

A Publication of the
National Wildfire
Coordinating Group

Fire Behavior Nomograms



PMS 436-3
NFES 2220

MARCH 1992

The "Fire Behavior Nomograms" are excerpted from "How to Predict the Spread and Intensity of Forest and Range Fuels", Richard C. Rothermel, June 1983, with the exception of the nomogram for fuel model #7 which was updated for this publication.

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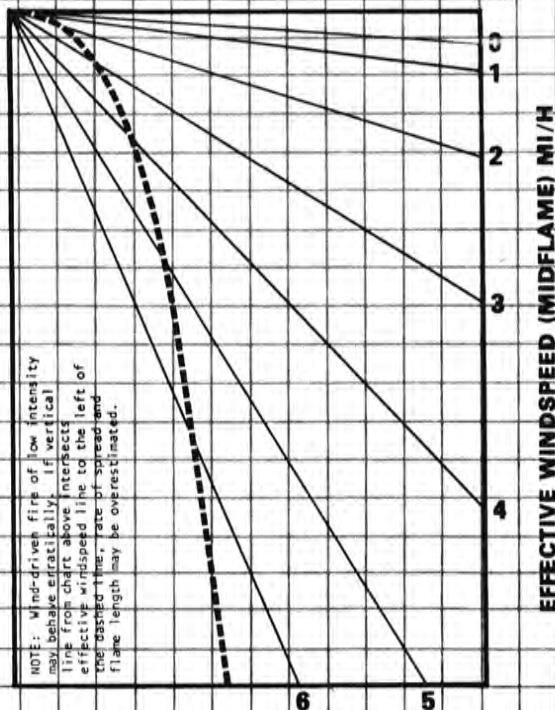
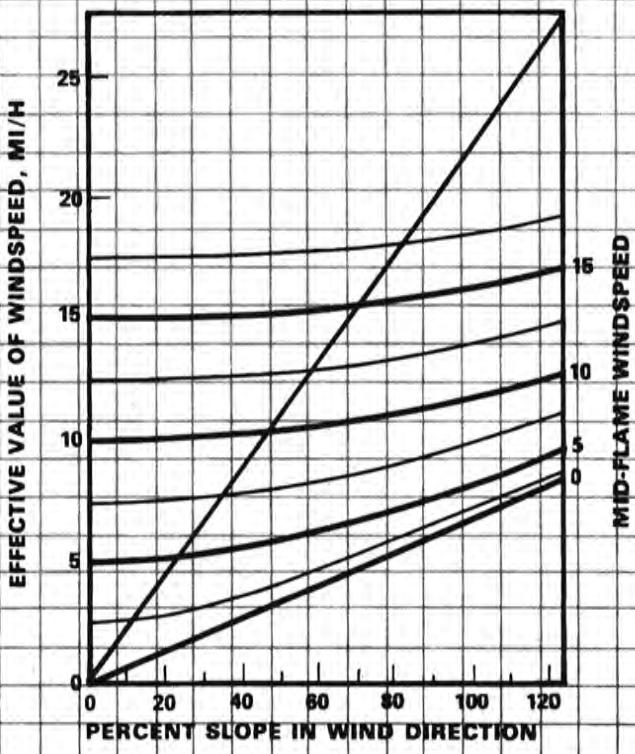
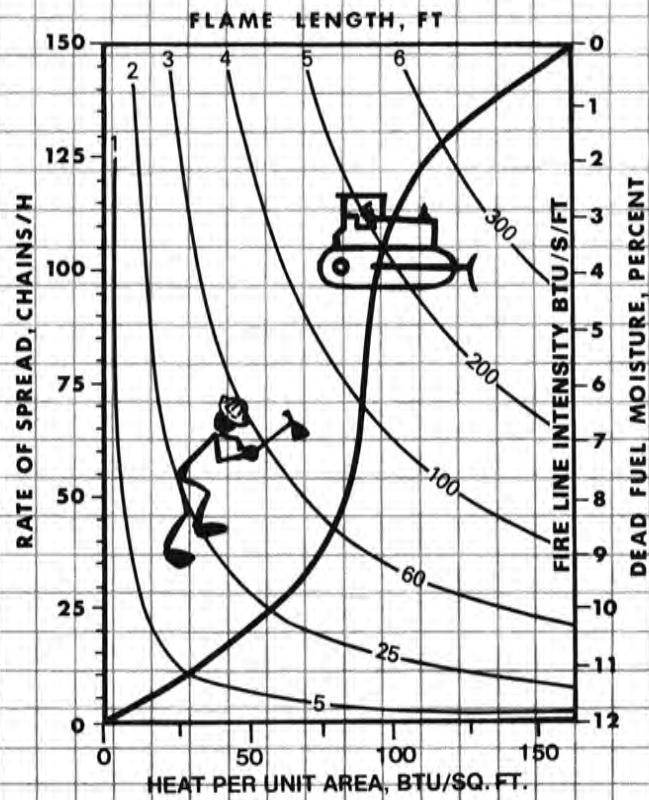
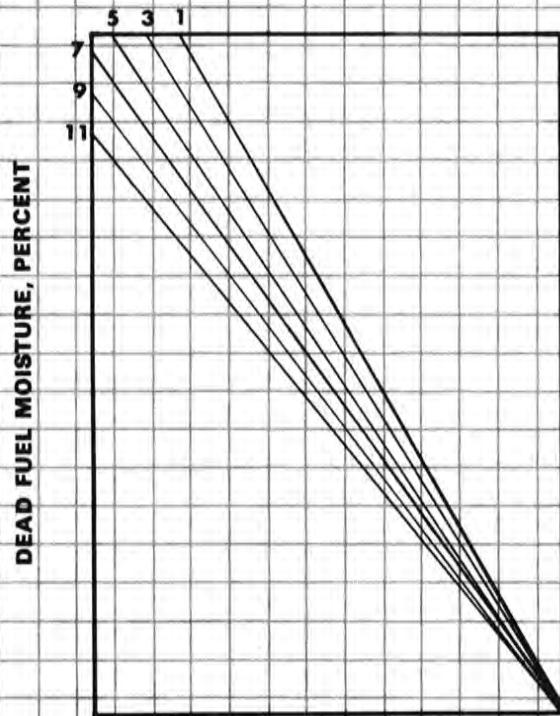


APPENDIX A

Nomograms

Fuel model 1 – low windspeeds

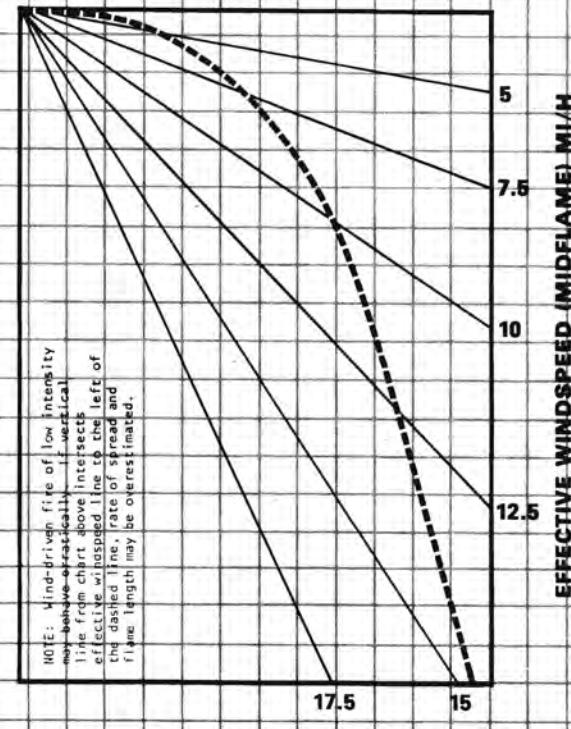
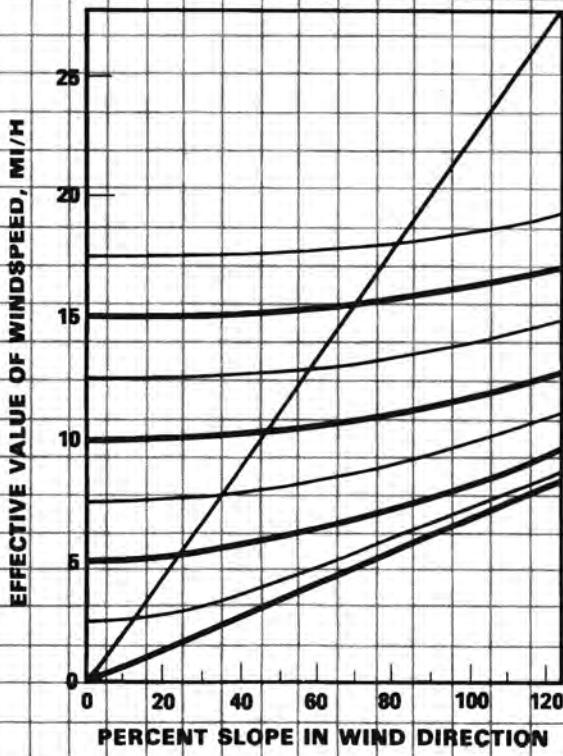
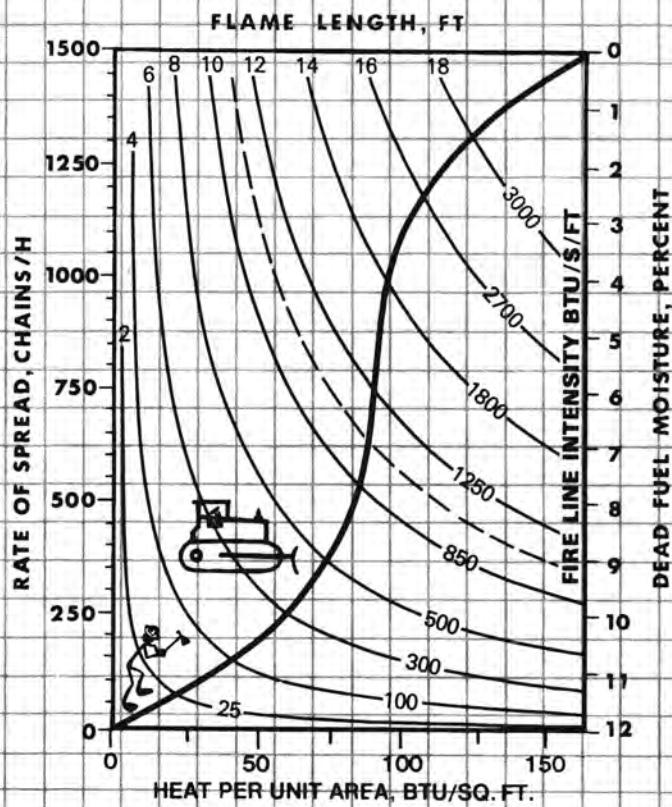
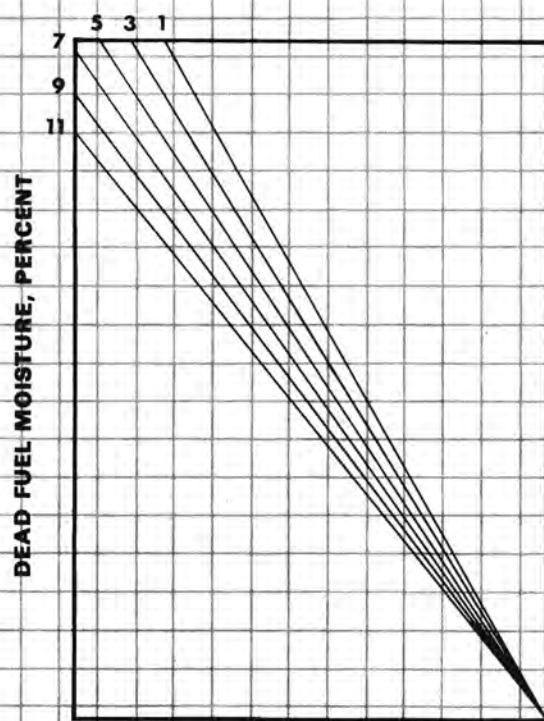
1. SHORT GRASS (1 FT) - LOW WINDSPEEDS



NOTE: Wind-driven fire of low intensity may behave abnormally. If vertical line from chart above intersects effective windspeed line to the left of the dashed line, rate of spread and flame length may be overestimated.

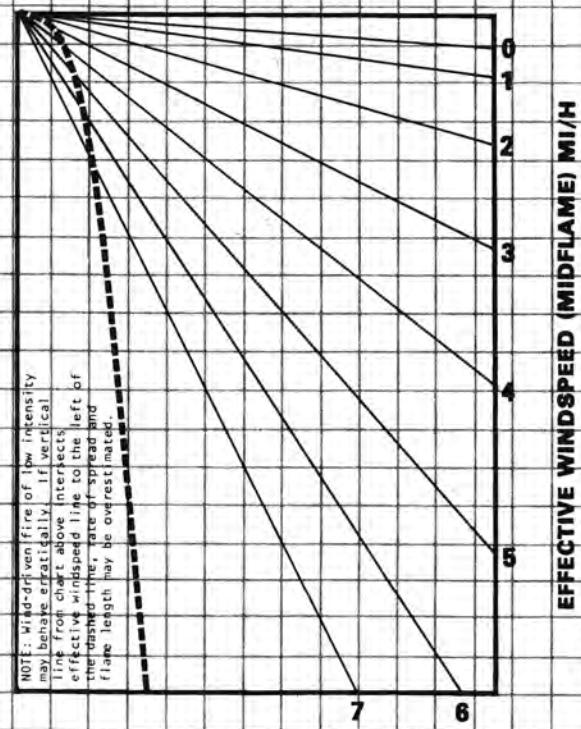
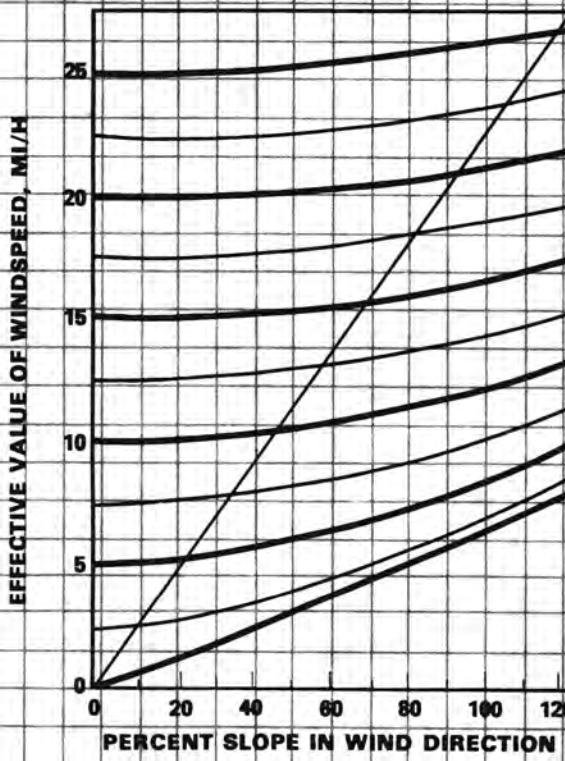
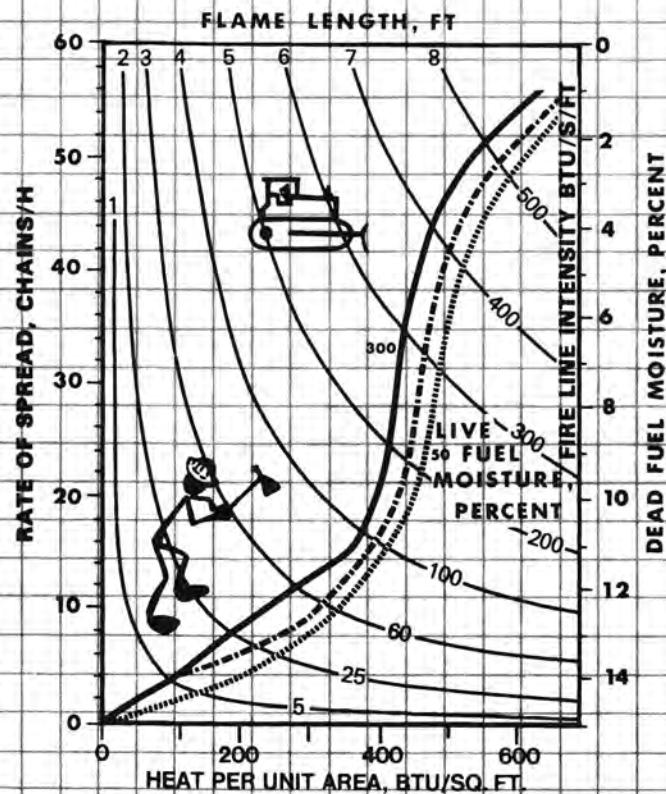
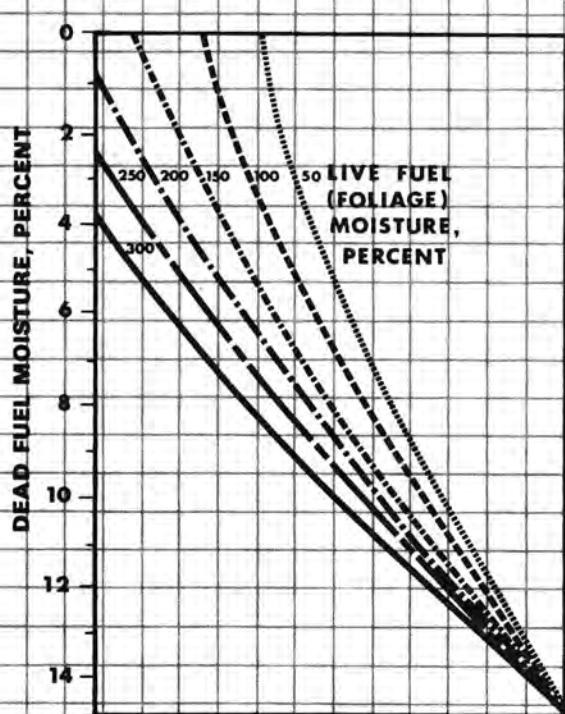
Fuel model 1 – high windspeeds

1. SHORT GRASS(1 FT) - HIGH WINDSPEEDS



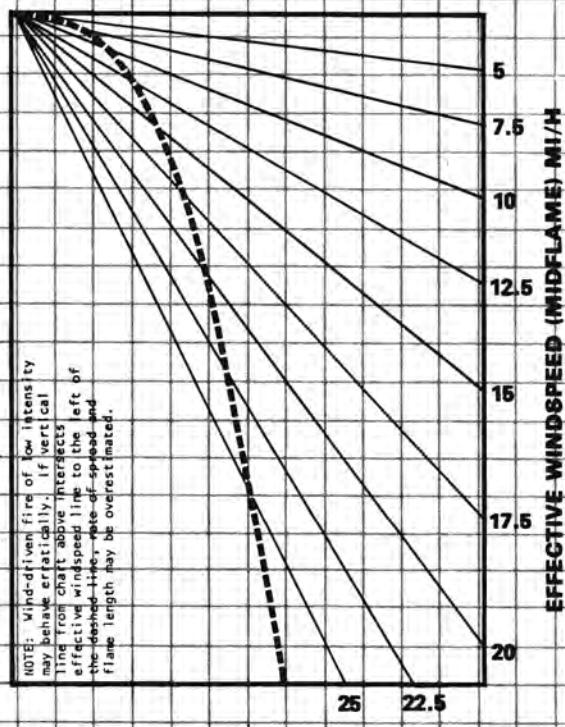
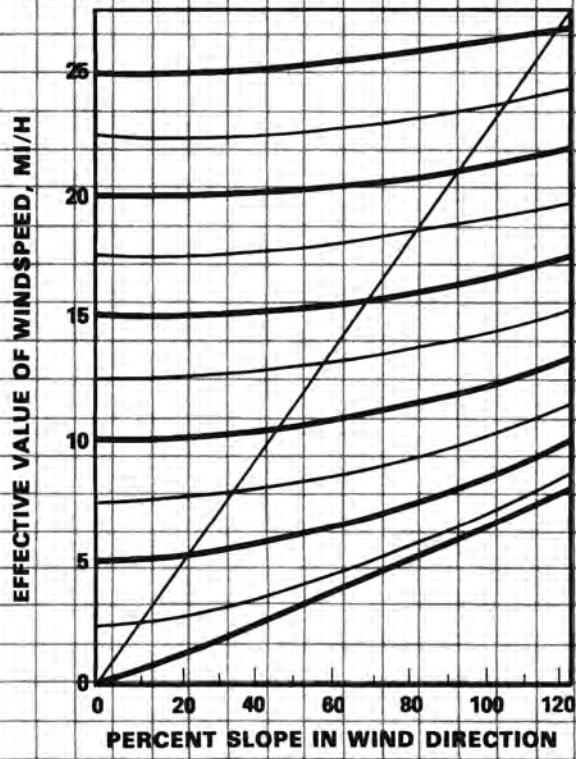
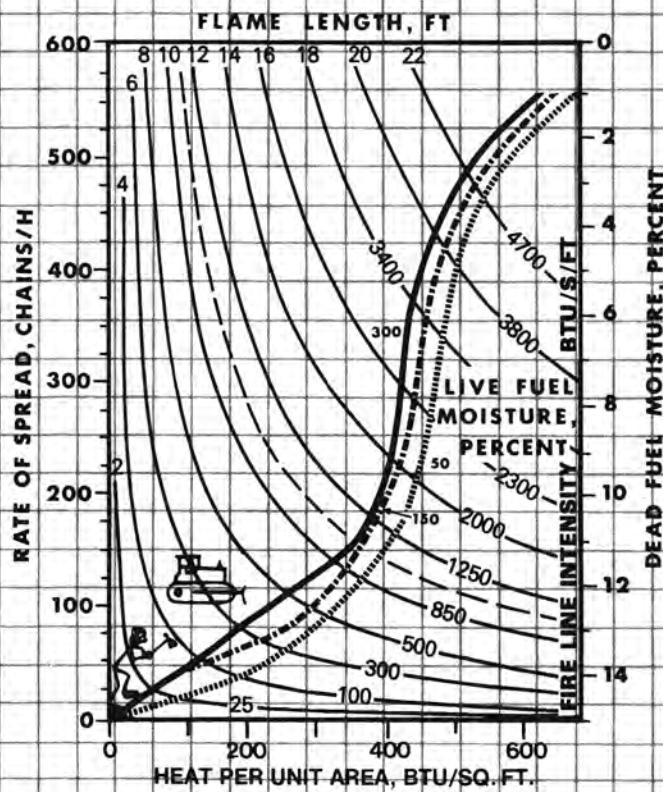
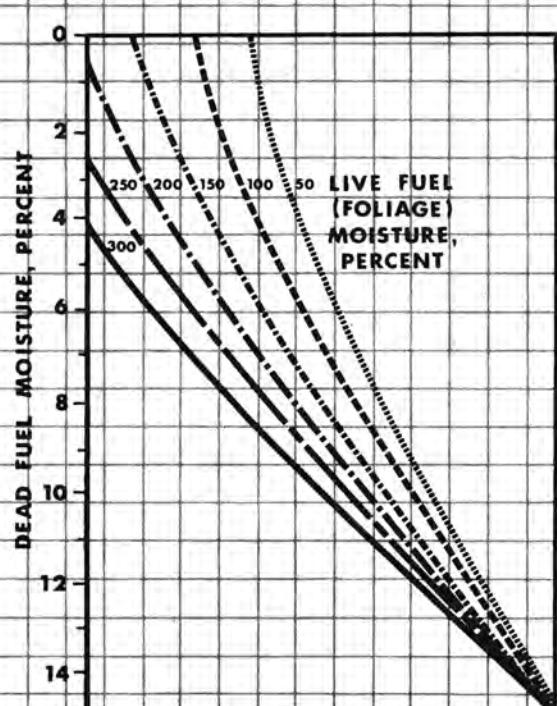
Fuel model 2 – low windspeeds

2. TIMBER(GRASS & UNDERSTORY) - LOW WINDSPEEDS



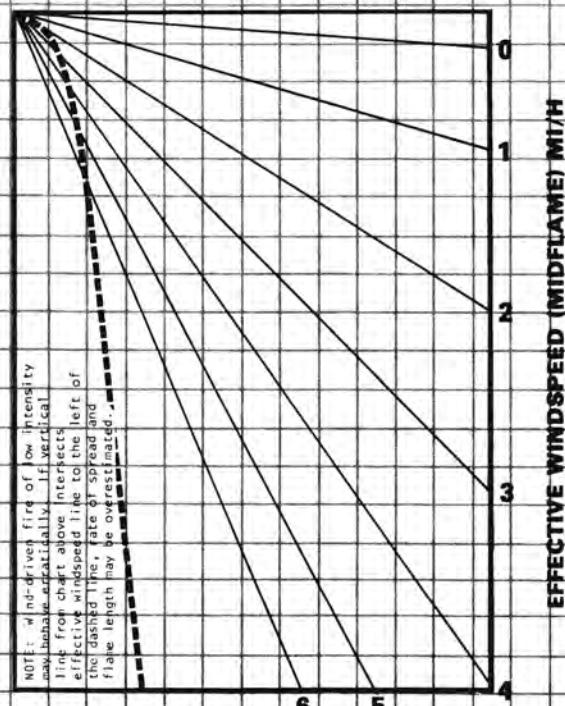
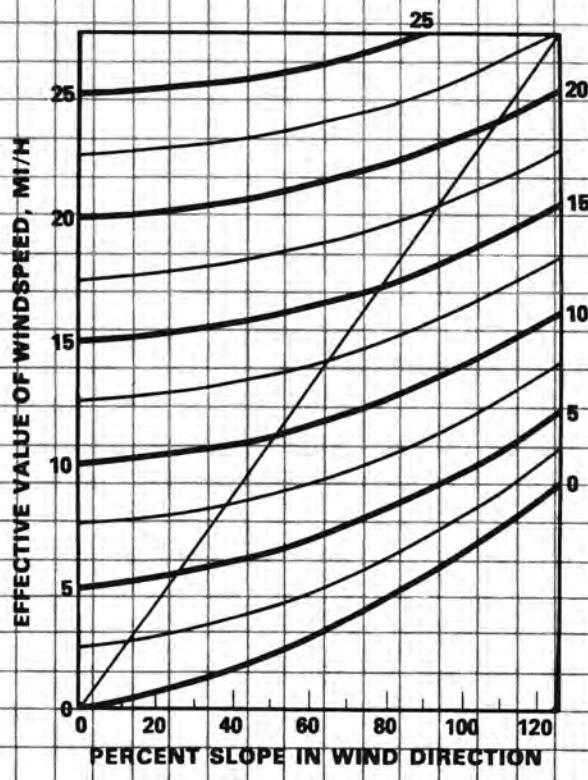
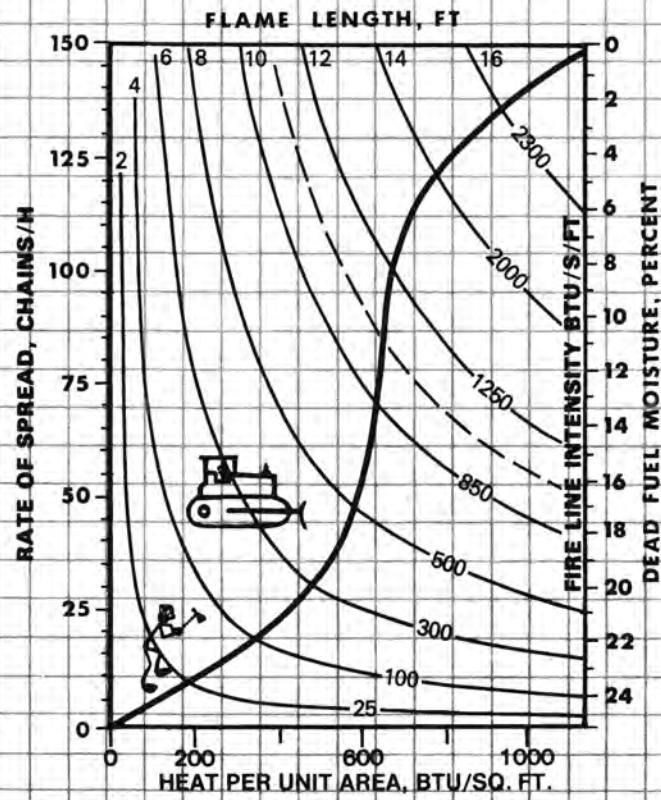
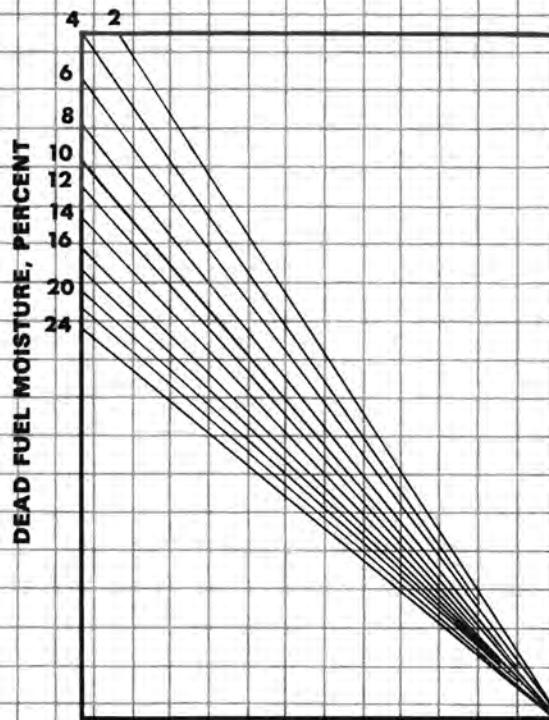
Fuel model 2 – high windspeeds

2. TIMBER (GRASS & UNDERSTORY)-HIGH WINDSPEEDS



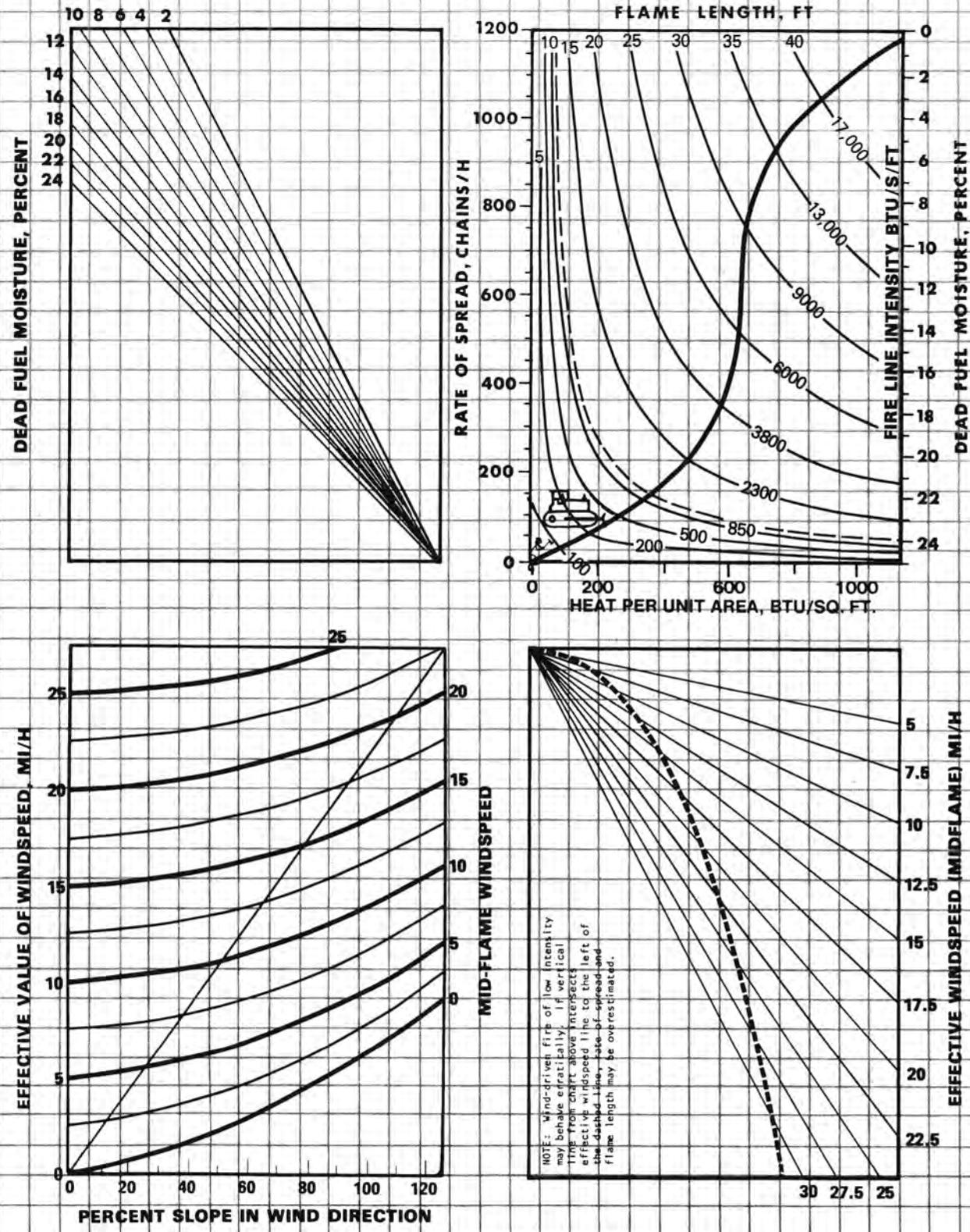
Fuel model 3 — low windspeeds

3. TALL GRASS (2.5 FT) - LOW WINDSPEEDS



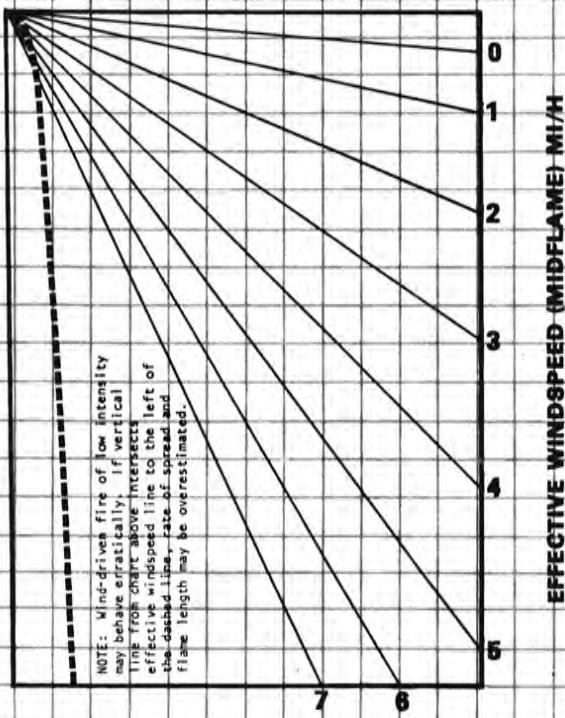
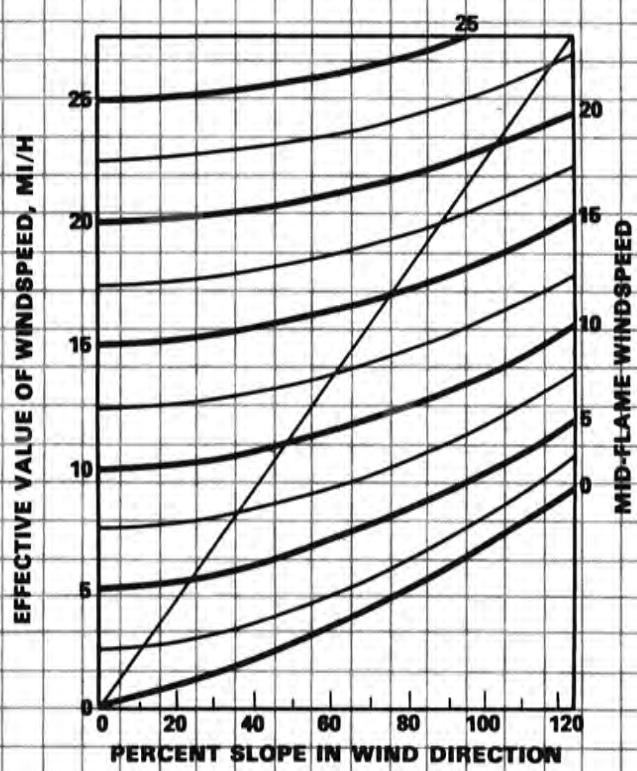
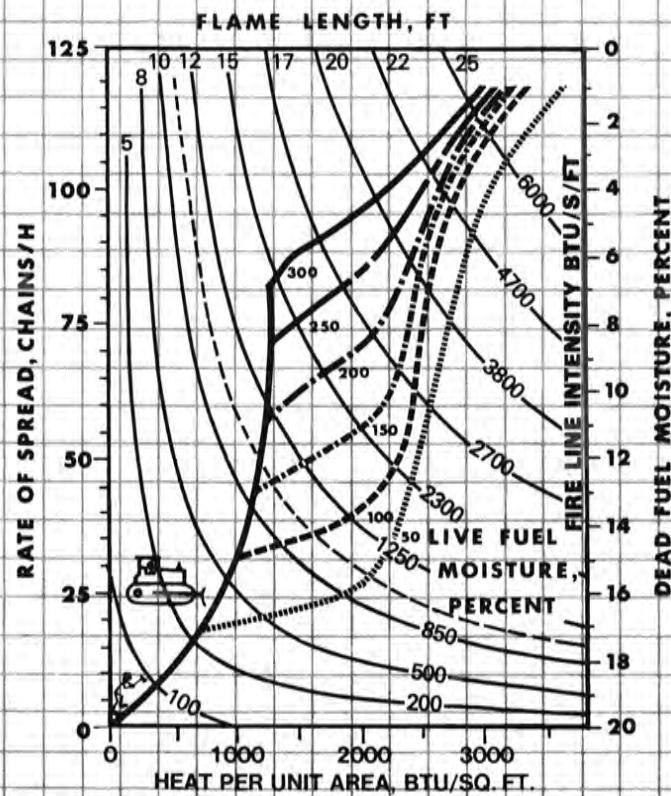
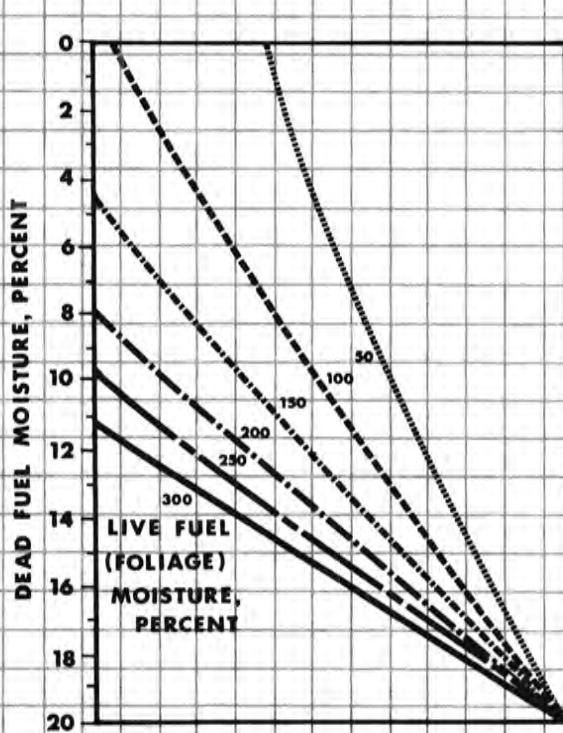
Fuel model 3 – high windspeeds

3. TALL GRASS (2.5 FT) - HIGH WINDSPEEDS



Fuel model 4 – low windspeeds

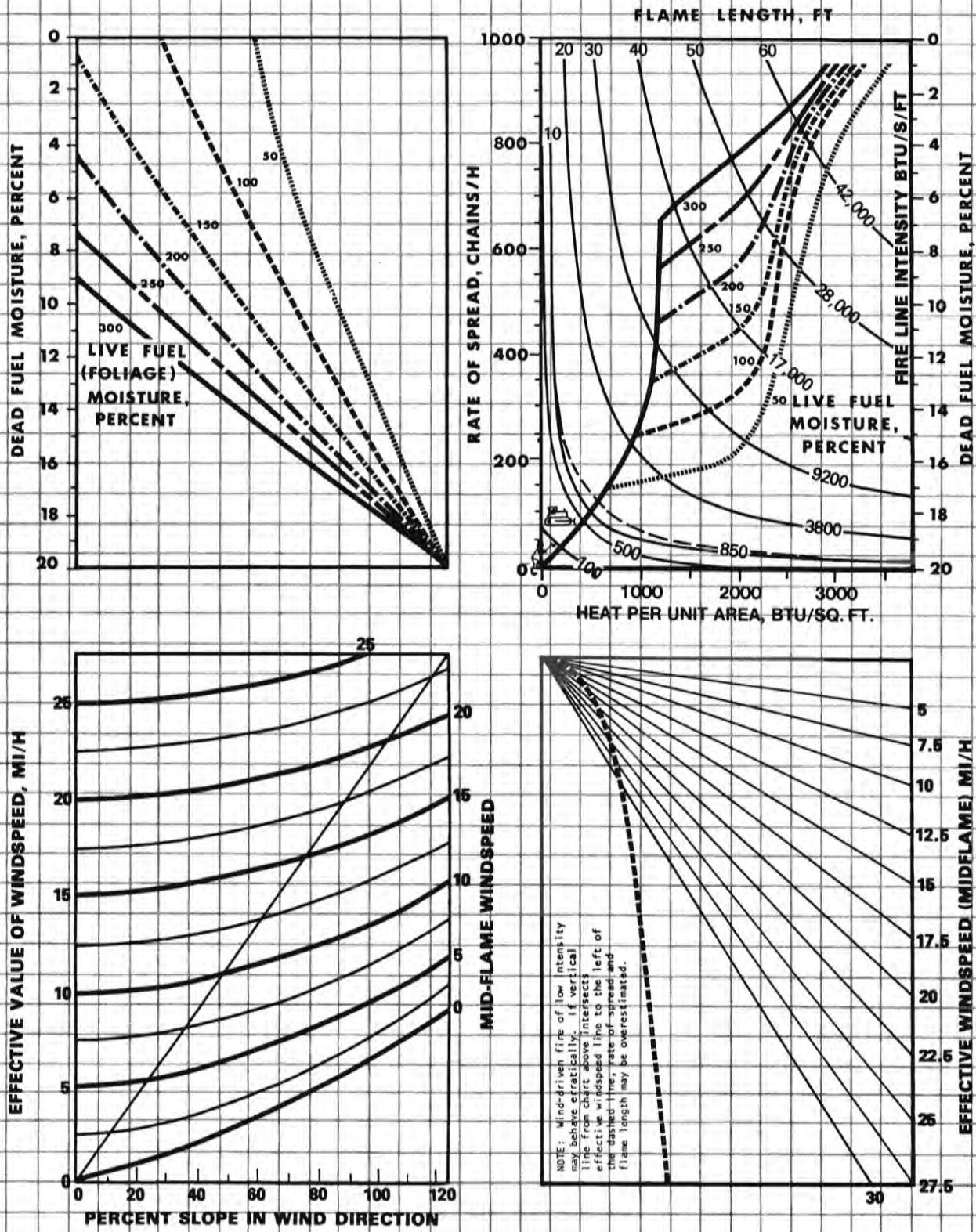
4. CHAPARRAL(6 FT) - LOW WINDSPEEDS



NOTE: Wind-driven fire of low intensity may behave erratically. If vertical line from chart above intersects effective windspeed line to the left of the dashed line, rate of spread and flame length may be overestimated.

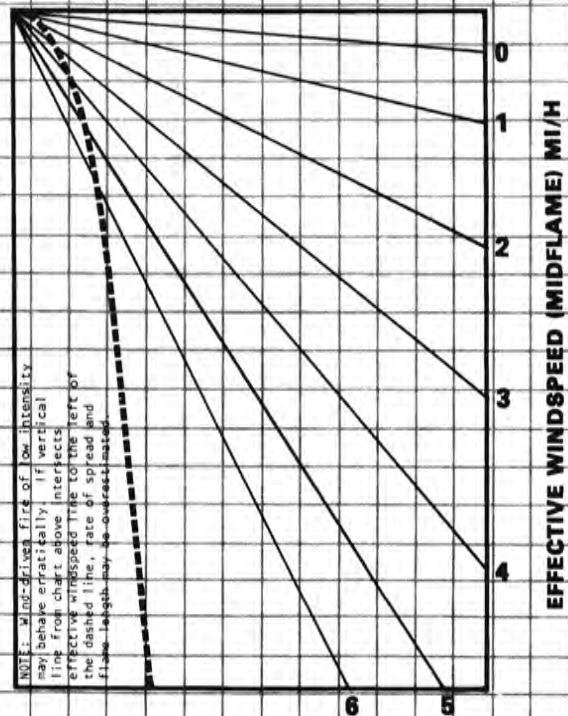
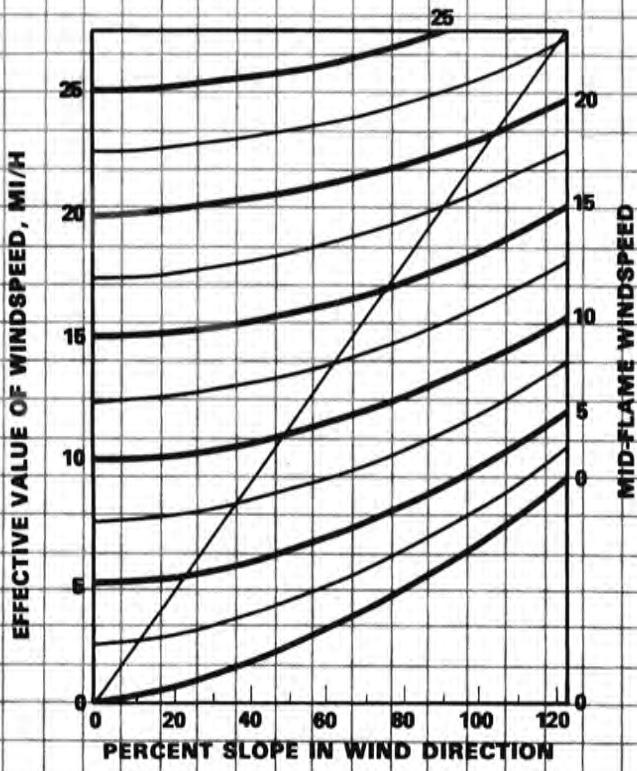
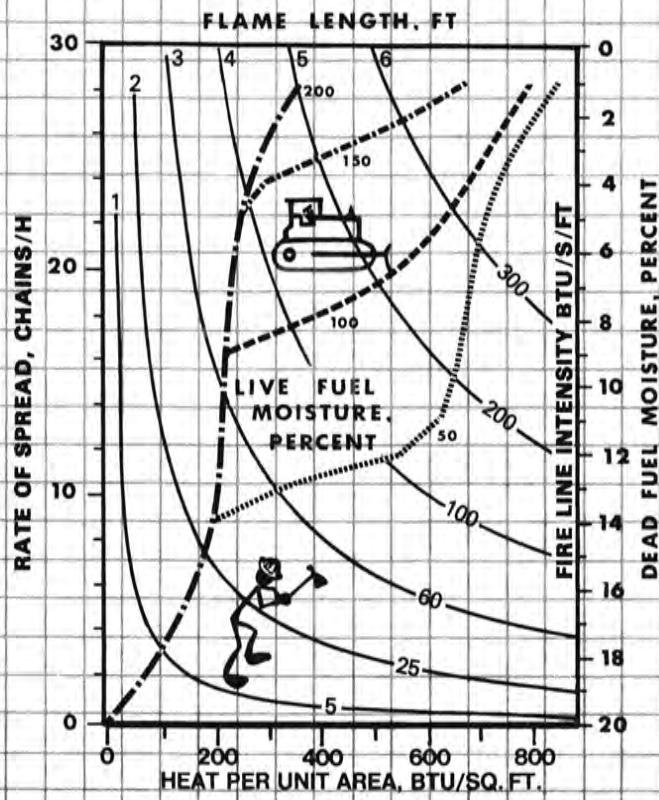
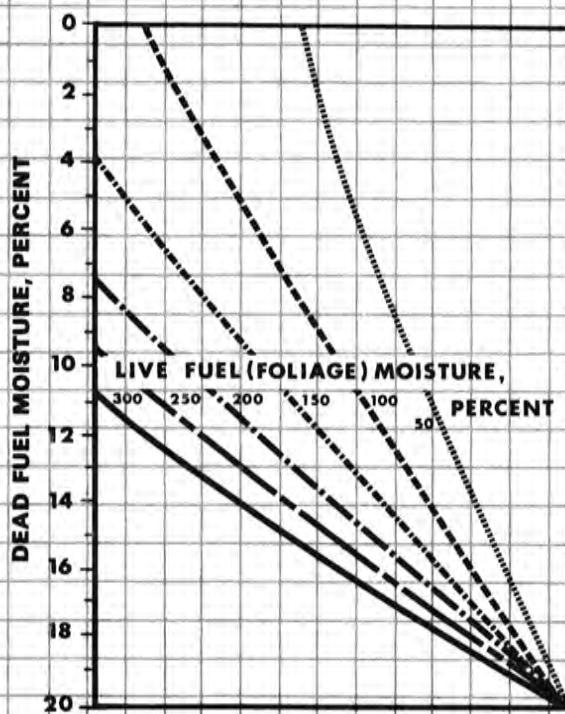
Fuel model 4 – high windspeeds

4. CHAPARRAL (6 FT)- HIGH WINDSPEEDS



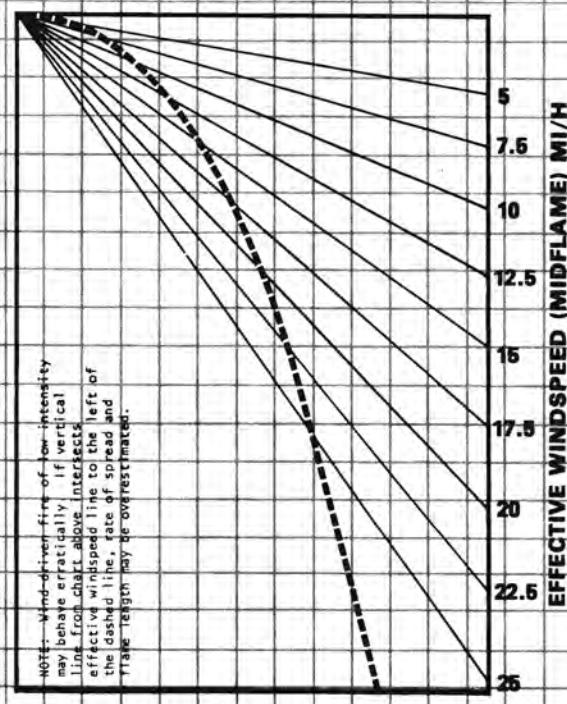
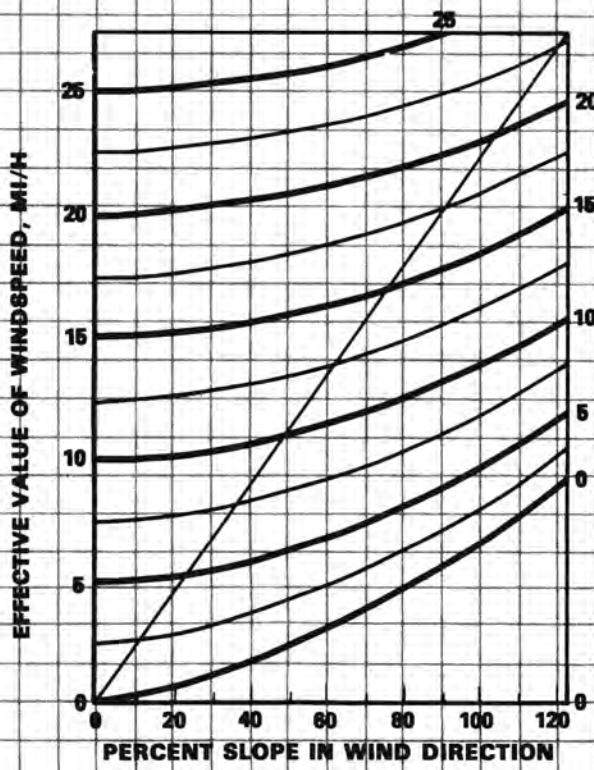
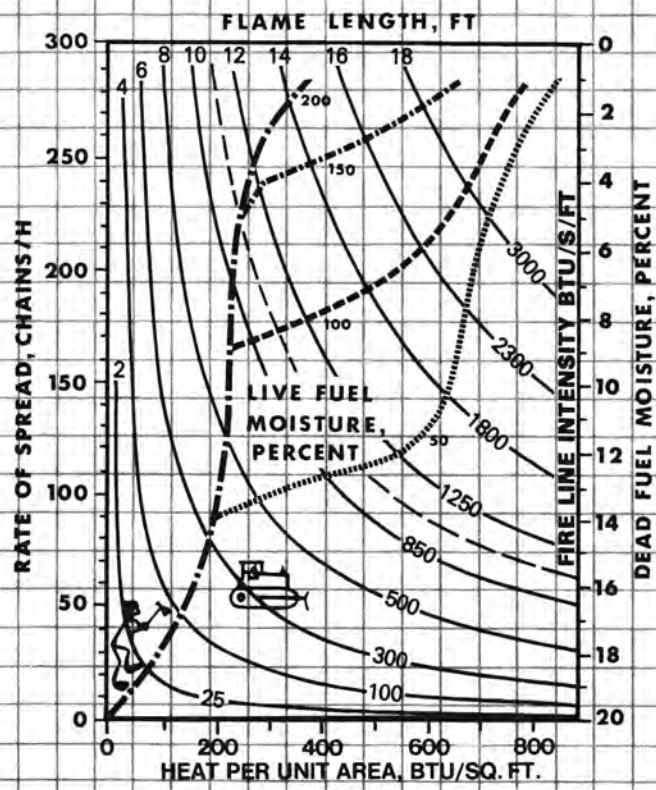
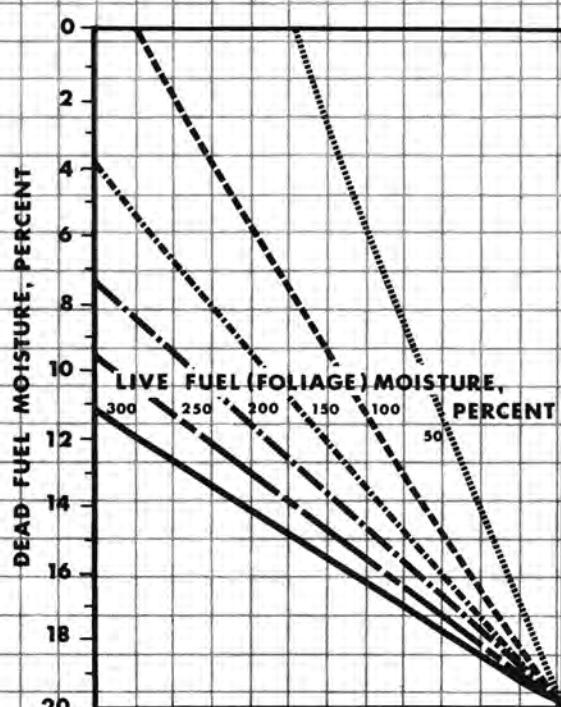
Fuel model 5 – low windspeeds

5. BRUSH (2 FT) - LOW WINDSPEEDS



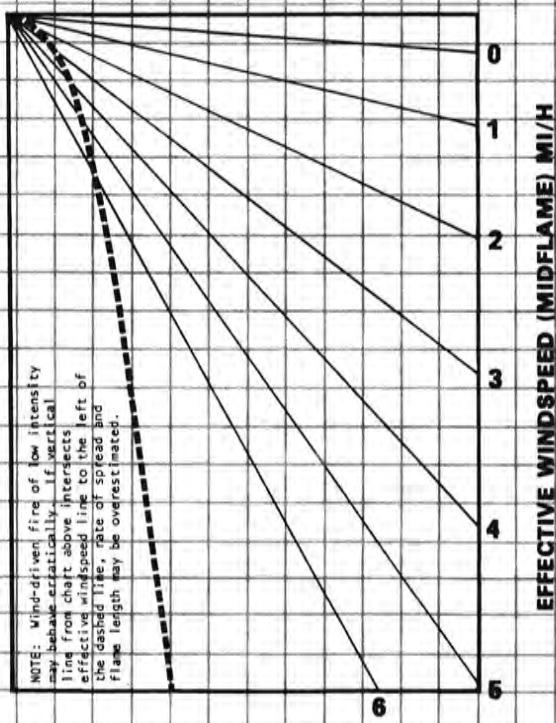
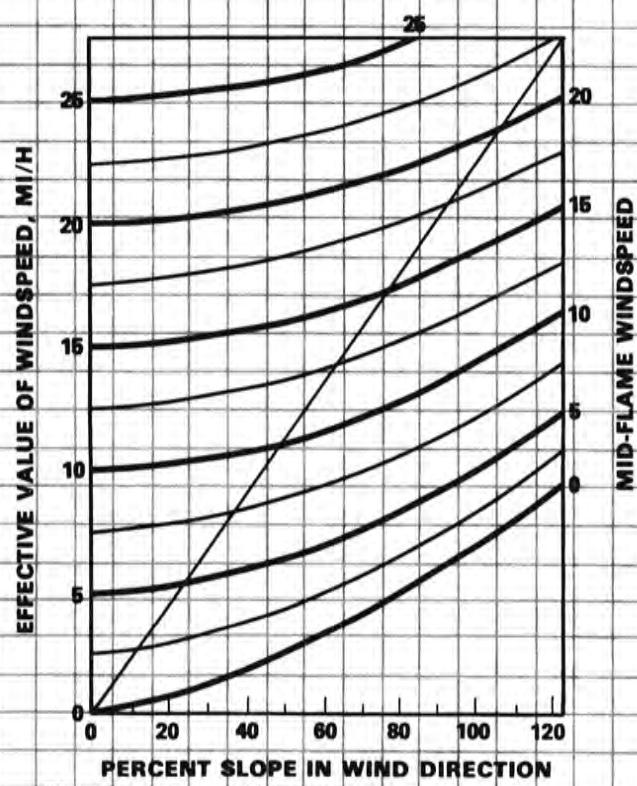
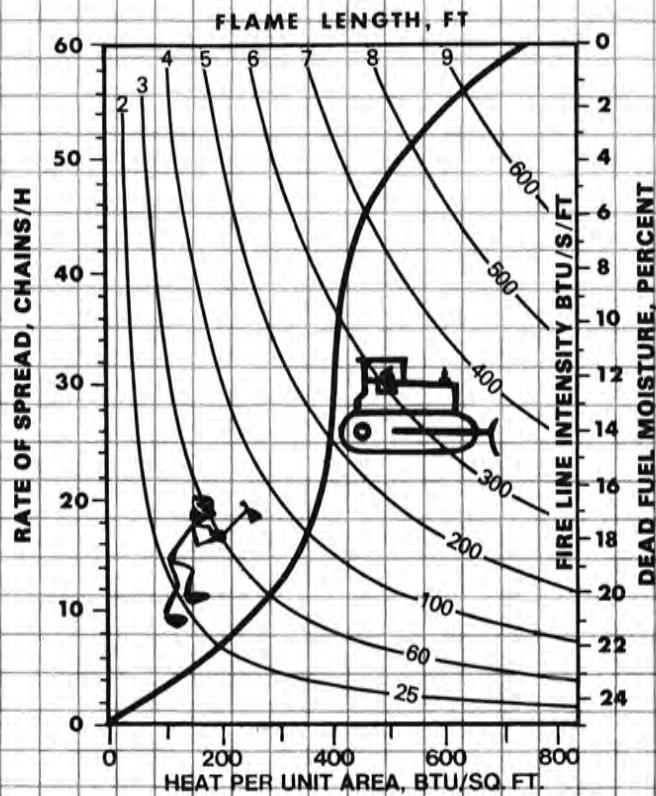
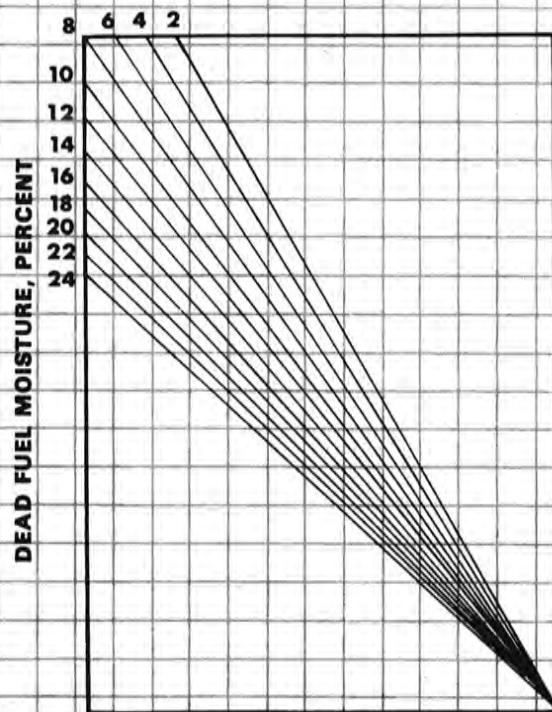
Fuel model 5 – high windspeeds

5. BRUSH (2 FT) - HIGH WINDSPEEDS



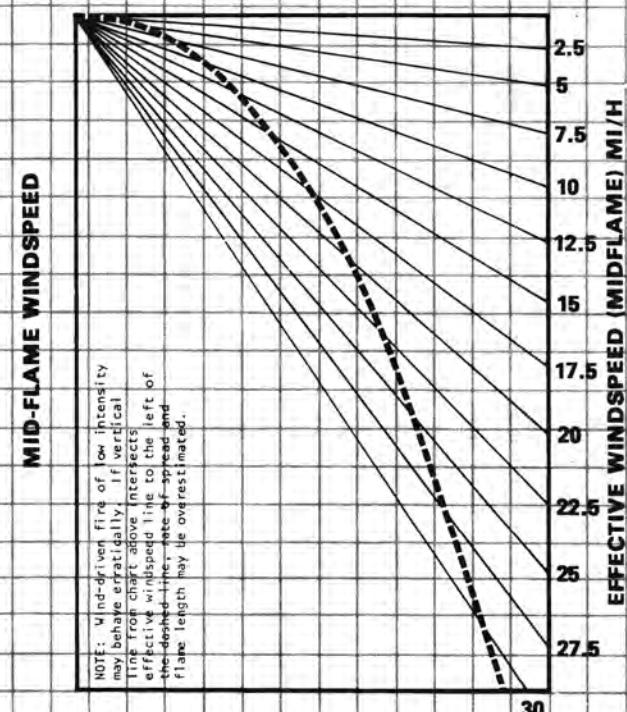
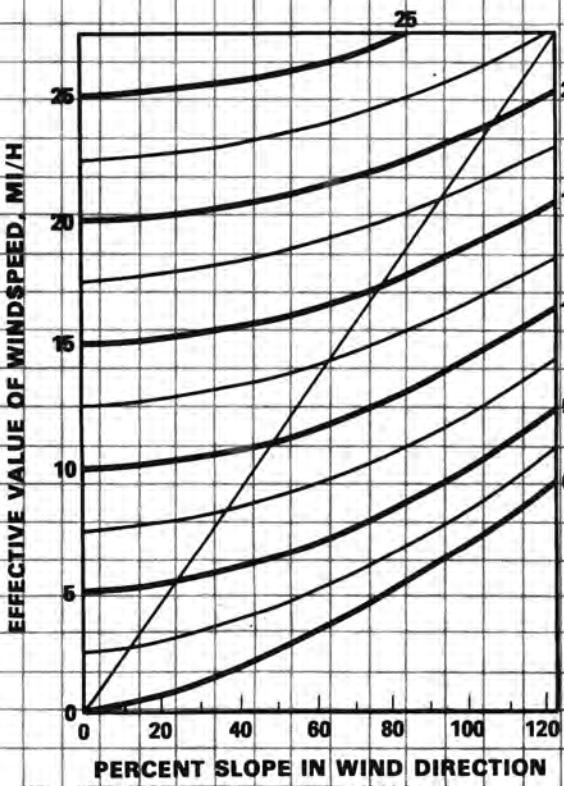
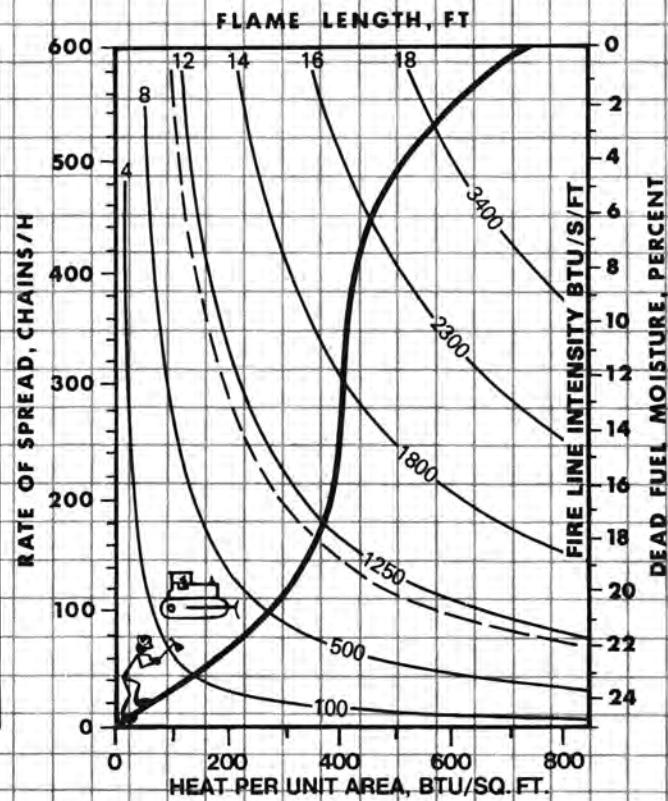
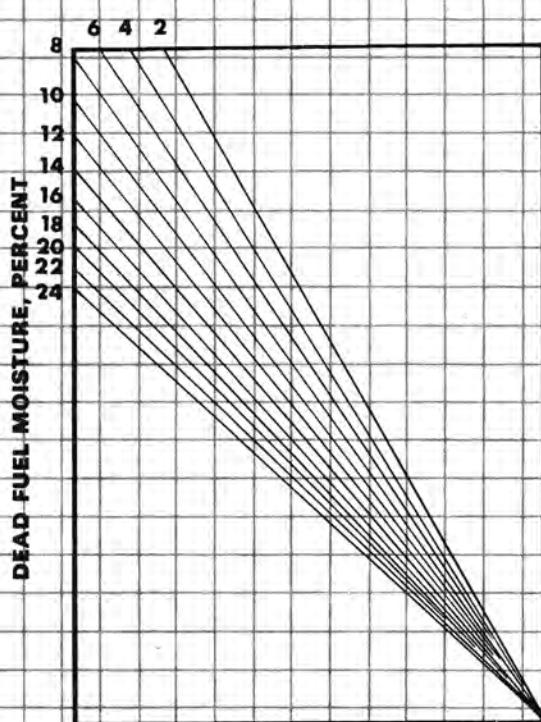
Fuel model 6 – low windspeeds

6. DORMANT BRUSH, HARDWOOD SLASH - LOW WINDSPEEDS



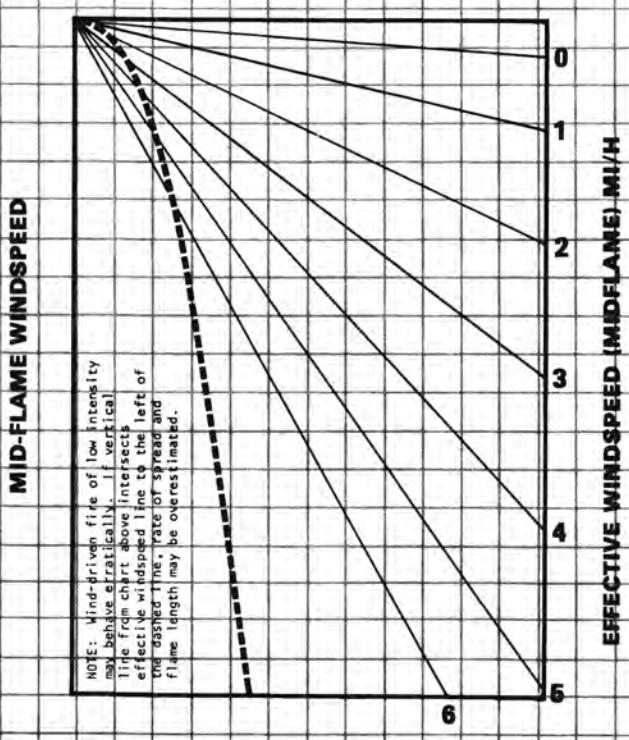
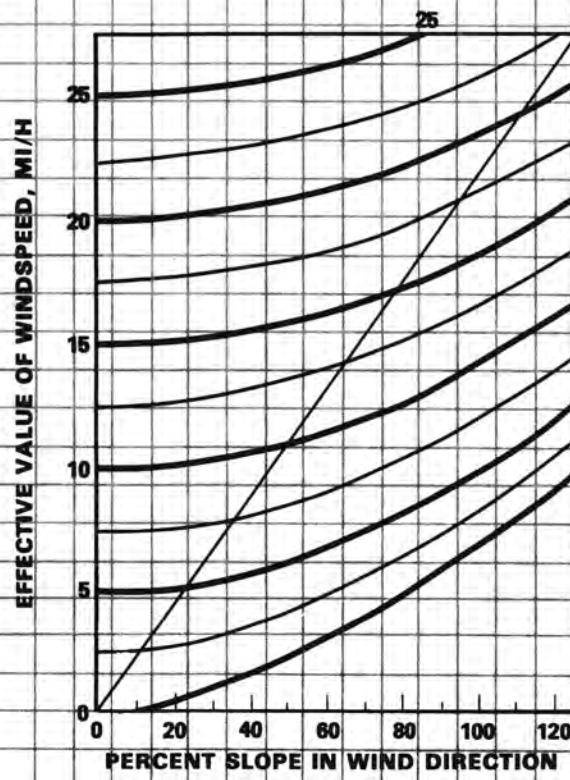
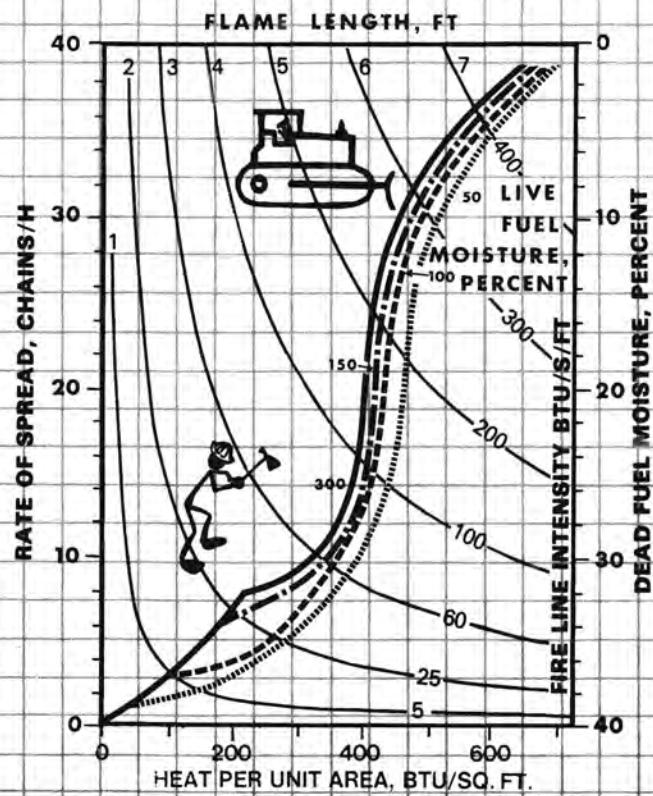
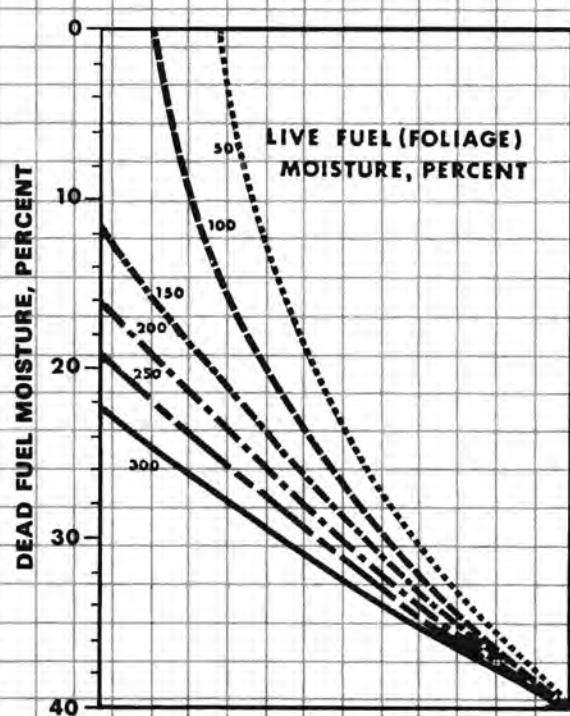
Fuel model 6 – high windspeeds

6. DORMANT BRUSH, HARDWOOD SLASH-HIGH WINDSPEEDS



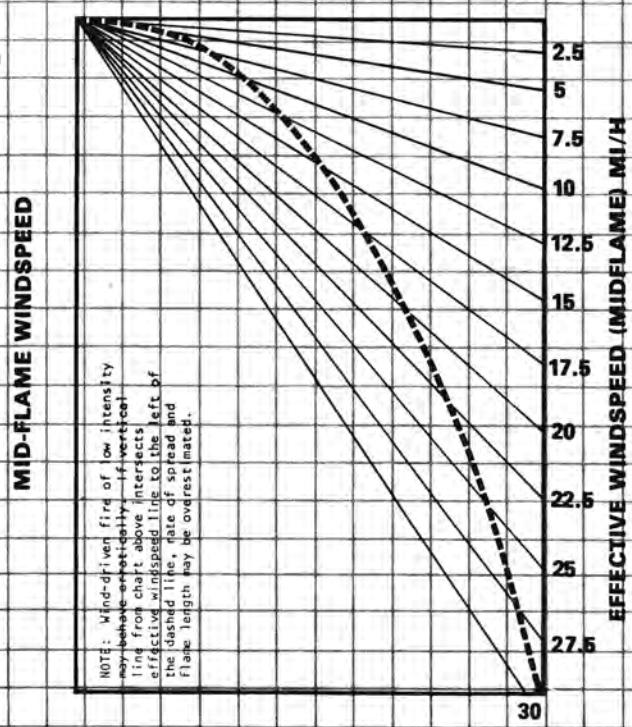
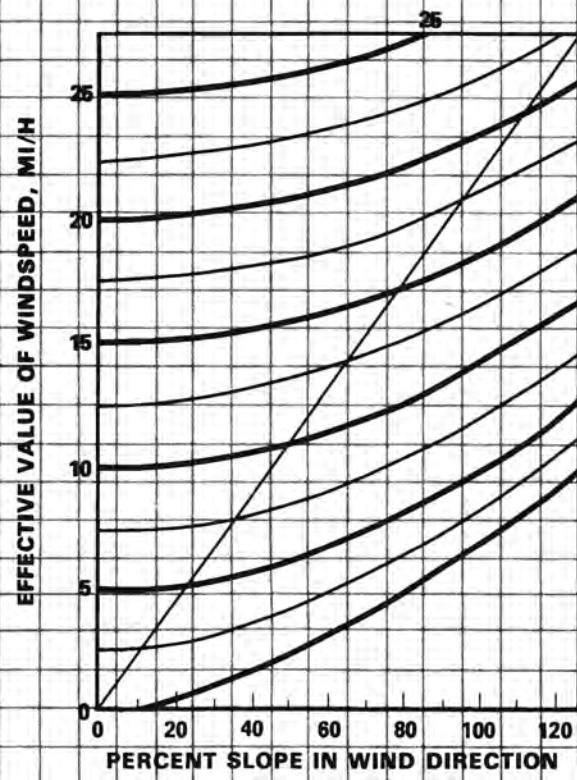
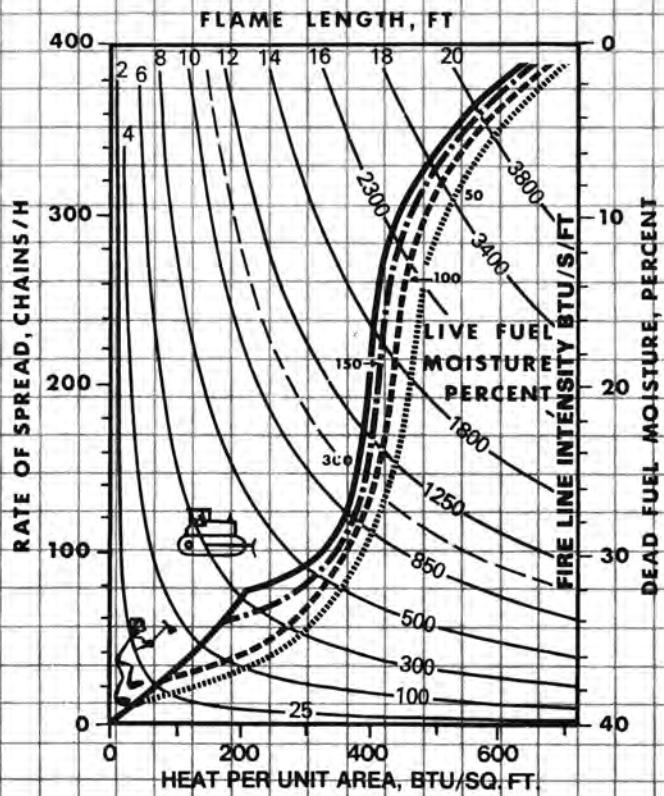
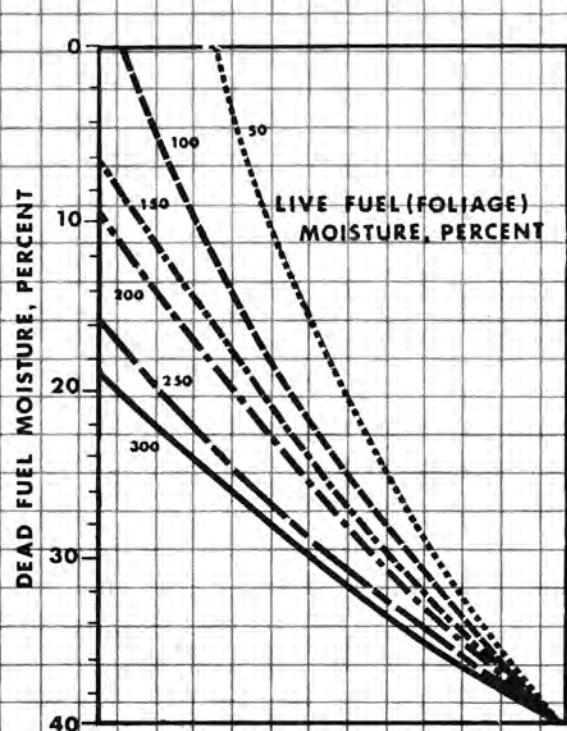
Fuel model 7 – low windspeeds

Z. SOUTHERN ROUGH - LOW WINDSPEEDS



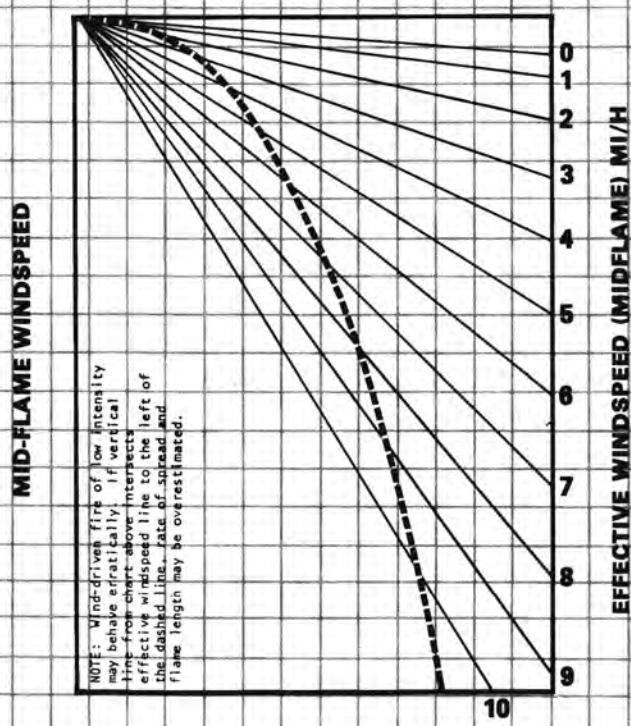
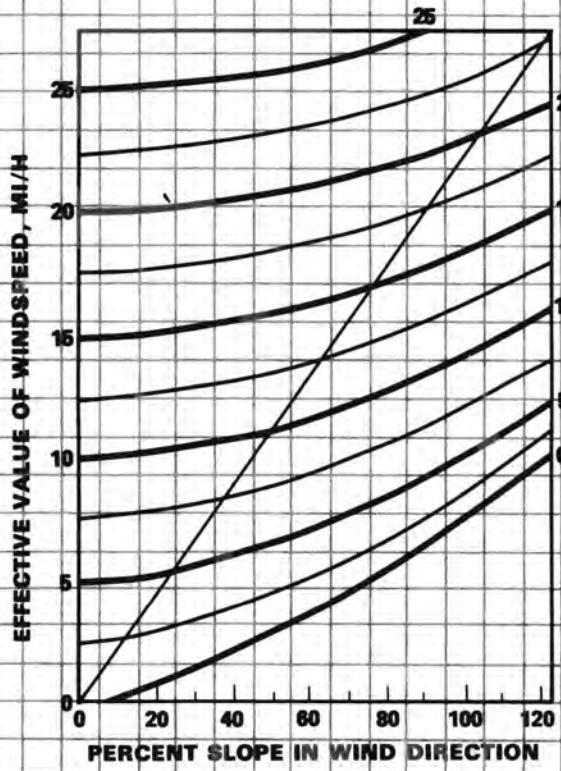
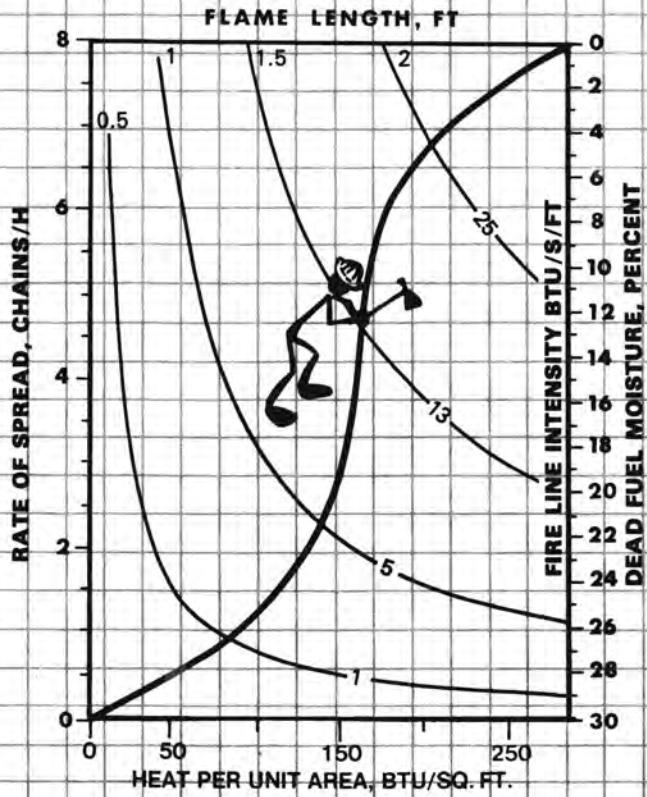
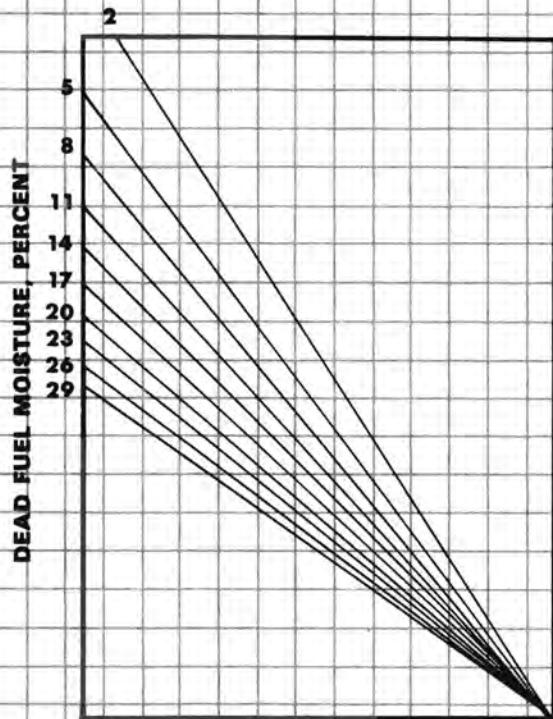
Fuel model 7 – high windspeeds

7. SOUTHERN ROUGH -HIGH WINDSPEEDS



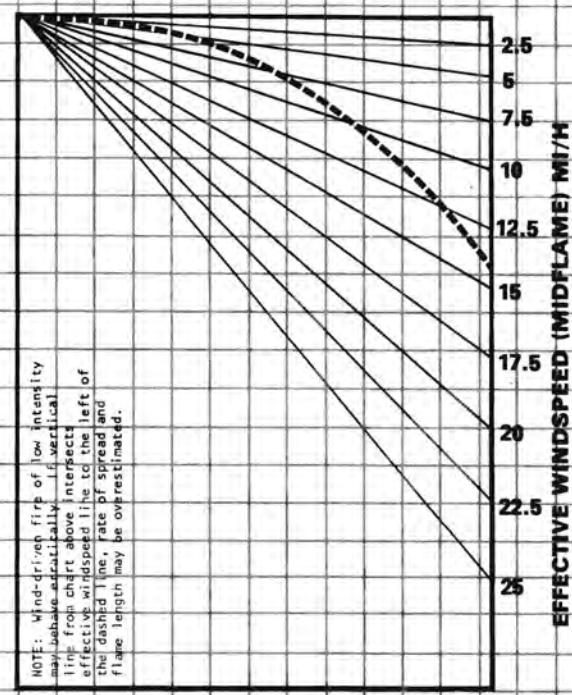
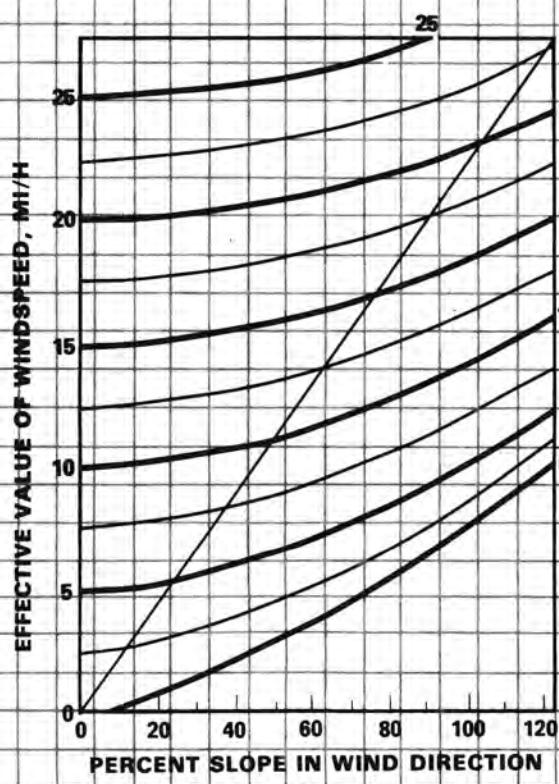
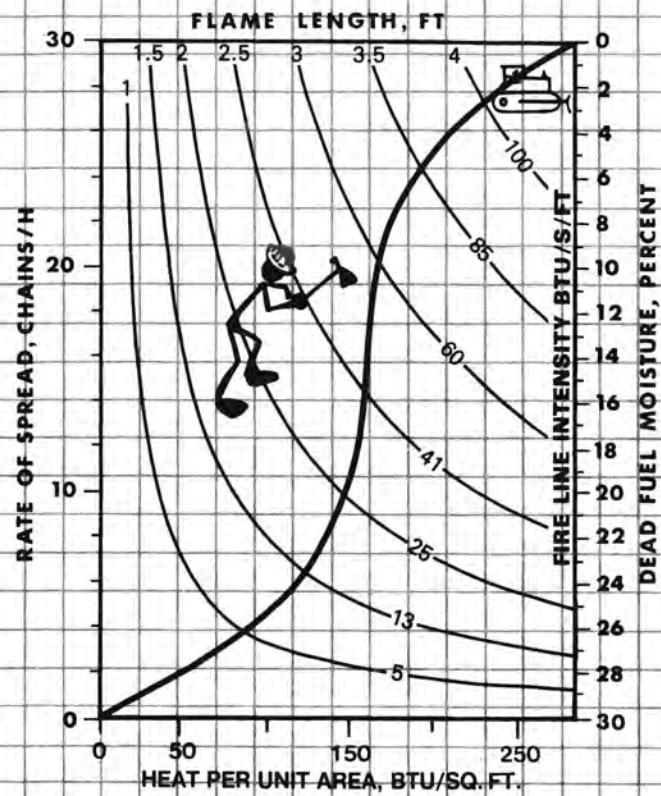
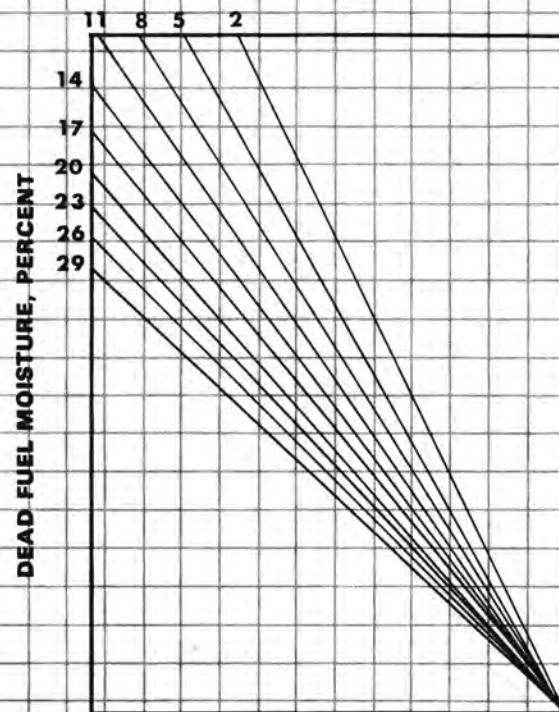
Fuel model 8 – low windspeeds

8. CLOSED TIMBER LITTER - LOW WINDSPEEDS



Fuel model 8 – high windspeeds

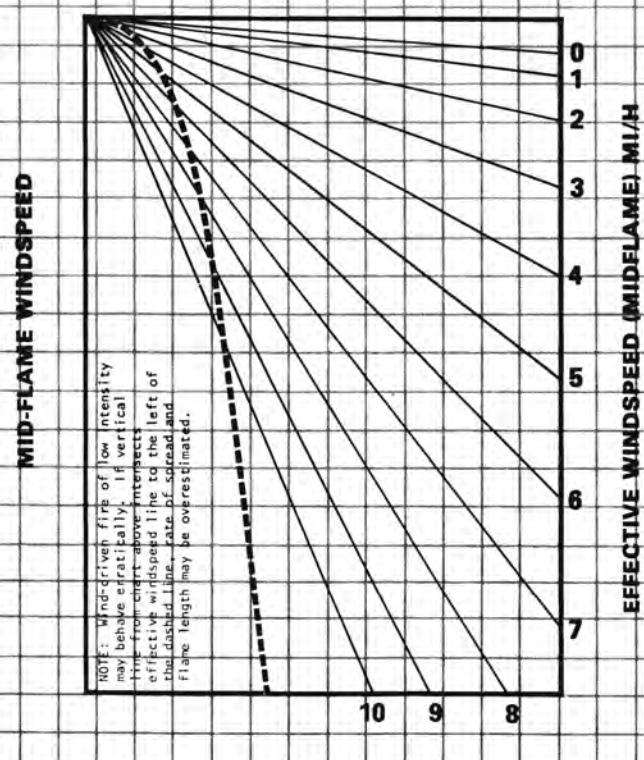
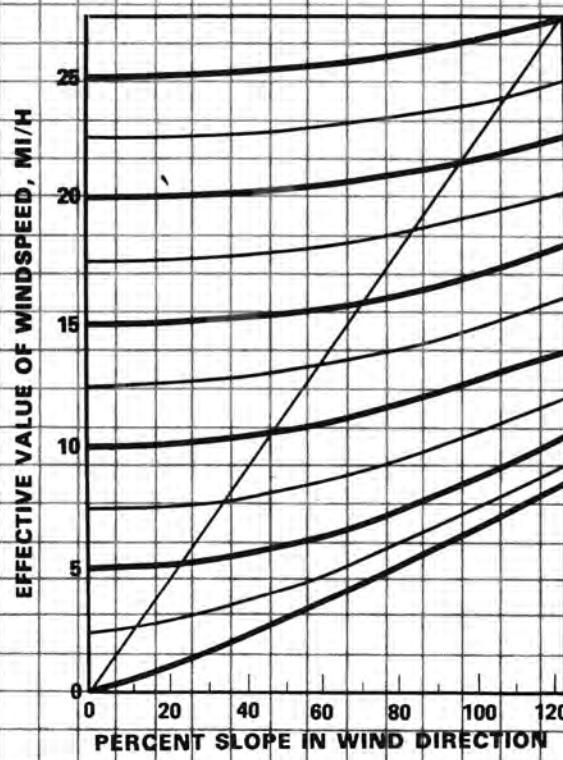
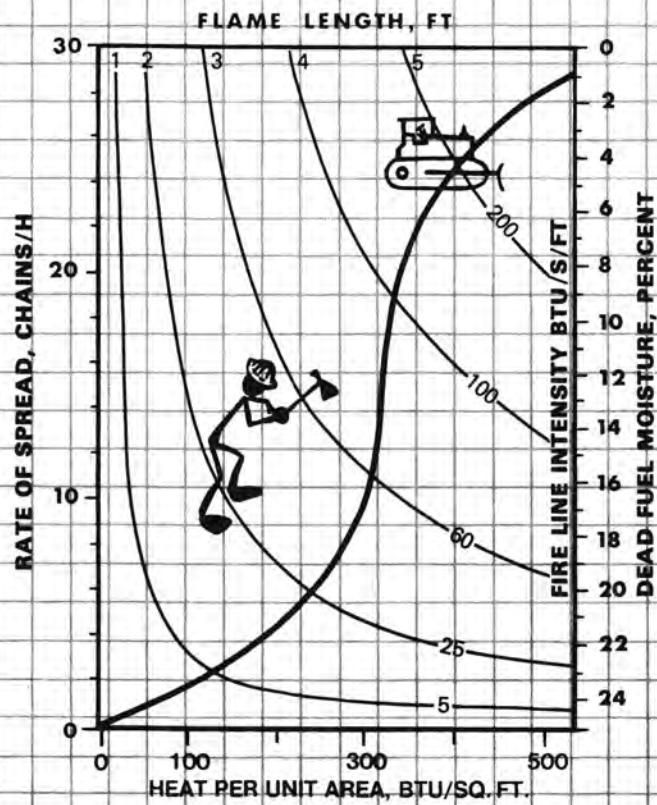
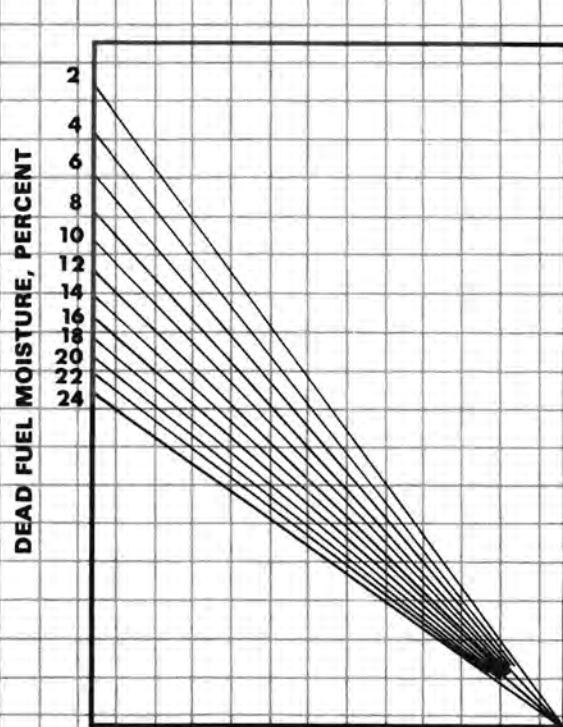
8. CLOSED TIMBER LITTER- HIGH WINDSPEEDS



NOTE: Wind-driven fires of low intensity may behave erratically if vertical line from chart above intersects effective windspeed line to the left of the dashed line, rate of spread and flame length may be overestimated.

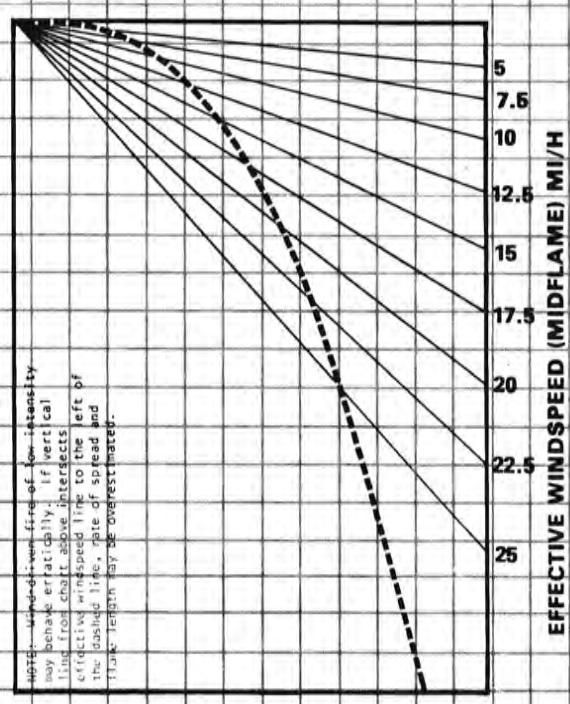
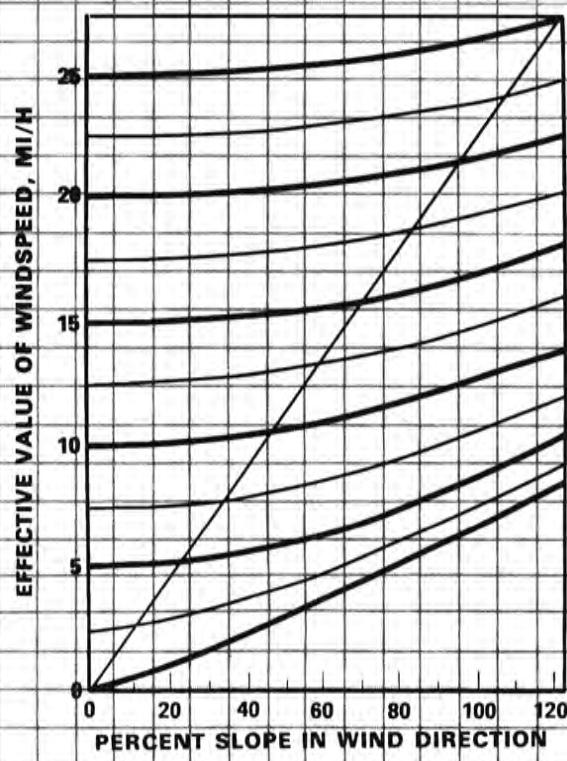
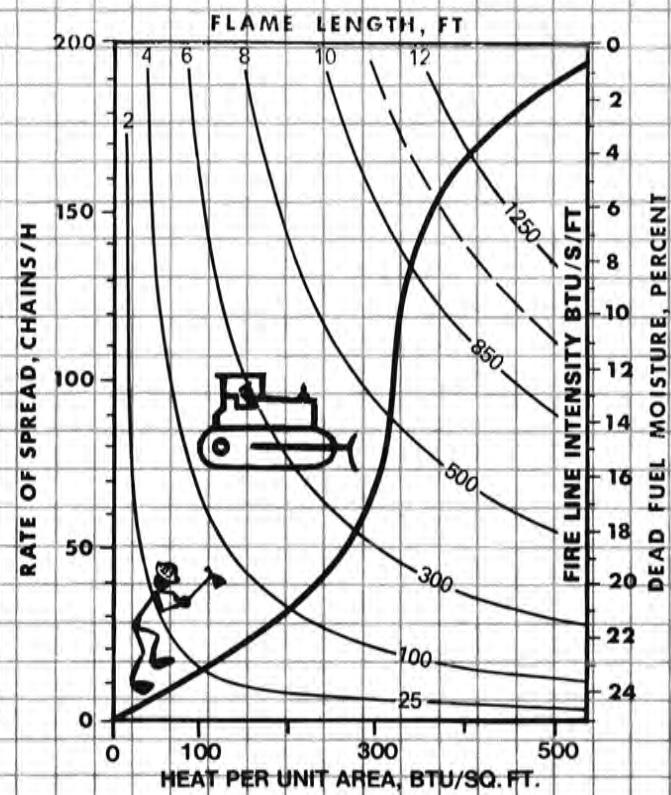
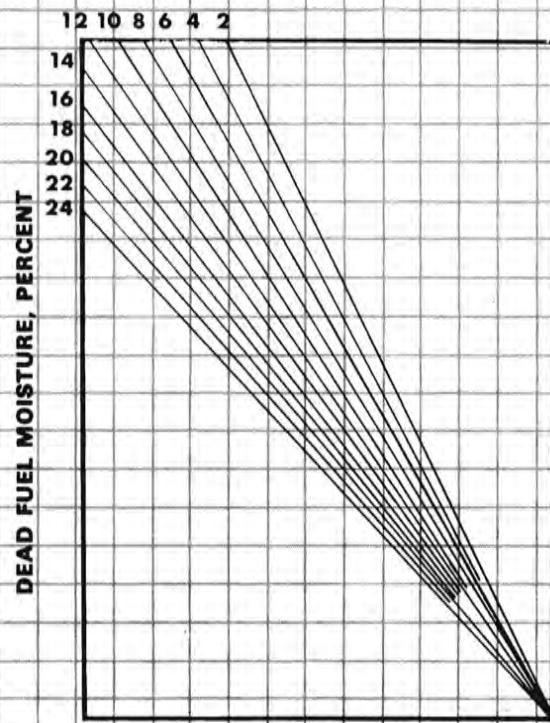
Fuel model 9 – low windspeeds

9. HARDWOOD LITTER - LOW WINDSPEEDS



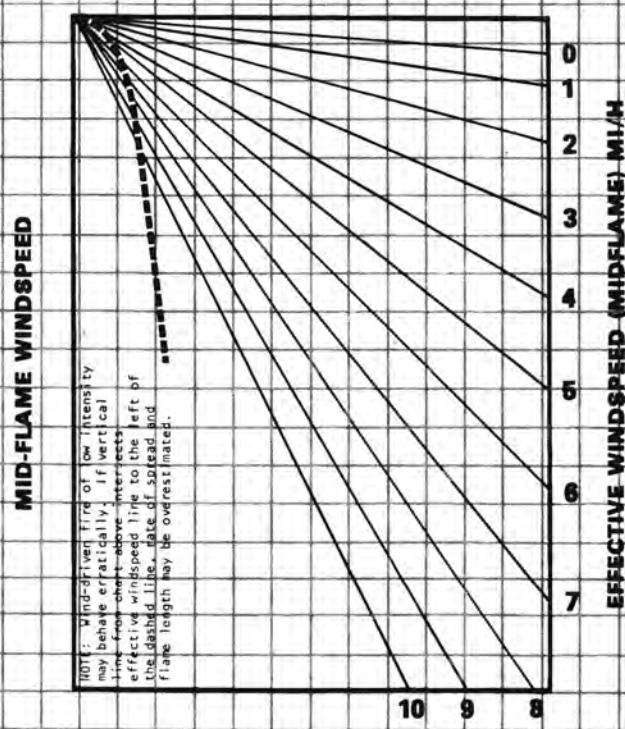
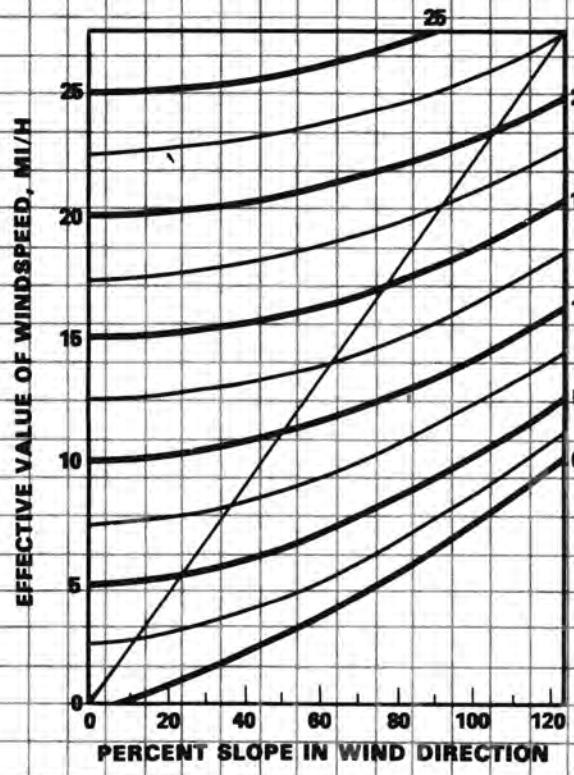
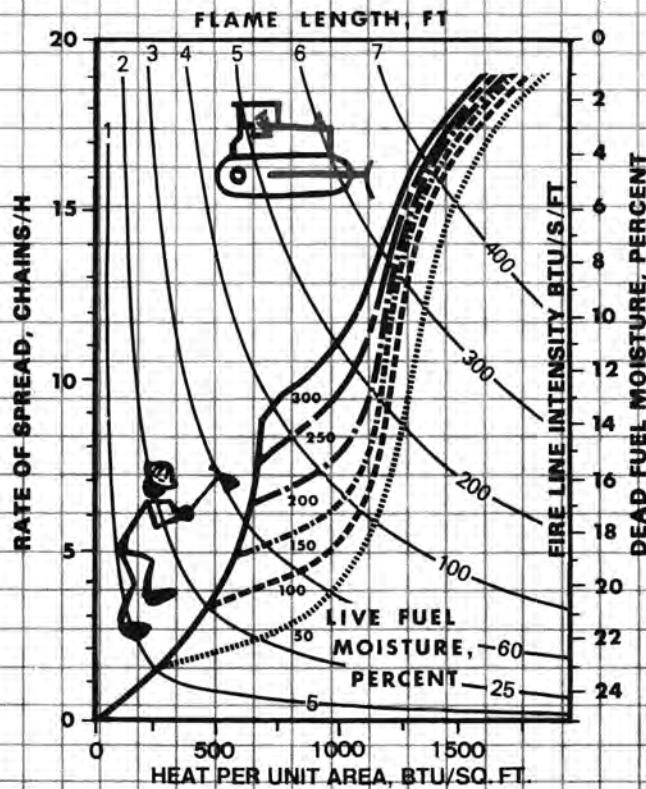
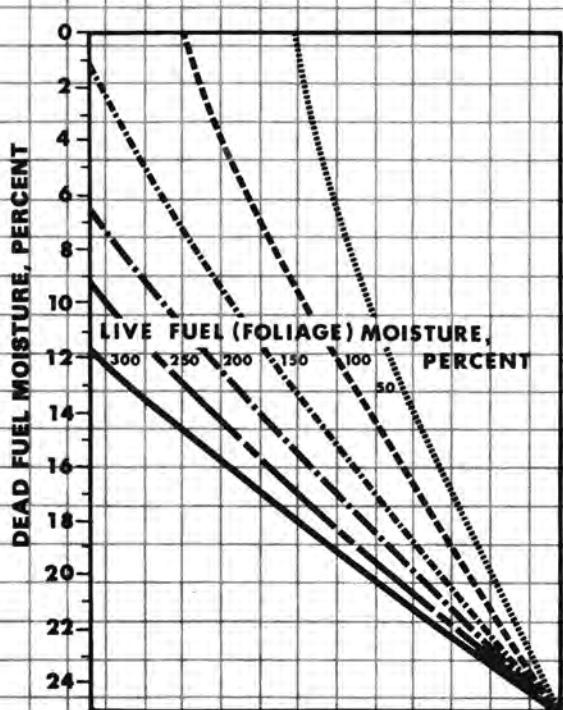
Fuel model 9 – high windspeeds

9. HARDWOOD LITTER-HIGH WINDSPEEDS



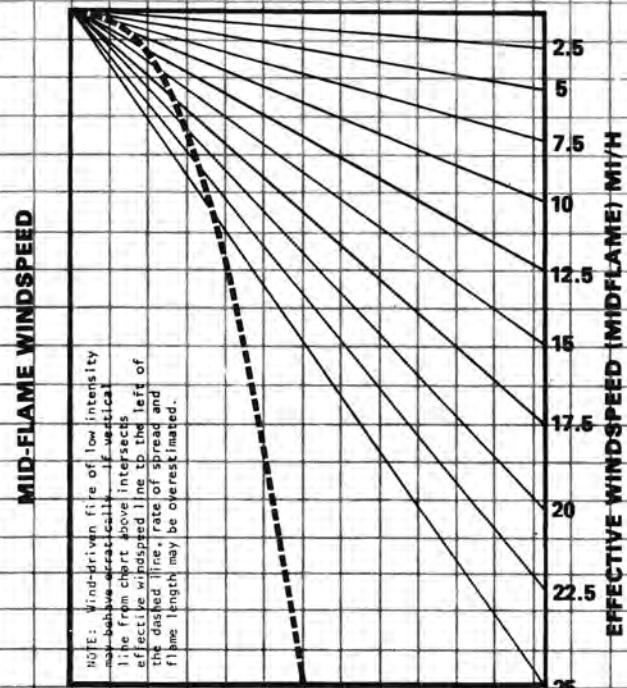
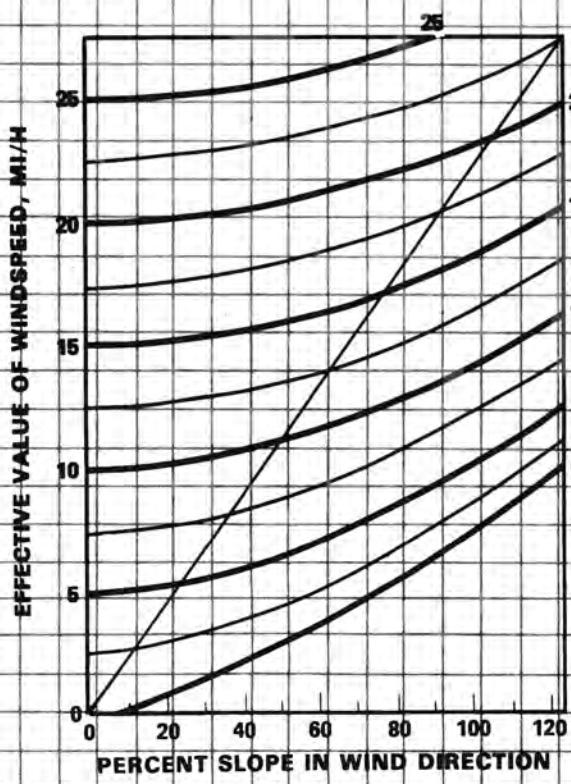
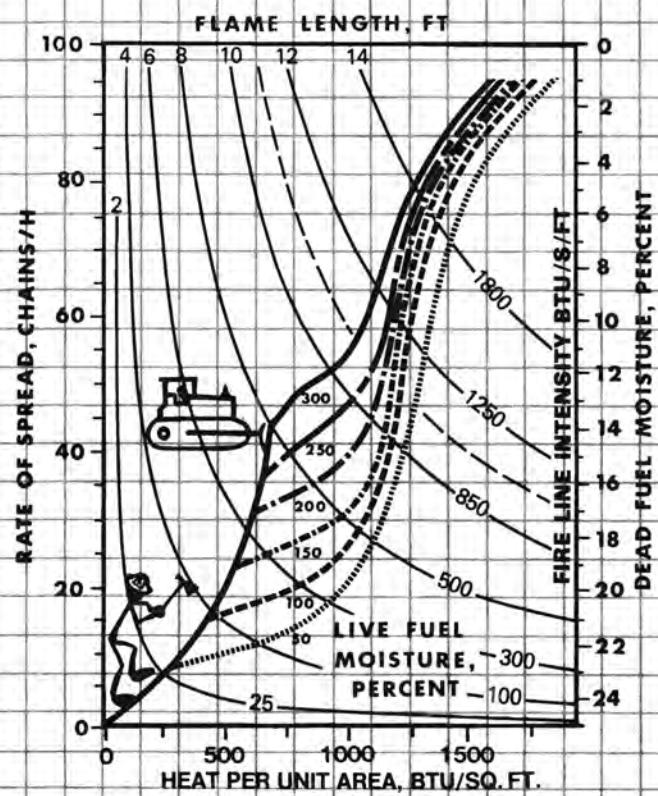
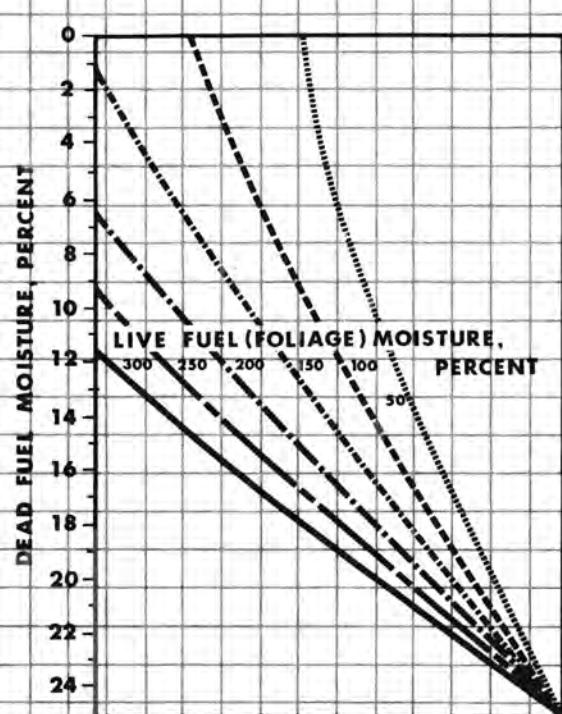
Fuel model 10 – low windspeeds

10. TIMBER (LITTER & UNDERSTORY) - LOW WINDSPEEDS



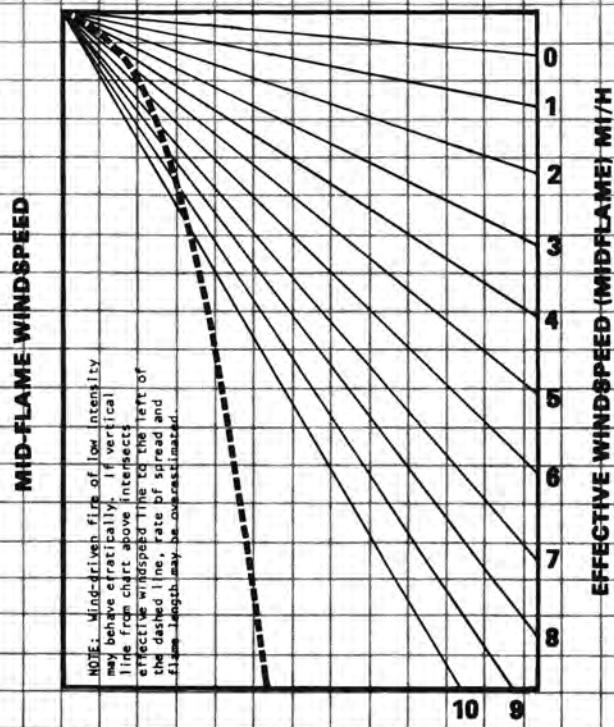
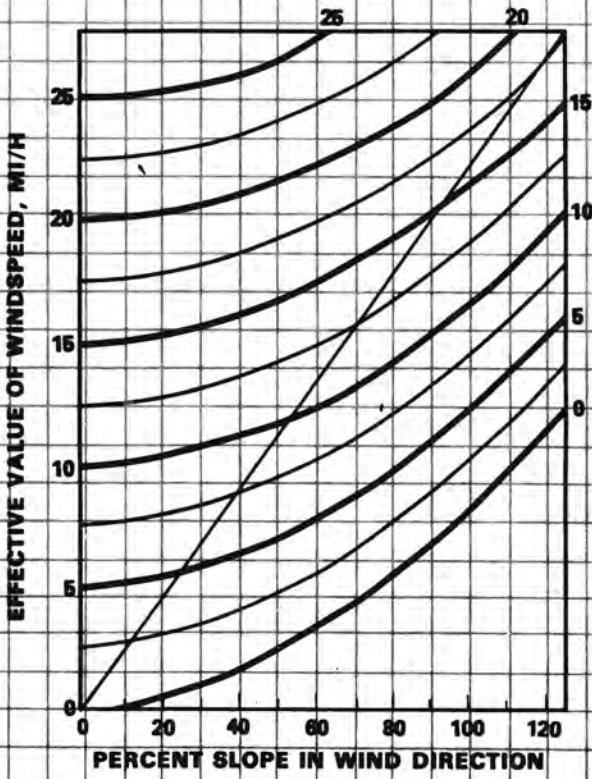
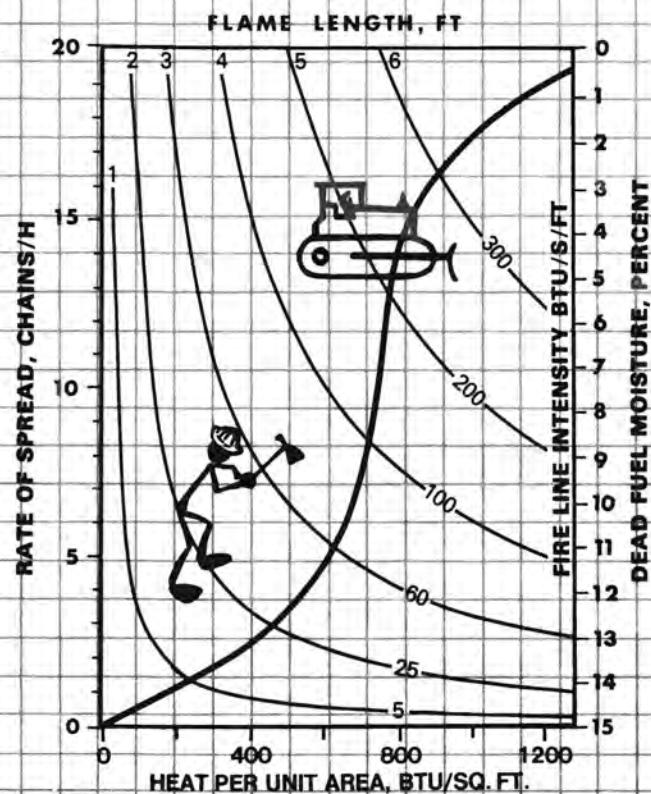
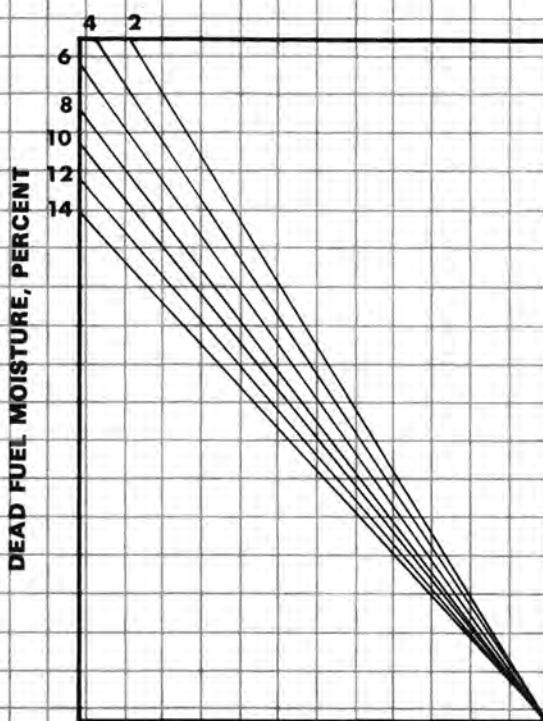
Fuel model 10 – high windspeeds

10. TIMBER (LITTER & UNDERSTORY)-HIGH WINDSPEEDS



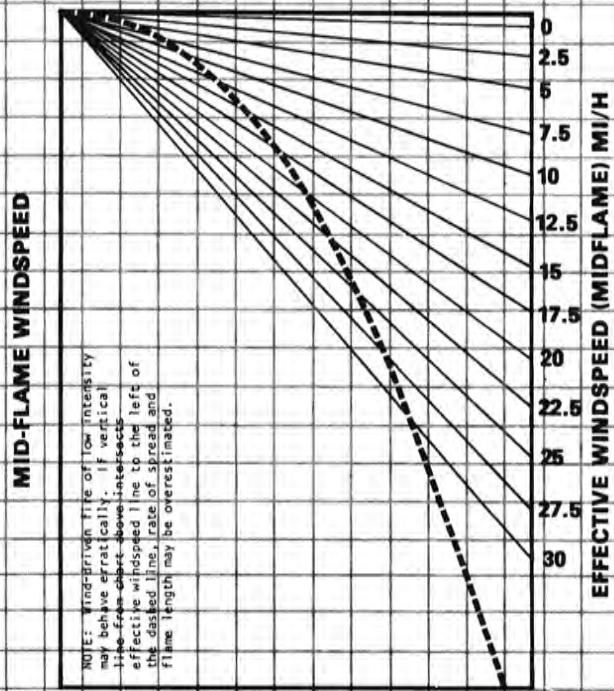
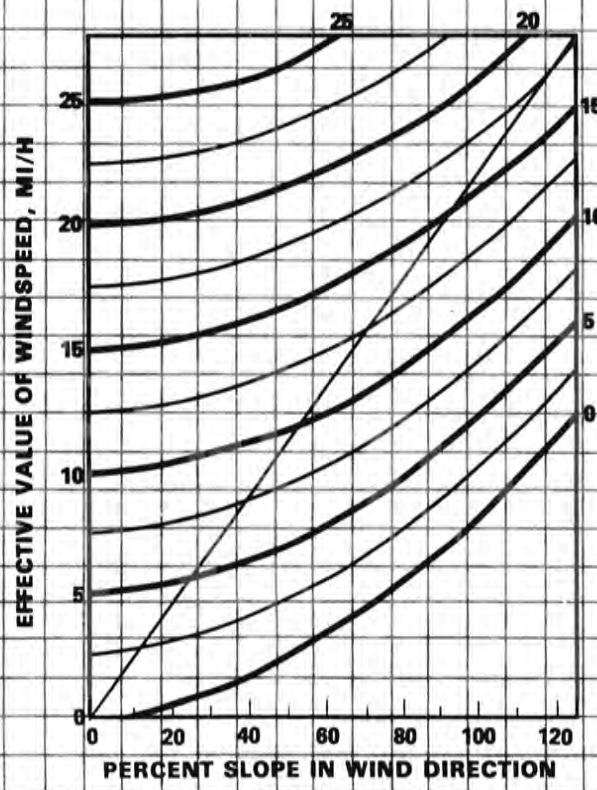
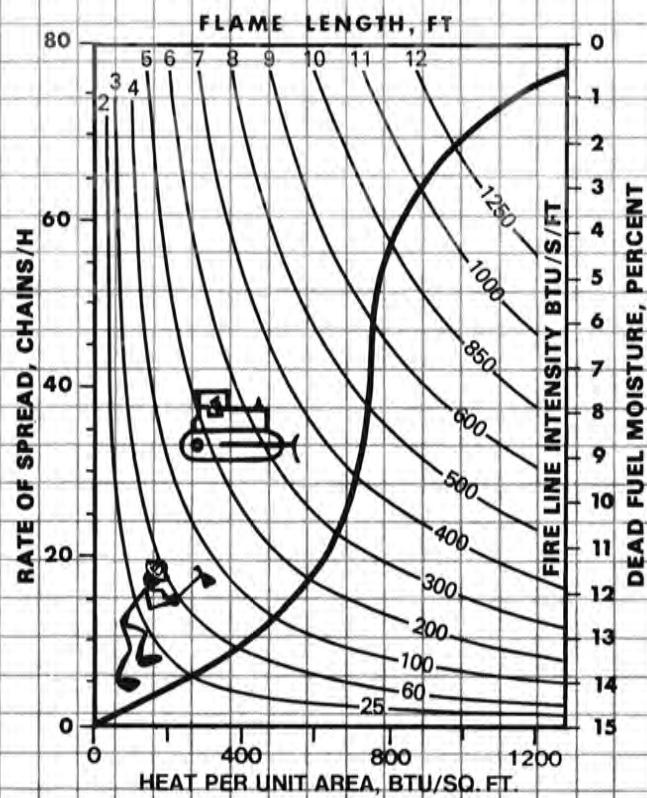
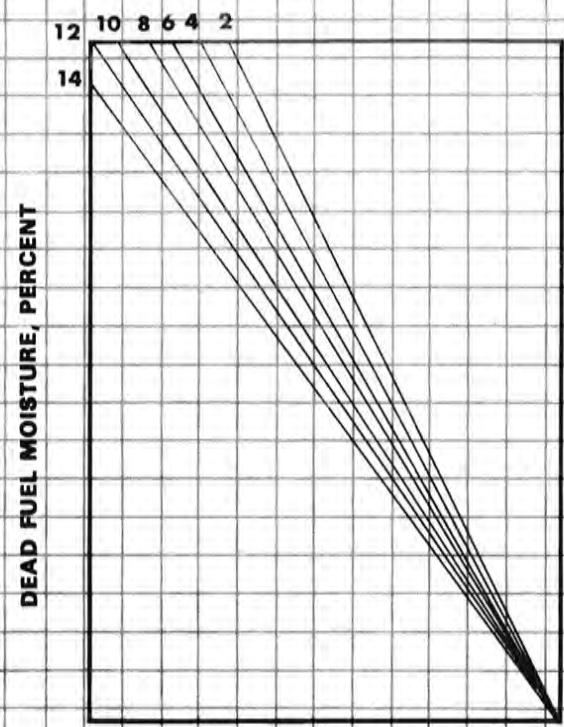
Fuel model 11 – low windspeeds

11. LIGHT LOGGING SLASH - LOW WINDSPEEDS



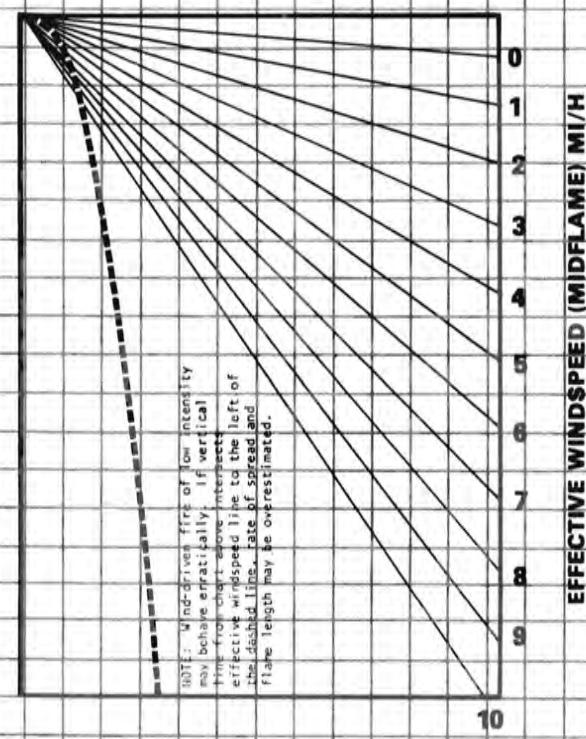
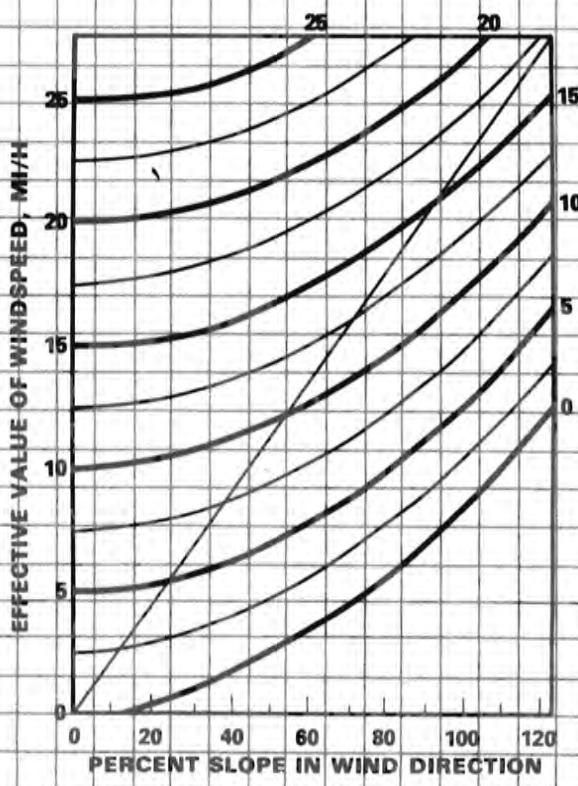
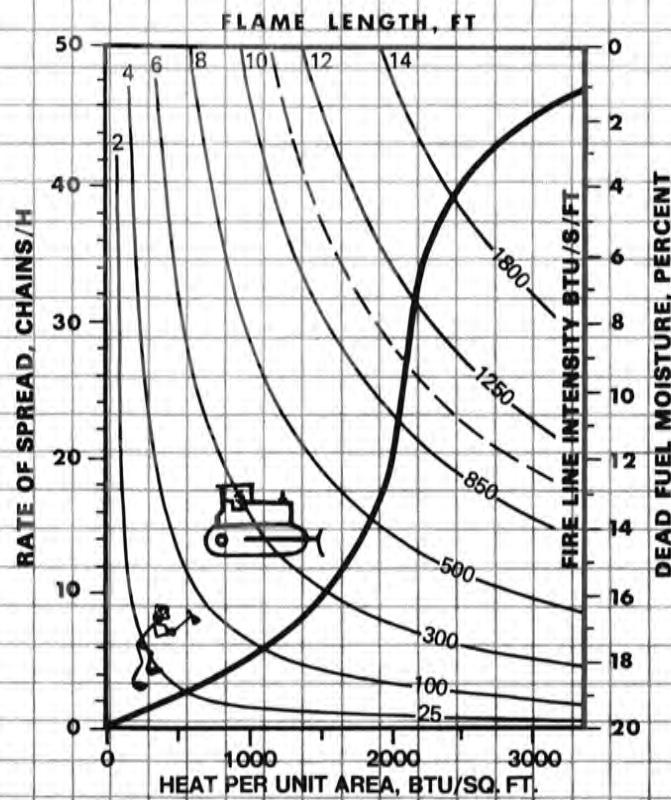
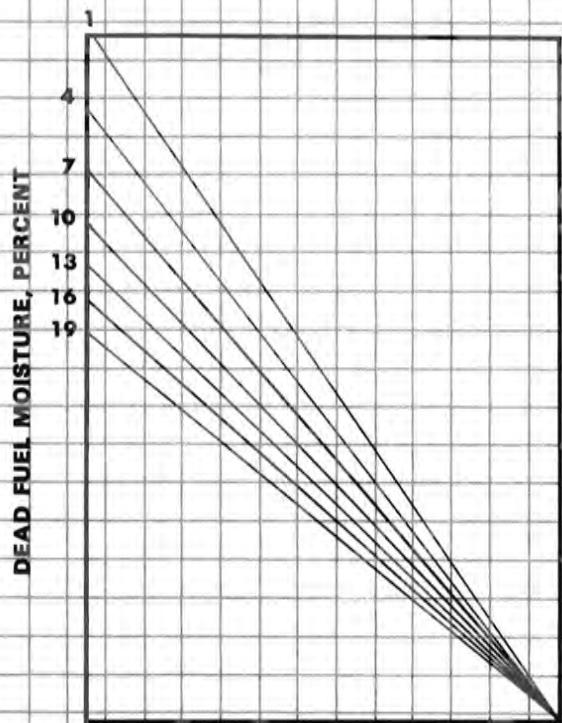
Fuel model 11 – high windspeeds

11. LIGHT LOGGING SLASH - HIGH WINDSPEEDS



Fuel model 12 – low windspeeds

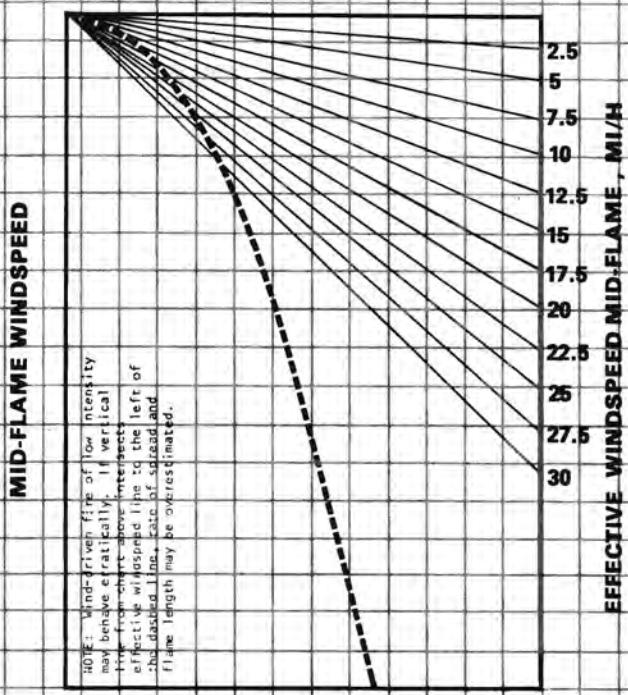
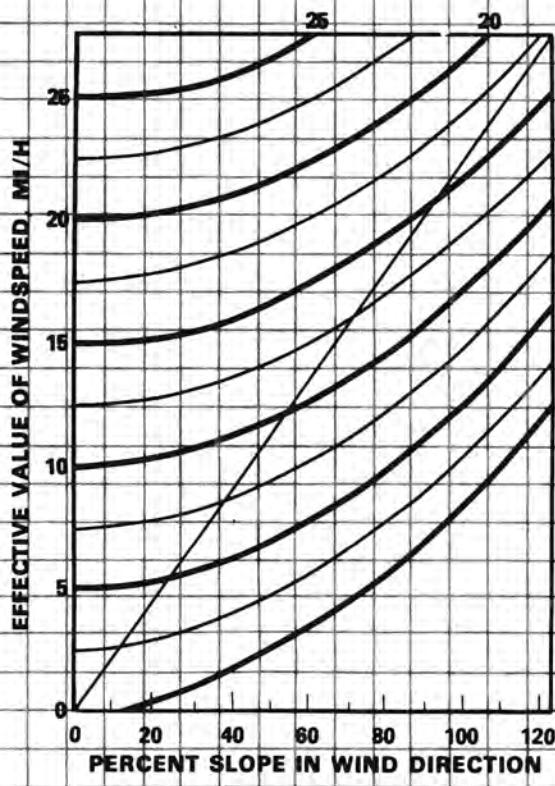
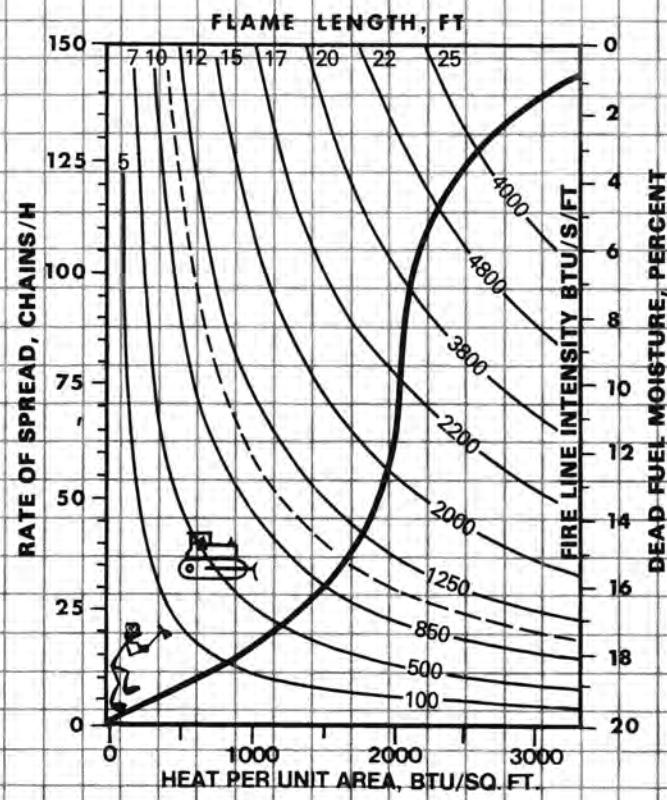
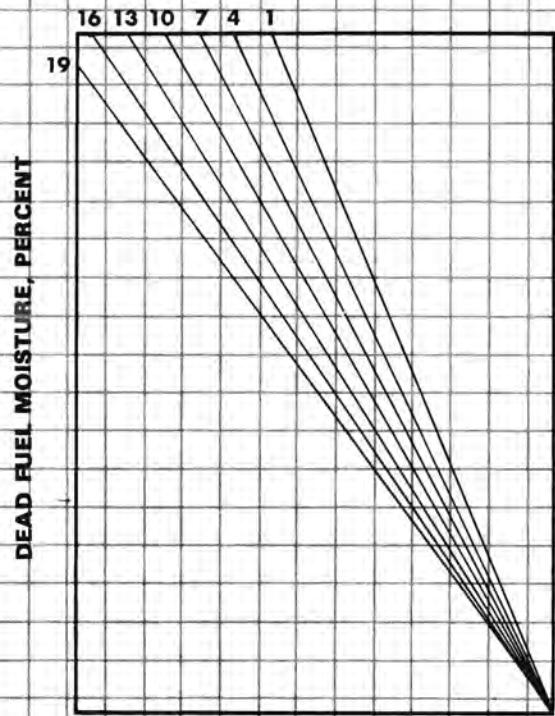
12. MEDIUM LOGGING SLASH - LOW WINDSPEEDS



NOTE: Wind-driven fire of low intensity may behave erratically. If vertical line from chart above intersects effective windspeed line to the left of the dashed line, rate of spread and flame length may be overestimated.

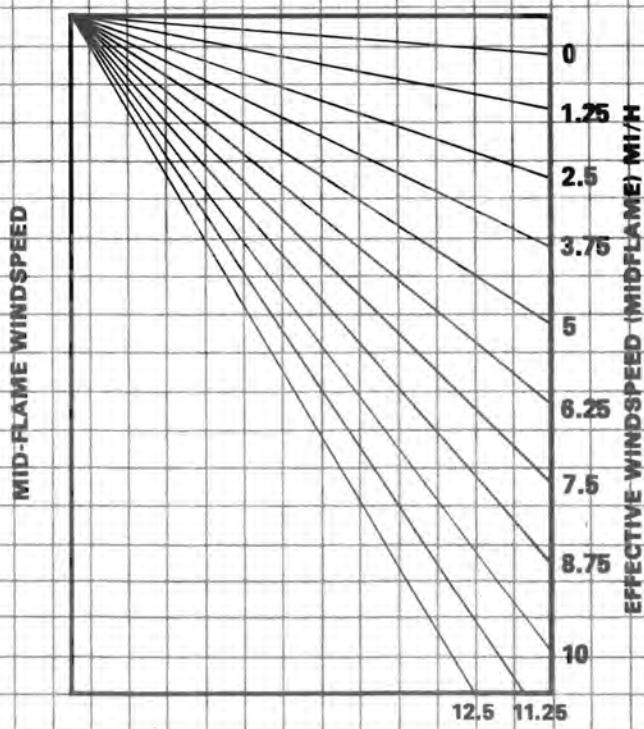
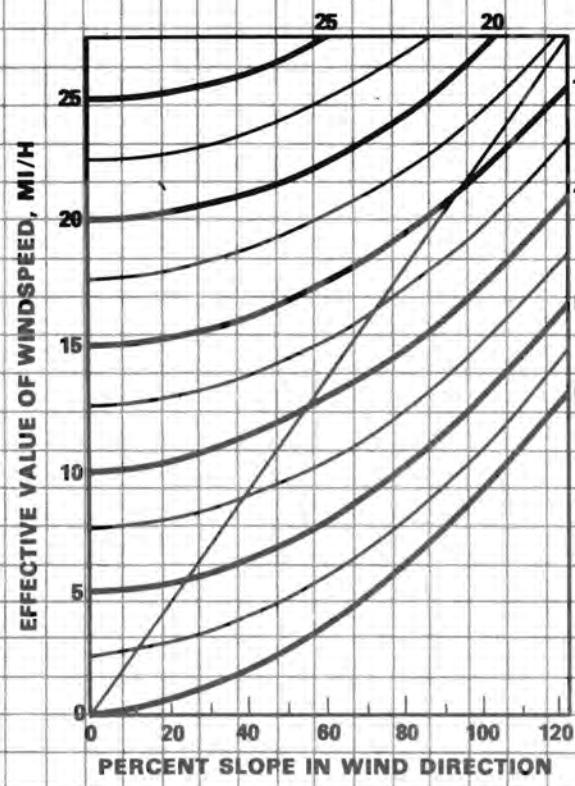
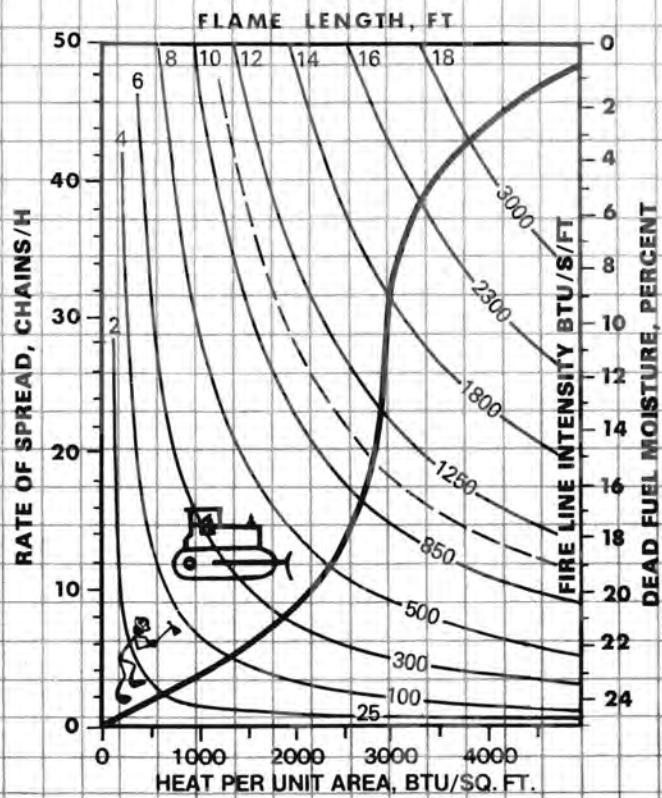
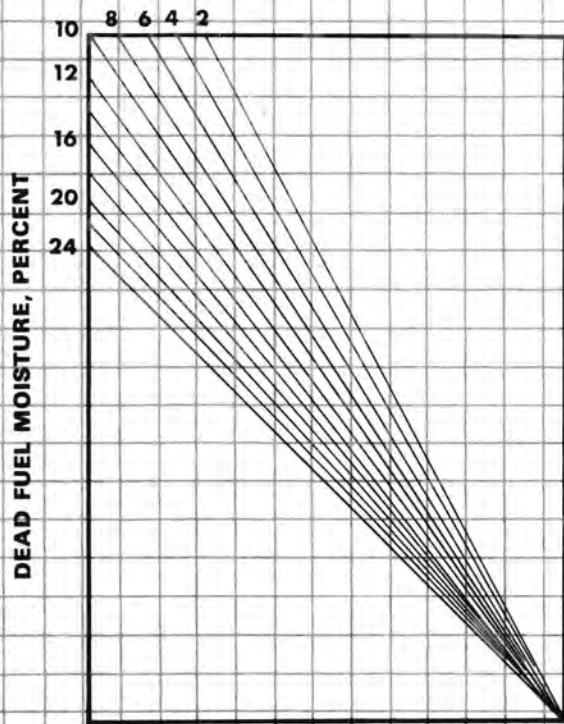
Fuel model 12 – high windspeeds

12. MEDIUM LOGGING SLASH-HIGH WINDSPEEDS



Fuel model 13 – low windspeeds

13. HEAVY LOGGING SLASH - LOW WINDSPEEDS



Fuel model 13 – high windspeeds

13. HEAVY LOGGING SLASH - HIGH WINDSPEEDS

