1. Harvest small groups of trees.

2. Single trees isolated from other cover trees can be harvested.

3a. Leave ridges untouched.

3b. Concentrate harvest in gullies and northerly aspects.

4. All lodgepole pine, spruce, and deciduous trees may be harvested.

5. Minimize damage to residuals and regeneration.
Principles for Stand Protection

Douglas-fir bark beetle is a major source of mortality in mature and over-mature fir stands. Each year a new brood of beetles fly and attack trees from mid-April to June, with a second smaller flight occurring in July and August. Trees weakened or damaged (including freshly felled trees) are most susceptible to attack, and poor logging practices can encourage the spread of the beetle. Because maintenance of mature and over-mature trees is of prime importance on a winter range, extra care must be taken to minimize mortality from the beetle. Ways of minimizing a beetle problem are explained below and illustrated in the facing diagram.

1. Slash must not be piled against trees. Douglas-fir beetles are attracted to slash, and will also attack standing trees next to it.

2. All slash over 20 centimetres in diameter should be removed because it attracts beetles.

3. Damage to residual trees should be minimized because beetles are attracted to damaged trees.

4. Severely scarred trees (i.e., over half of the circumference of the bole) should be removed.

5. Remove beetle attacked trees.

6. Slash piles should be burned before they become breeding grounds for more beetles.

7. Logging operations should be scheduled as long before the beetle flight as possible to allow the logging debris to dry. Late summer and fall are ideal.

If an area has a major beetle problem, a trap tree program may be necessary. This involves falling a number of trees shortly before the beetle flight. The beetles are attracted to these trees, which are removed and milled before the next flight, reducing the local beetle population.
1. Do not pile slash against trees
2. Remove all slash over 20 cm in diameter
3. Minimize damage to residual trees
4. Remove severely damaged trees
5. Remove beetle attacked trees
6. Burn slash piles promptly
7. Log in the fall if possible