a shear-blade-equipped crawler tractor	430 $/ha
Clearing	
Rake-equipped crawler tractor	420 $/ha
Rake equipped skidder or hydraulic rake	355 $/ha
Modified "V" blade models C and H	180 $ ha
Ploughing and harrowing	
Forest plough (Lazure type) + forest harrow (Rome and Crabes types)	1 155 $/ha
Prescribed burning	390 $/ha

2. RELEASE TREATMENT

Mecanical	
Coniferous or boreal forest zone	600 $/ha
Mixed and hardwood forest zones	675 $/ha
Herbicides	
Ground spraying	340 $/ha
Aerial spraying	205 $/ha

3. PRECOMMERCIAL THINNING

Priority production of softwoods and mixed predominantly softwood stands

Value per hectare = 418,72 x ln(ti/ha) - 3 236,72

ln: base *e* logarithm
ti: number of trees of more than 1,2 meter for softwoods and 1,8 meter for hardwoods
ha: hectare

Priority production of intolerant hardwoods and mixed predominantly intolerant hardwoods stands	830 $/ha
Priority production of tolerant hardwoods and mixed predominantly tolerant hardwood stands	795 $/ha

4. COMMERCIAL THINNING

Softwoods

Average DBH of felled trees (cm)	Value with tree marking ($/ha)	Value without tree marking ($/ha)
10 à 10,9	1 240	1 095
11 à 11,9	1 035	890
12 à 12,9	875	730
13 à 14,9	700	555
15 et plus	535	390

Mixed with tolerant and intolerant hardwoods	560 $/ha
Tolerant and intolerant hardwoods	240 $/ha

5. DRAINAGE

Cleard areas (without prior felling)	1,45 $/m or m3
Wooded areas (without prior felling)	1,60 $/m or m3
Wooded areas (with prior felling)	1,80 $/m or m3

6. FERTILIZATION

Softwoods	365 $/ha

7. NATURAL REGENERATION REINFORCEMENT PLANTING AND RED PINE AND WHITE PINE PLANTING

With site preparation	
Bare-root seedlings	
Conventional size	230 $/1 000 seedlings
Large size	365 $/1 000 seedlings

Container seedlings	
67-50	190 $/1 000 seedlings
45-110	200 $/1 000 seedlings
25-200	255 $/1 000 seedlings
45-340 and 25-350-A	320 $/1 000 seedlings
Without site preparation	
Bare-root seedlings	
Conventional size	245 $/1 000 seedlings
Large size	380 $/1 000 seedlings
Container seedlings	
67-50	205 $/1 000 seedlings
45-110	215 $/1 000 seedlings
25-200	270 $/1 000 seedlings
45-340 or 25-350-A	335 $/1 000 seedlings

8. PROGRESSIVE SEED CUTTING

Softwoods	520 $/ha
Mixed with tolerant and intolerant hardwoods	240 $/ha
Tolerant and intolerant hardwoods	240 $/ha

9. STRIP CUTTING WITH REGENERATION AND SOIL PROTECTION 210 $/ha

10. PLANTING

With site preparation	
Bare-root seedlings	
Conventional size	215 $/1 000 seedlings
Large size	345 $/1 000 seedlings
Container seedlings	
67-50	170 $/1 000 seedlings
45-110 or cuttings	180 $/1 000 seedlings
25-200	235 $/1 000 seedlings
45-340 or 25-350-A	300 $/1 000 seedlings
Without site preparation	
Bare-root seedlings	
Conventional size	230 $/1 000 seedlings
Large size	360 $/1 000 seedlings
Container seedlings	
67-50	185 $/1 000 seedlings
45-110	195 $/1 000 seedlings
25-200	250 $/1 000 seedlings
45-340 or 25-350-A	315 $/1 000 seedlings

11. ENRICHMENT AND REINFORCEMENT PLANTING OF HARDWOODS AND PINE 510 $/1 000 seedlings

12. SPREADING COMMERCIAL THINNING 240 $/ha

13. IMPROVEMENT CUTTING

Cedar 225 $/ha

14. SELECTION CUTTING

Tolerant hardwood	240 $/ha
Mixed with tolerant hardwood	240 $/ha
Cedar	225 $/ha

15. SELECTION CUTTING BY PATCHES 240 $/ha

16. SELECTION AND REGENERATION CUTTING BY PATCHES 240 $/ha

17. PRESELECTION CUTTING

Tolerant hardwood	240 $/ha
Mixed with tolerant hardwood	240 $/ha

18. PINE SEEDING

Aerial seeding	35 $/ha
Ground seeding	135 $/ha
Funnels	305 $/1 000 microsites ensemencés

Note: The expression «tolerant hardwoods» includes white pine and red pine.

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