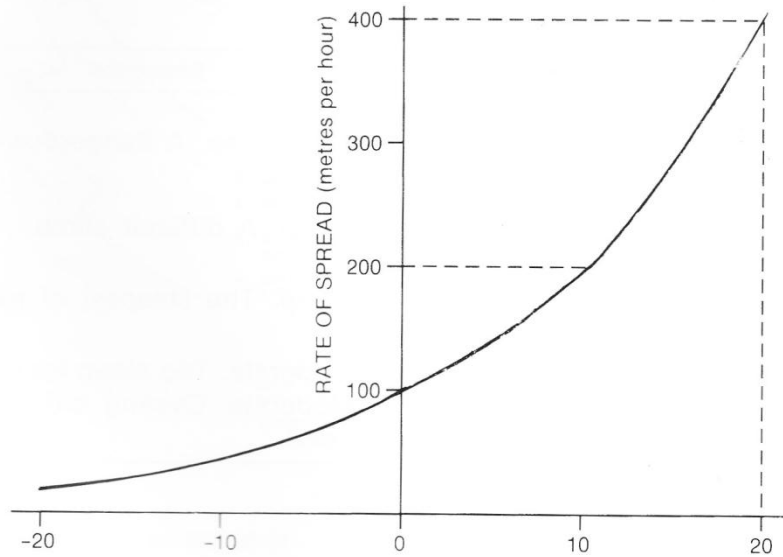


FIRE SPREAD

Figure 14—Effect of Slope on Rate of Spread



In both forest and grass fuels the rate of spread on level ground doubles on a 10 deg. slope and increases fourfold up a 20 degree slope.

Figure 16—Estimation of Degrees of Slope

Degrees	Gradient	Description
40	1 in 1	Very Steep. A dangerous slope.
30	1 in 2	Steep. A difficult climb.
20	1 in 3	Steep. The steepest of roads.
10	1 in 6	Moderate. Too steep for cycling.
5	1 in 10	Moderate. Cycling difficult.
0	0 in 0	Level.

Figure 15—Effect of Lee Slope winds on fire front



SPOTTING:

Long-distance spotting is usually caused by strips of candlebark, shed by the upper branches of smooth-barked eucalypts, dangling in the crowns and forks.

Eucalypts such as **stringybarks** and peppermints have a fibrous bark, which under less severe conditions can produce concentrated short distance spotting up to three kilometres ahead of the main fire.

IF SPOT FIRES START TO FALL IN THE AREA AROUND YOU THE SITUATION IS CRITICAL. YOU MUST EVACUATE THE CREW FROM THE AREA IMMEDIATELY.

PERIMETER INCREASE:

For all practical purposes, the perimeter of a grassfire can be taken as $2\frac{1}{2}$ times the forward spread, i.e. if the forward spread is 10 km/h, the perimeter spread will be 25 km/h.

AREA INCREASE:

The area of a fire increases as the square of the burning time, i.e. the area at 4 hours from start will be 16 times the area at 1hour. This indicates the need for very fast initial attack and quick control.