

A Publication of the
National Wildfire
Coordinating Group

Fire Behavior Nomograms



PMS 436-3
NFES 2220

MARCH 1992

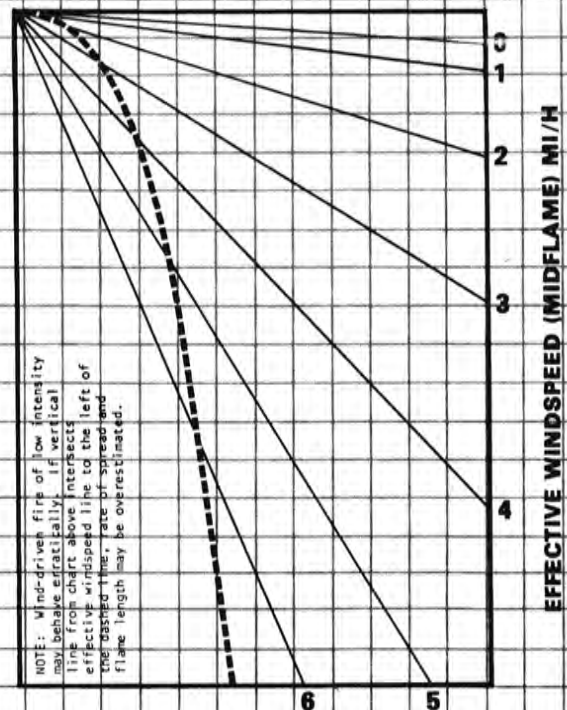
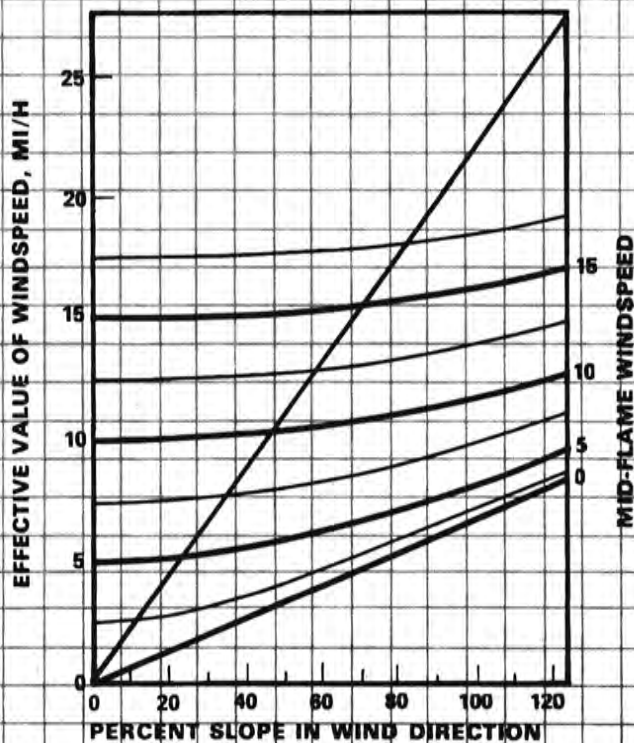
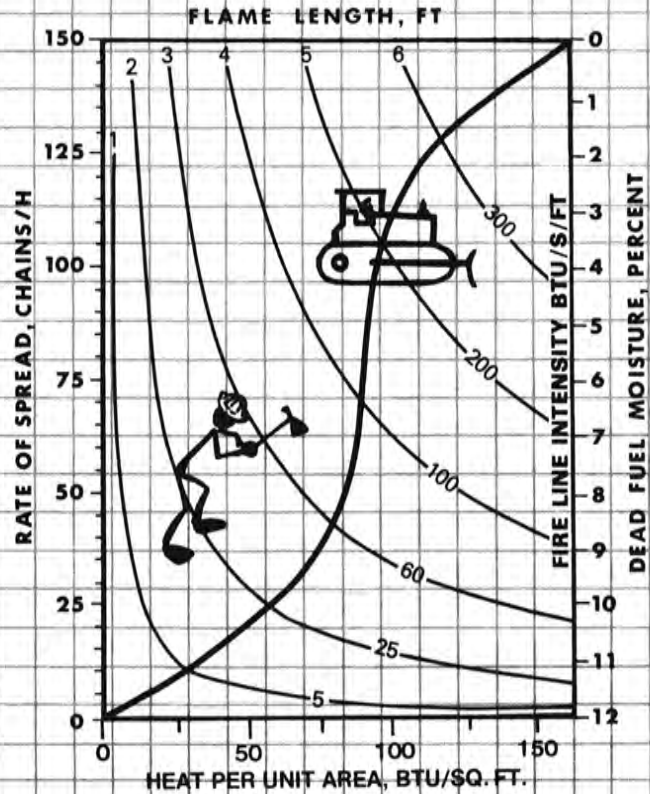
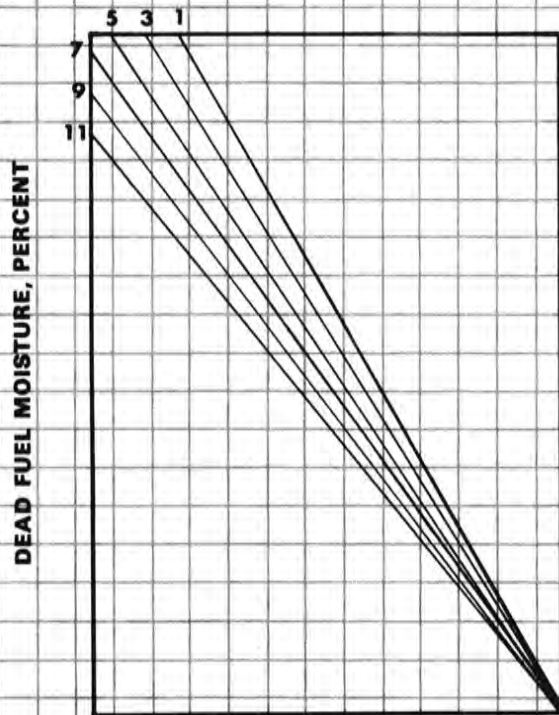
The "Fire Behavior Nomograms" are excerpted from "How to Predict the Spread and Intensity of Forest and Range Fuels", Richard C. Rothermel, June 1983, with the exception of the nomogram for fuel model #7 which was updated for this publication.

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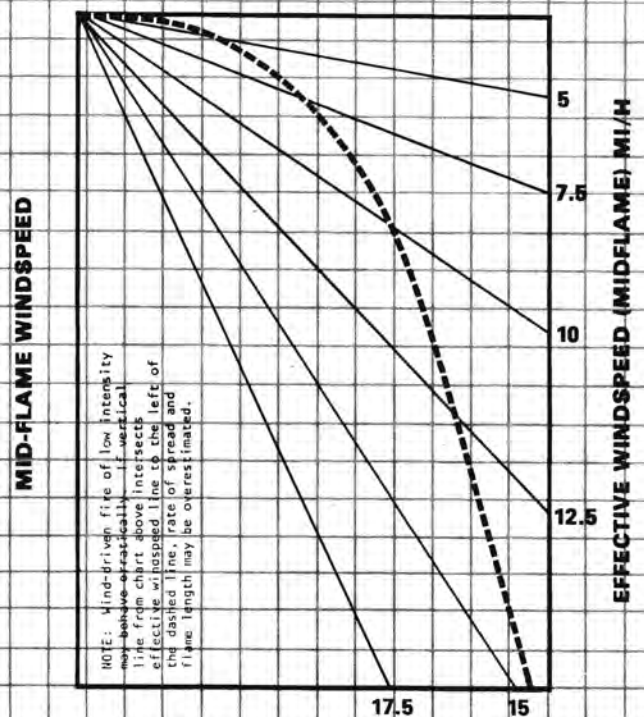
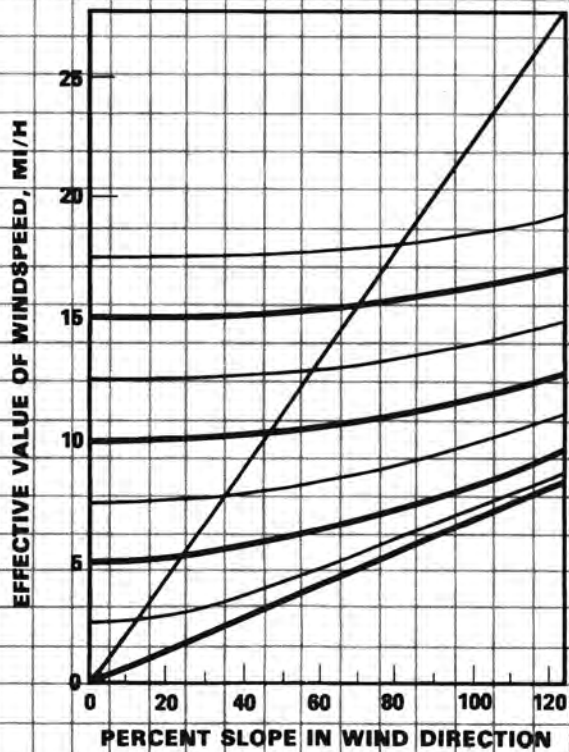
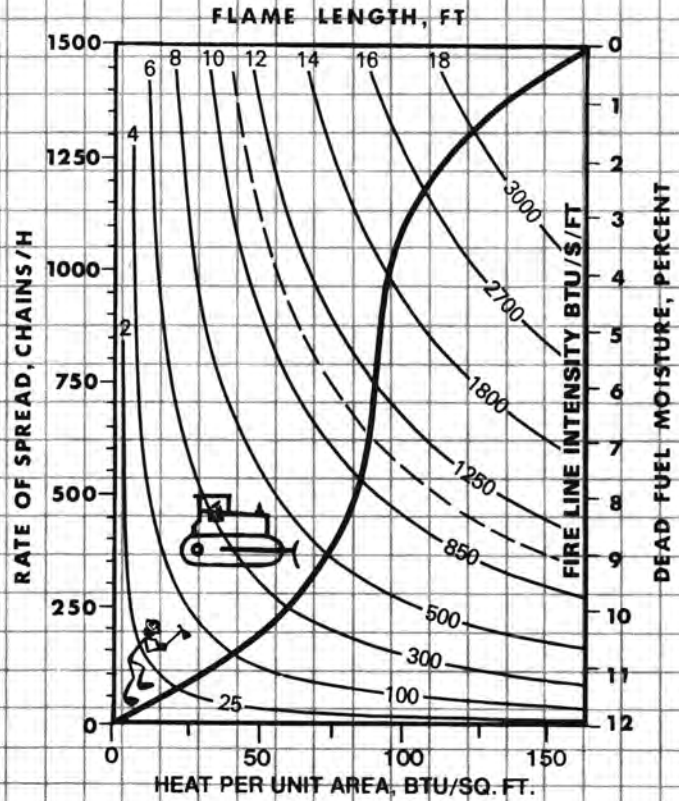
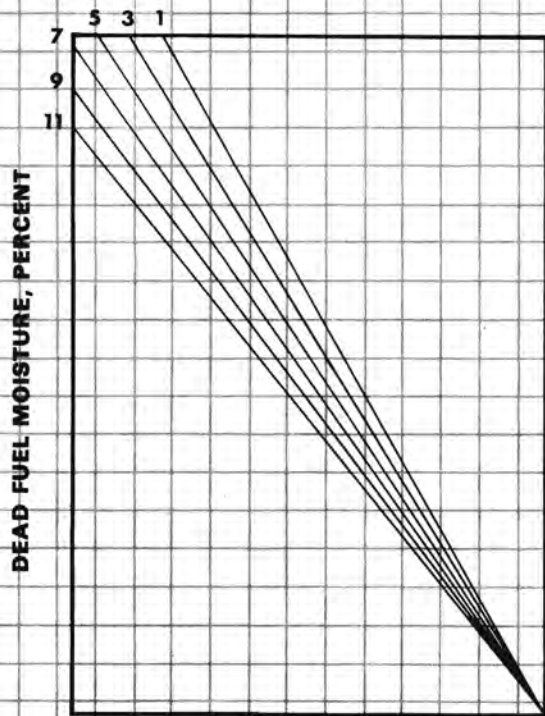
APPENDIX A Nomograms

Fuel model 1 - low windspeeds

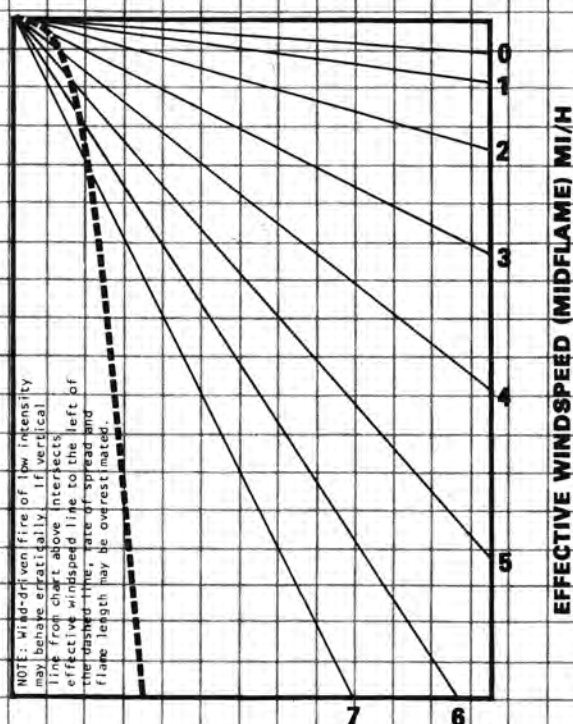
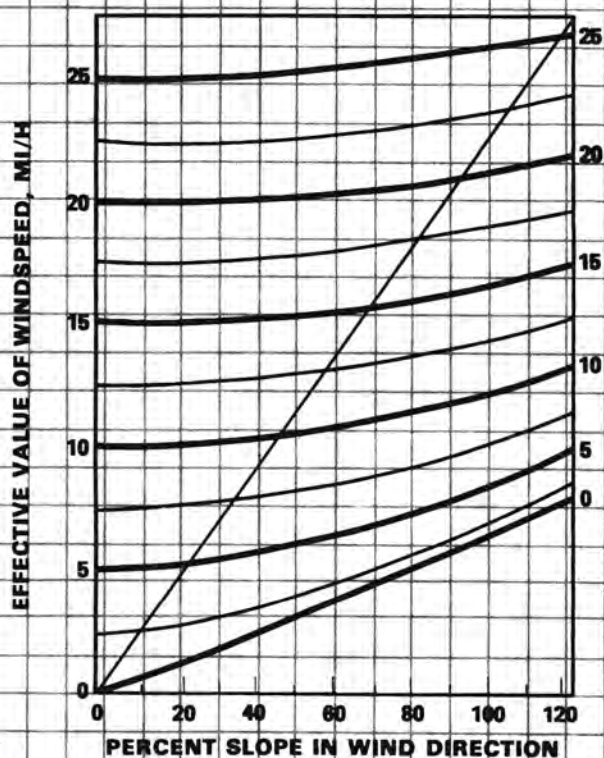
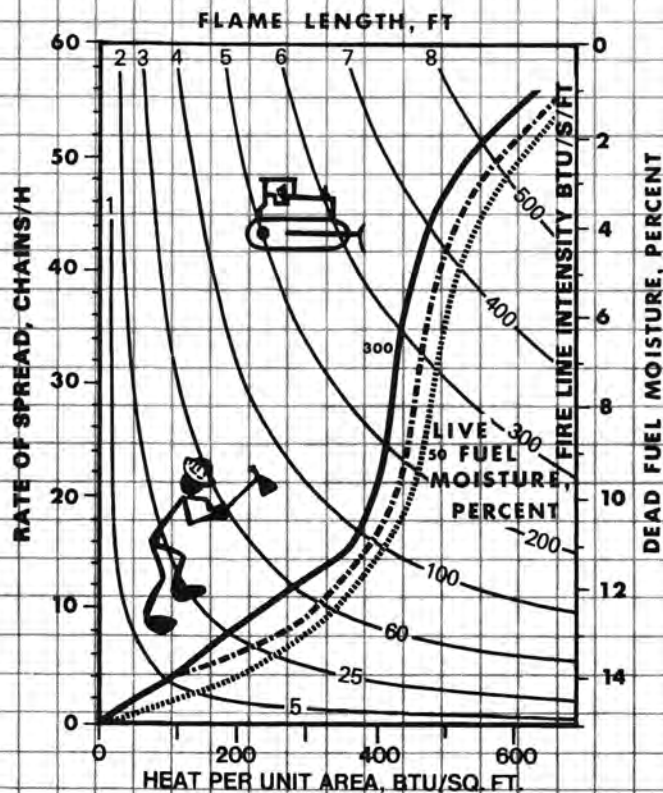
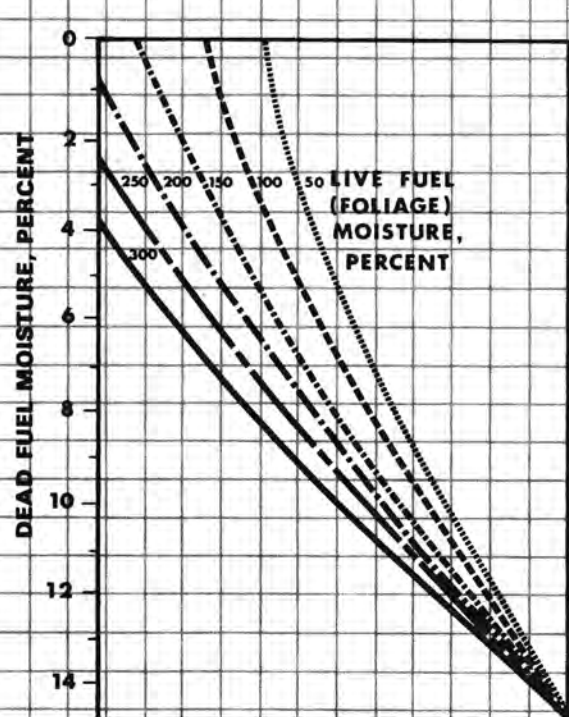
1. SHORT GRASS (1 FT) - LOW WINDSPEEDS



1. SHORT GRASS (1 FT) - HIGH WINDSPEEDS

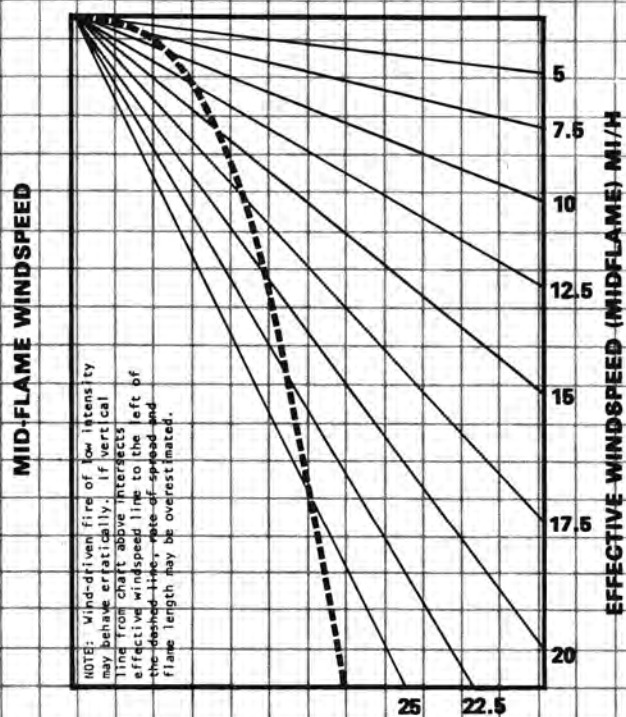
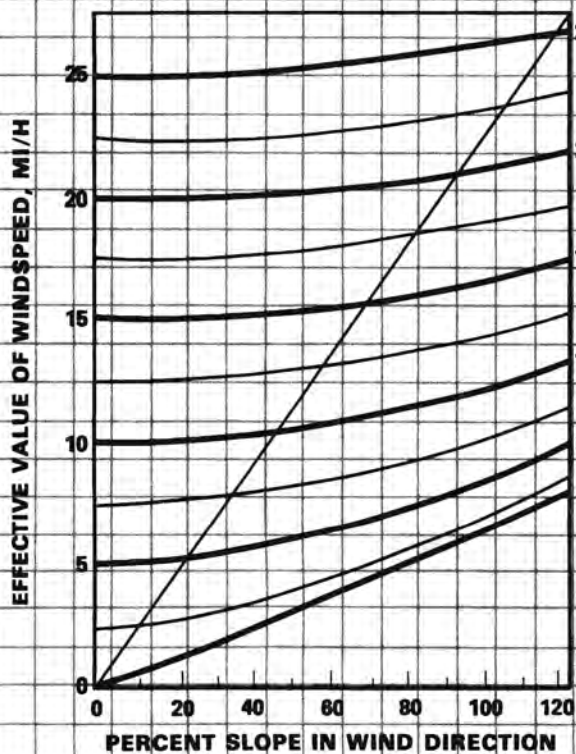
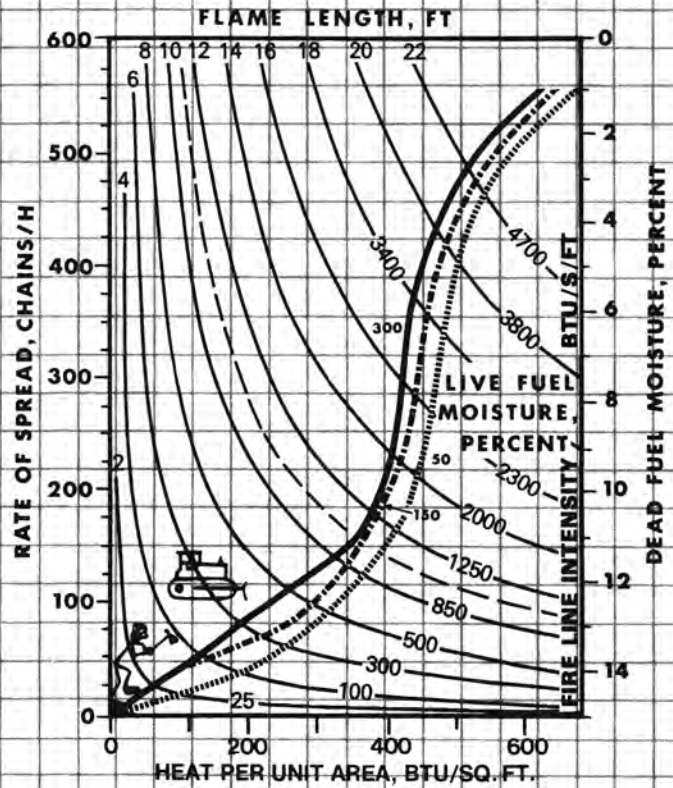
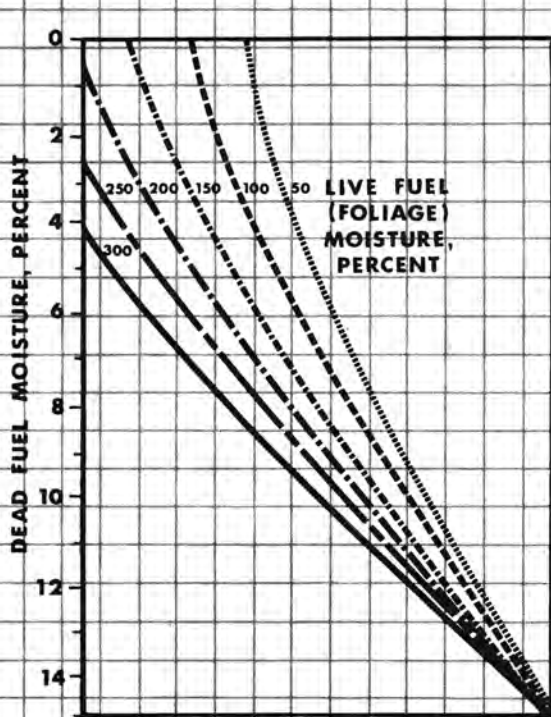


2. TIMBER (GRASS & UNDERSTORY) - LOW WINDSPEEDS

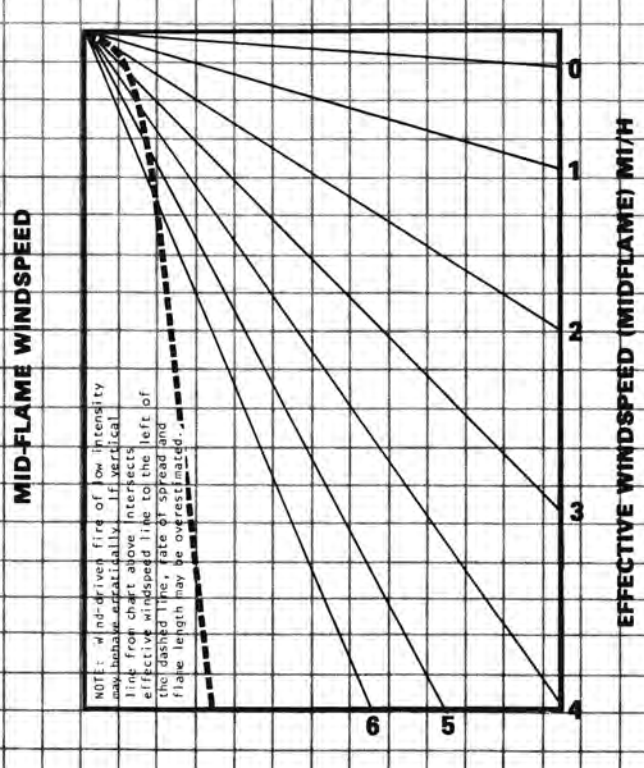
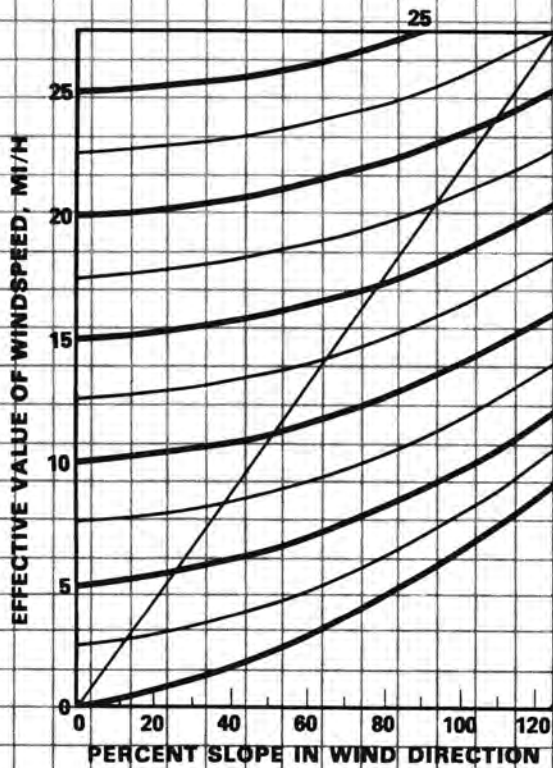
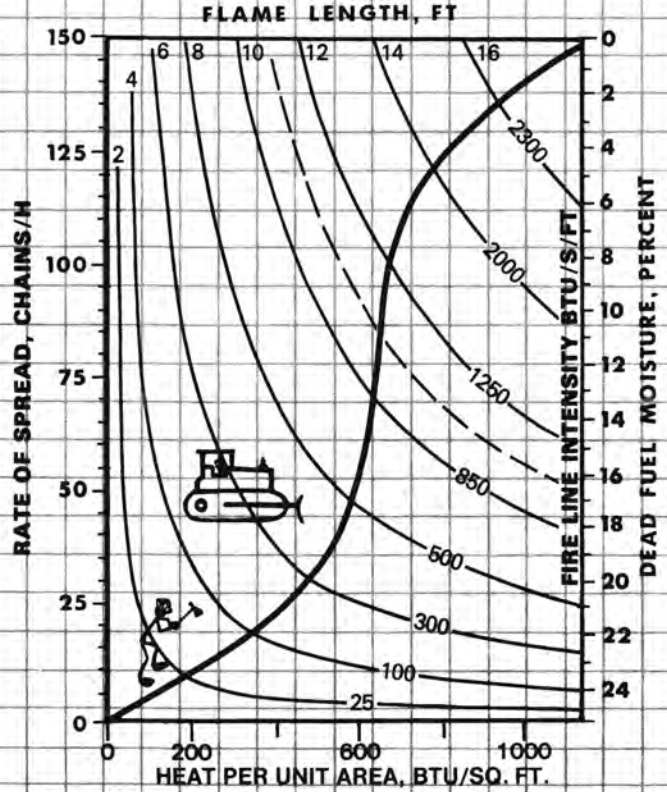
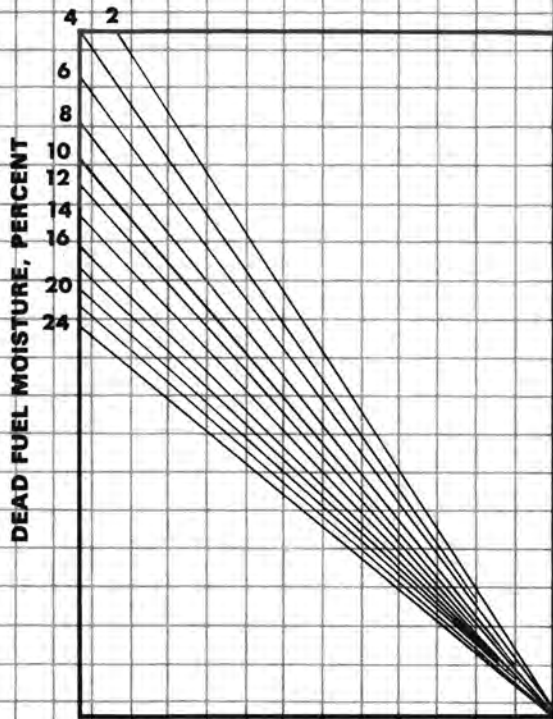


Fuel model 2 - high windspeeds

2. TIMBER (GRASS & UNDERSTORY) - HIGH WINDSPEEDS

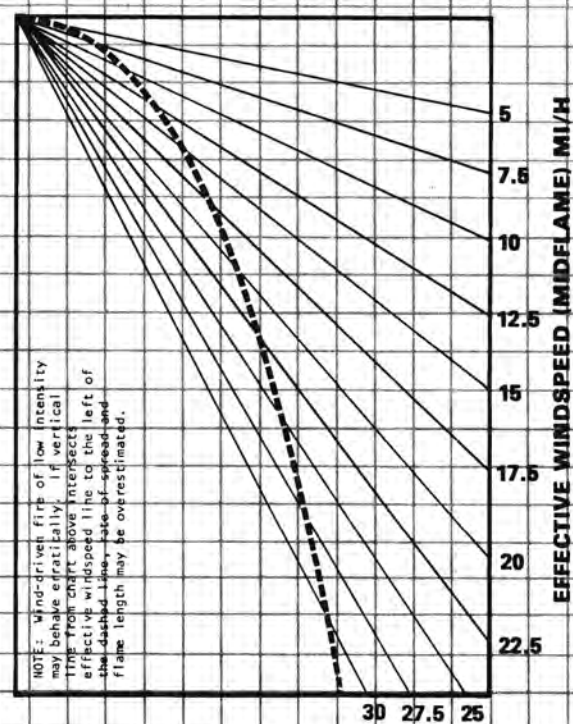
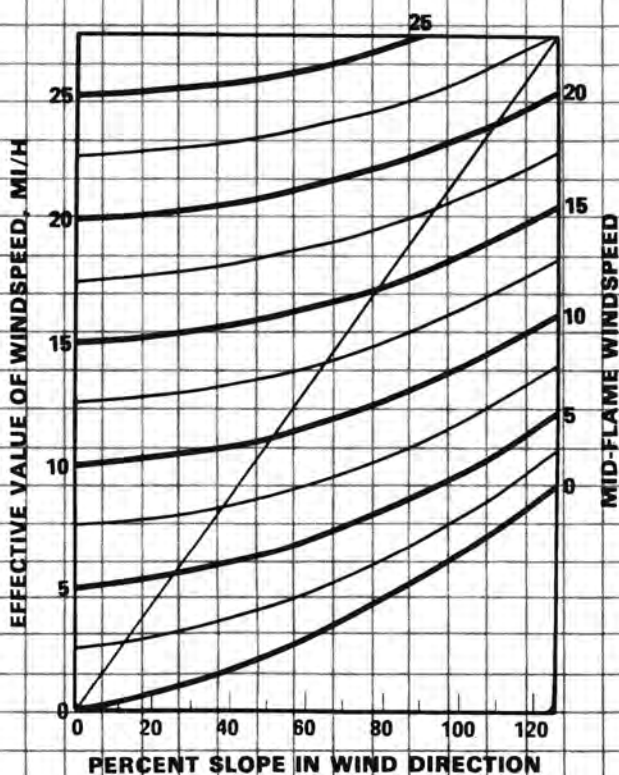
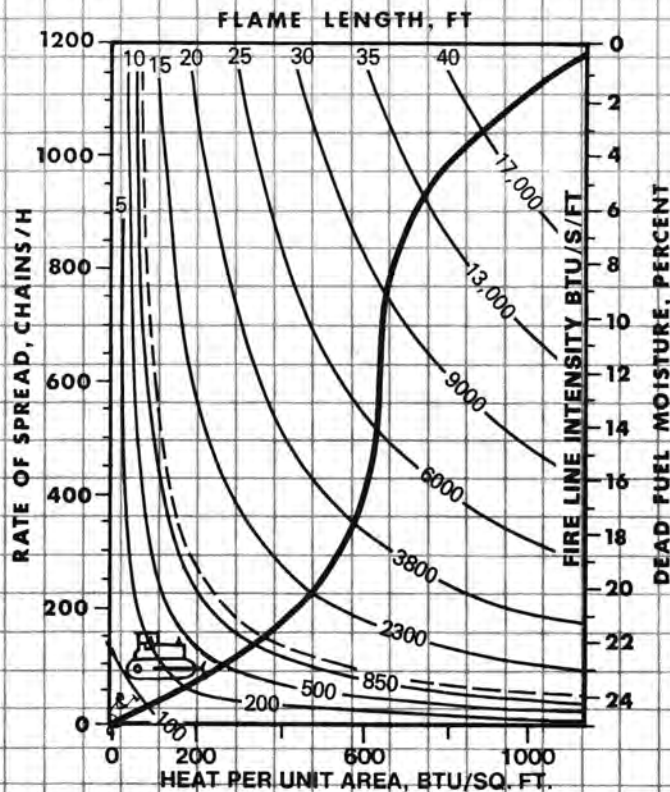
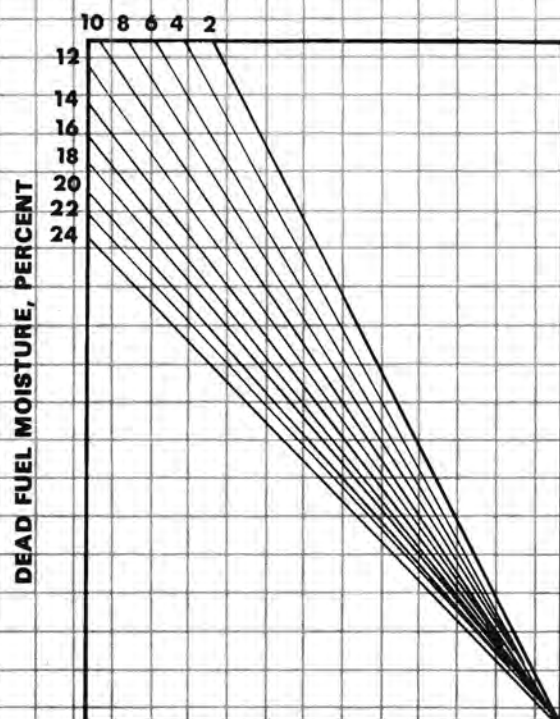


3. TALL GRASS (2.5 FT) - LOW WINDSPEEDS

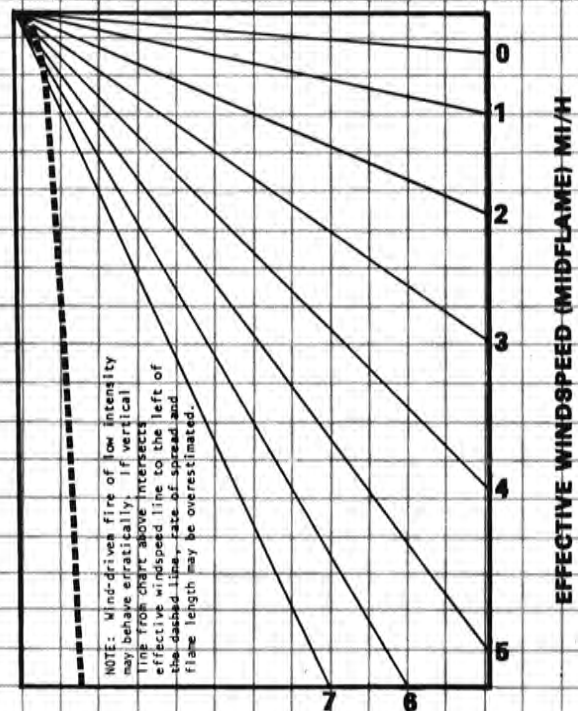
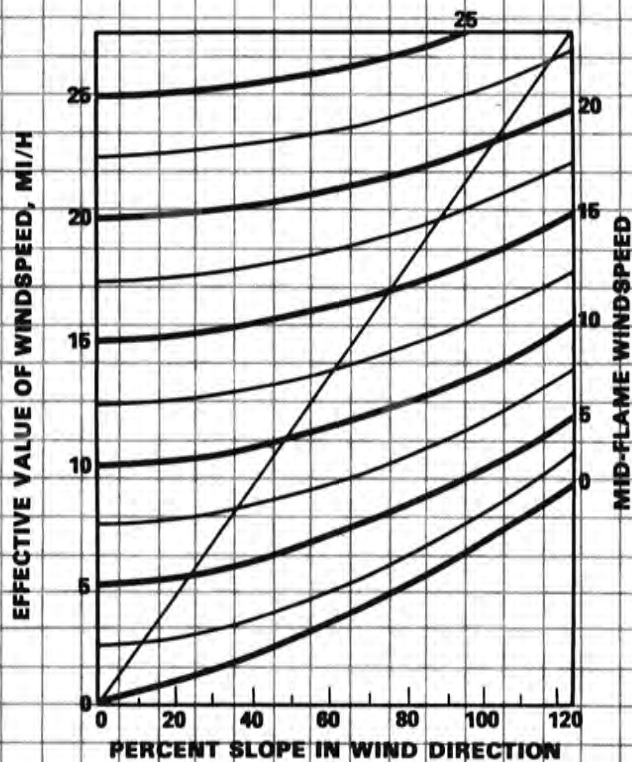
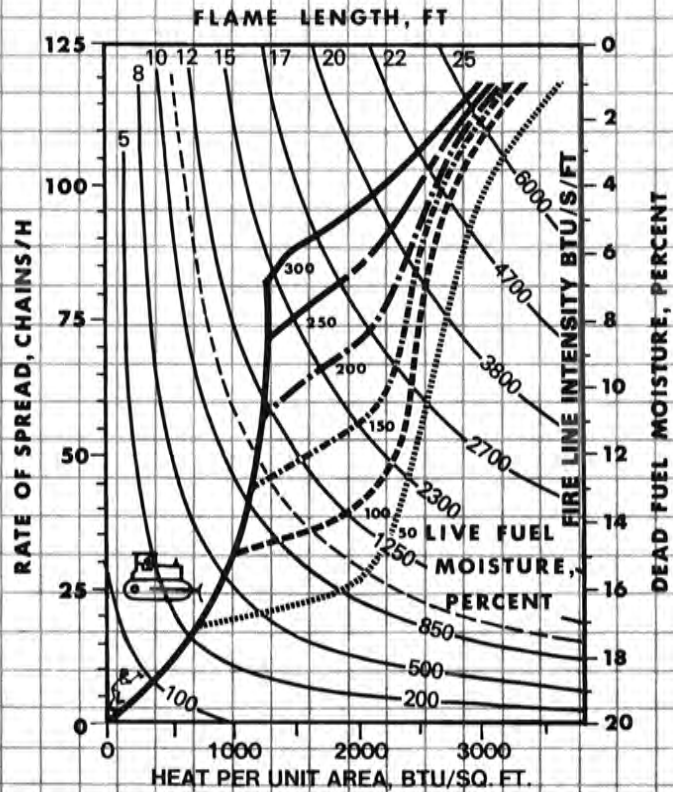
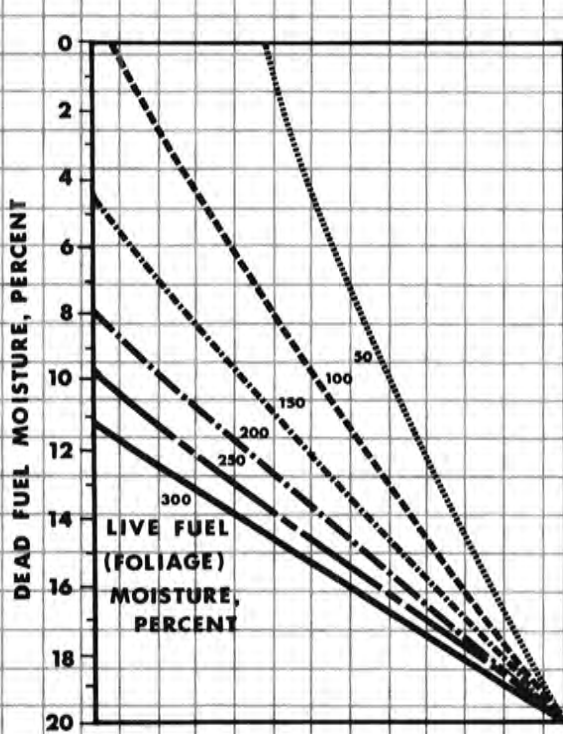


NOTE: wind-driven fire of low intensity may behave anomalously. If vertical line from chart above intersects effective windspeed line to the left of the dashed line, rate of spread and flame length may be overestimated.

3. TALL GRASS (2.5 FT) - HIGH WINDSPEEDS

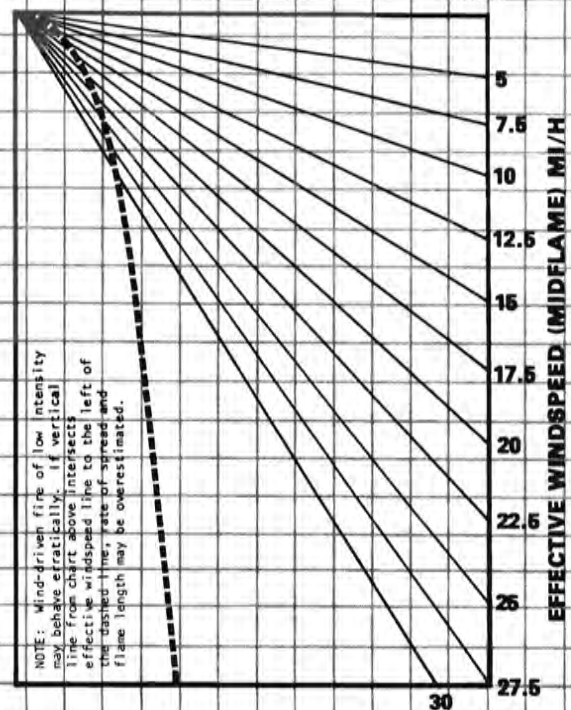
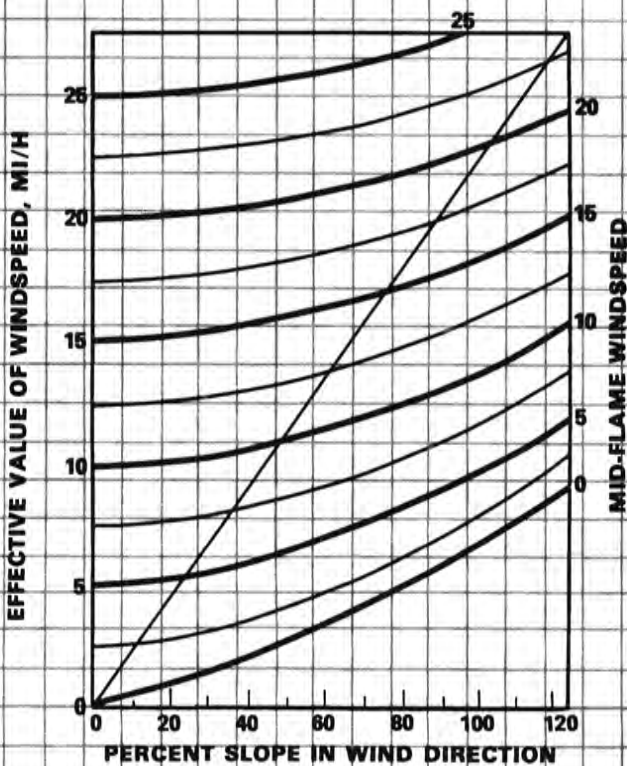
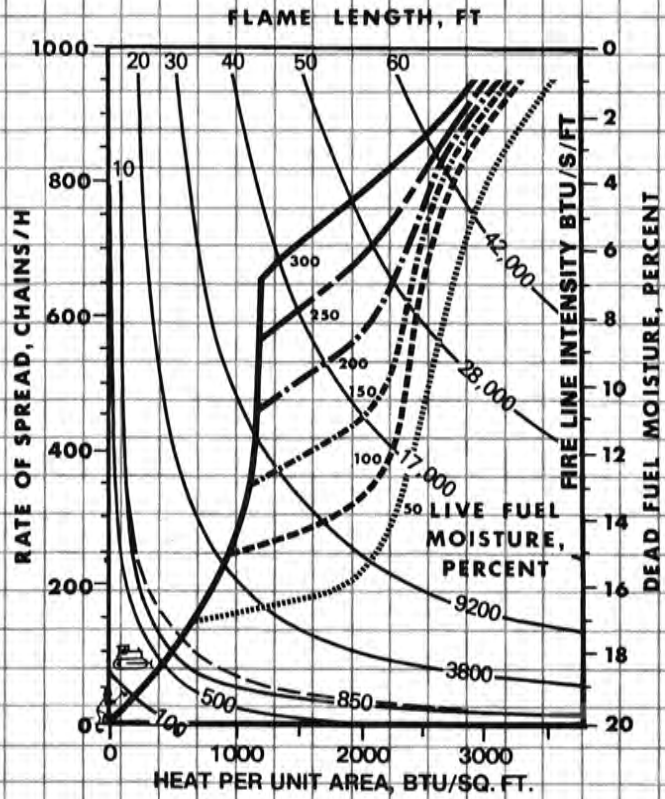
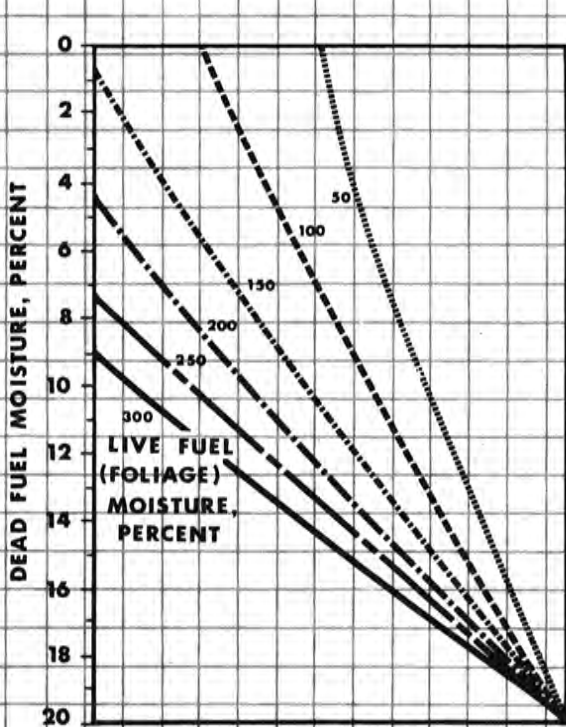


4. CHAPARRAL (6 FT) - LOW WINDSPEEDS



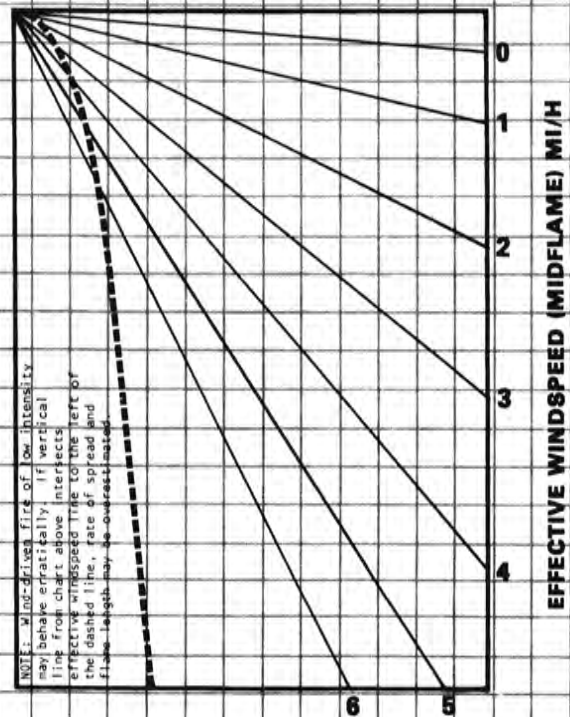
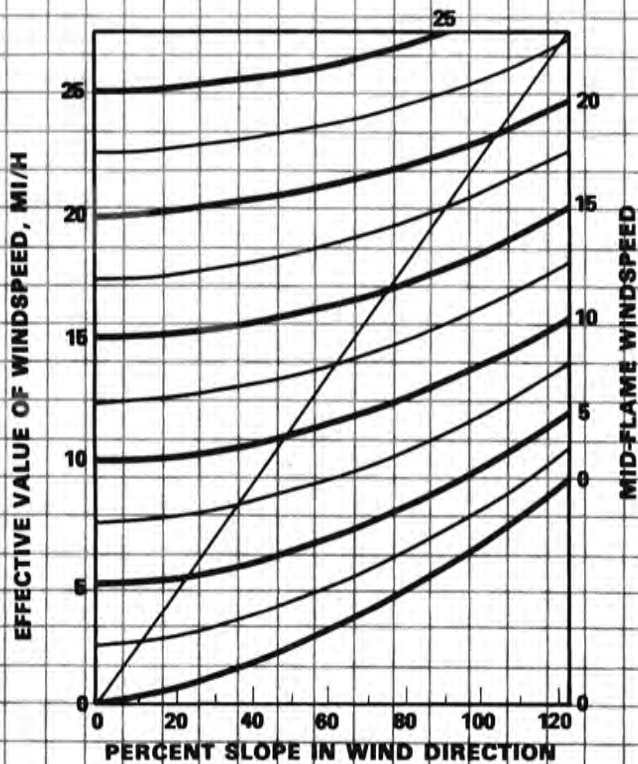
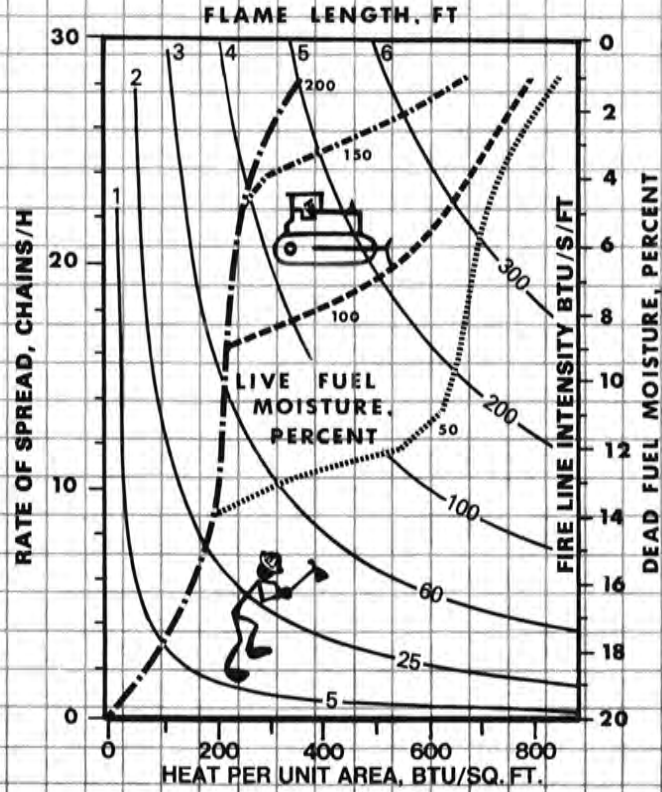
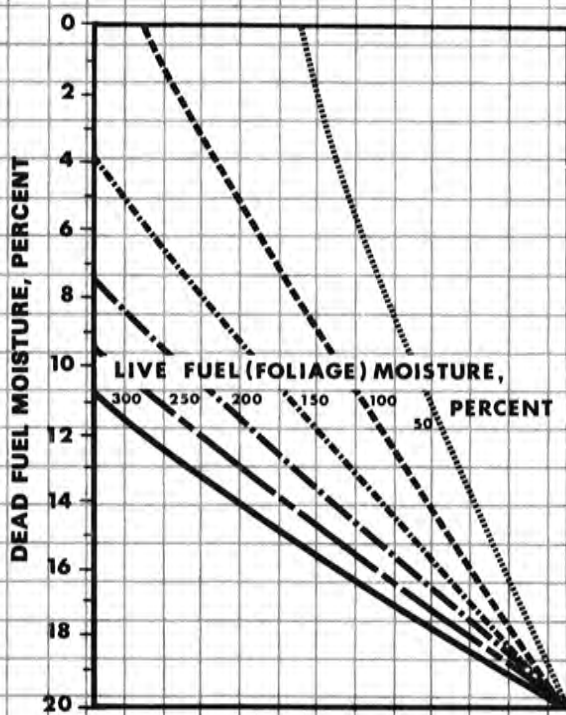
Fuel model 4 - high windspeeds

4. CHAPARRAL (6 FT)- HIGH WINDSPEEDS



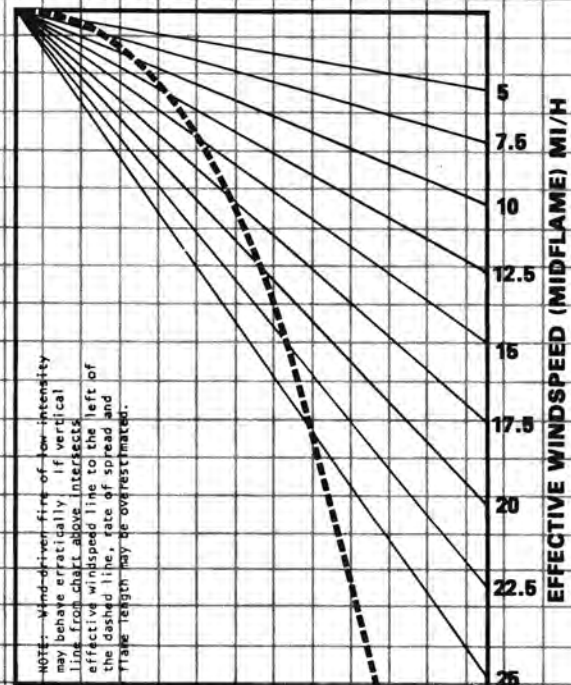
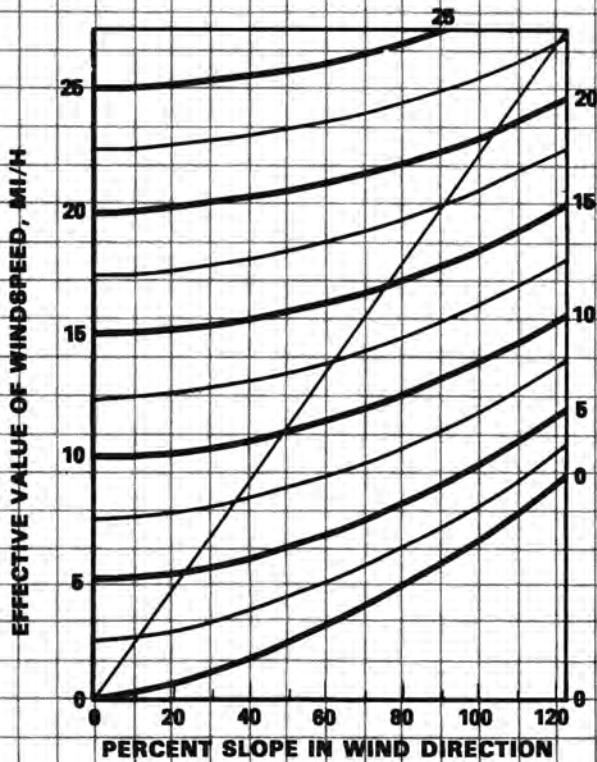
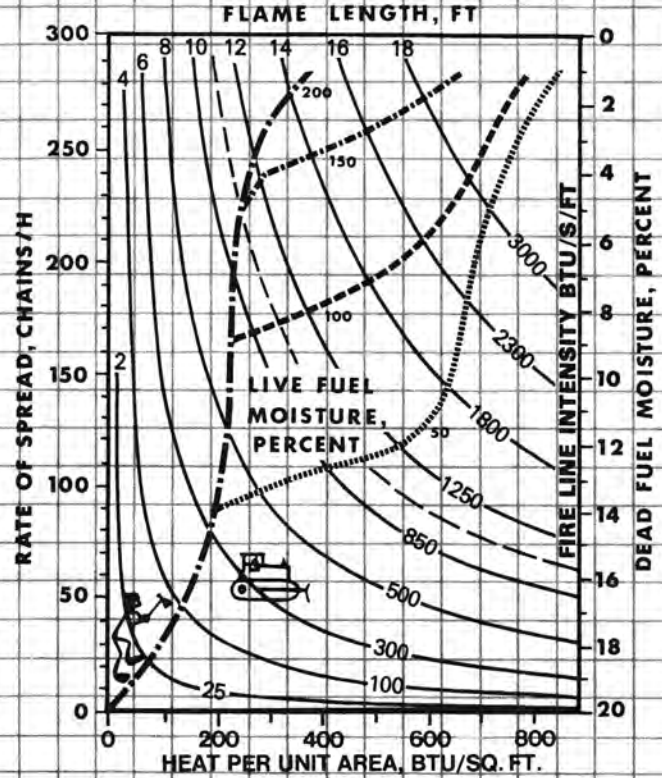
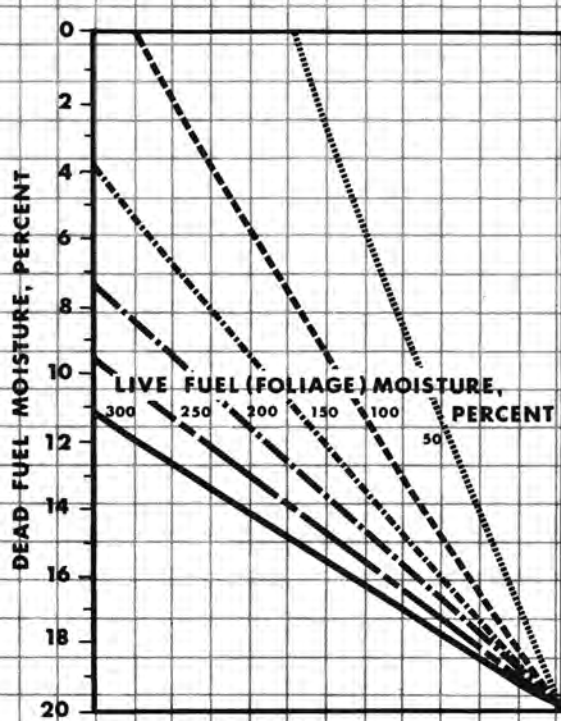
NOTE: Wind-driven fire of low intensity may behave erratically; if vertical line from chart above intersects line of effective windspeed line to the left of the dashed line, rate-of-spread and flame length may be overestimated.

5. BRUSH (2 FT) - LOW WINDSPEEDS



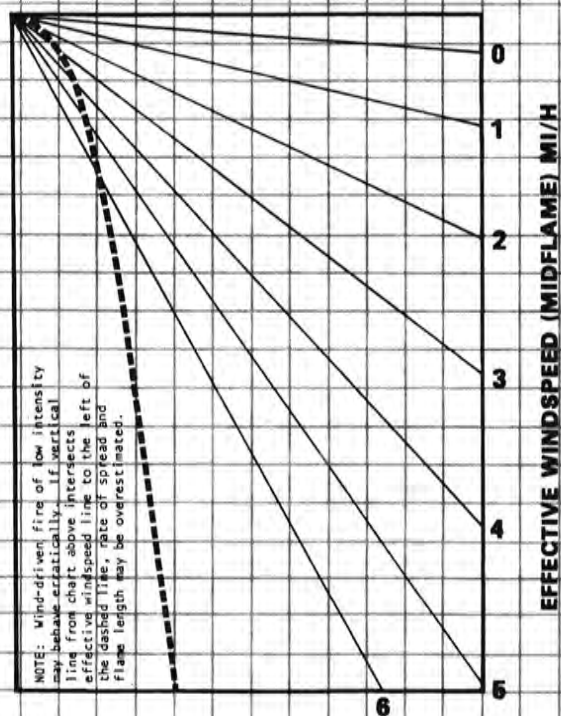
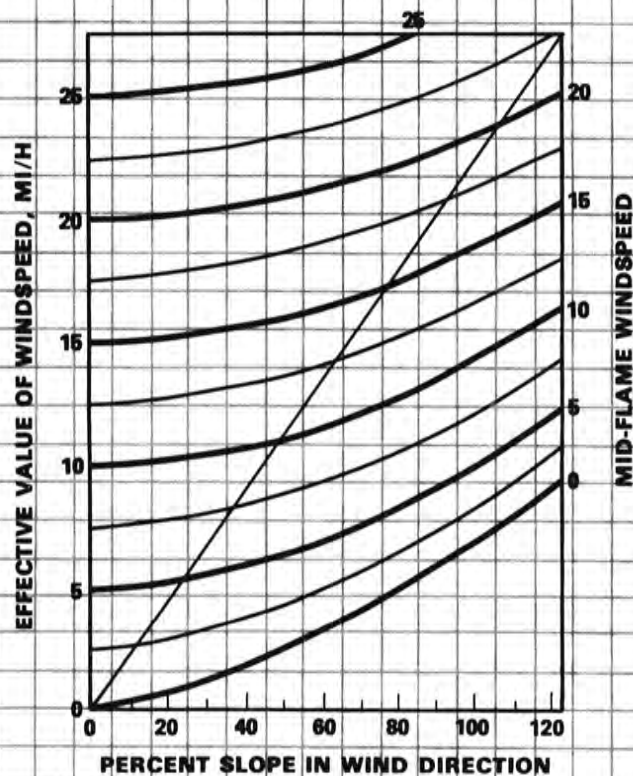
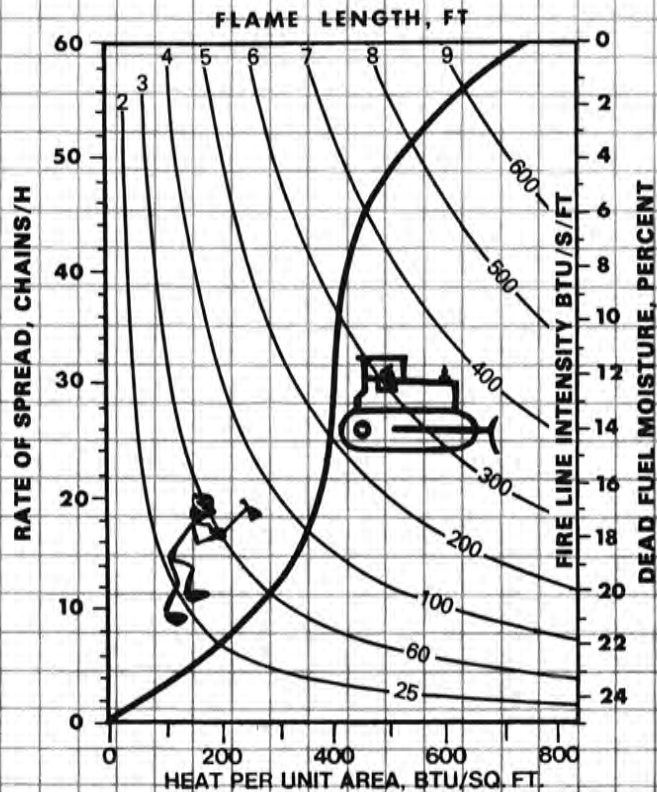
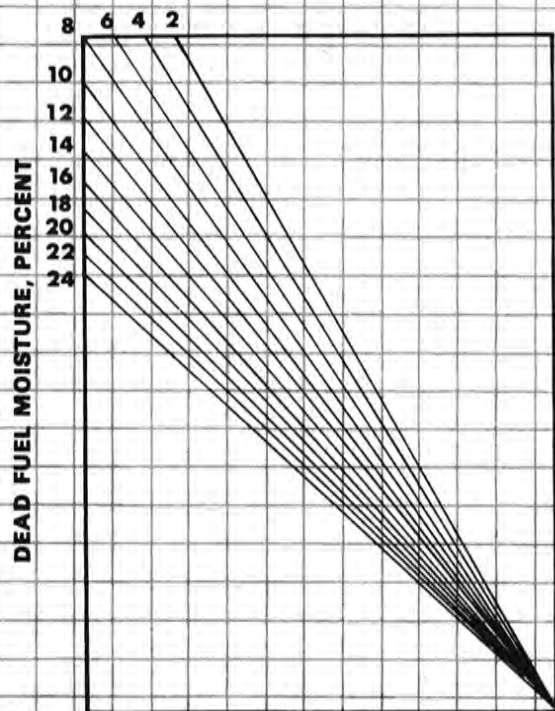
Fuel model 5 - high windspeeds

5. BRUSH (2 FT) - HIGH WINDSPEEDS

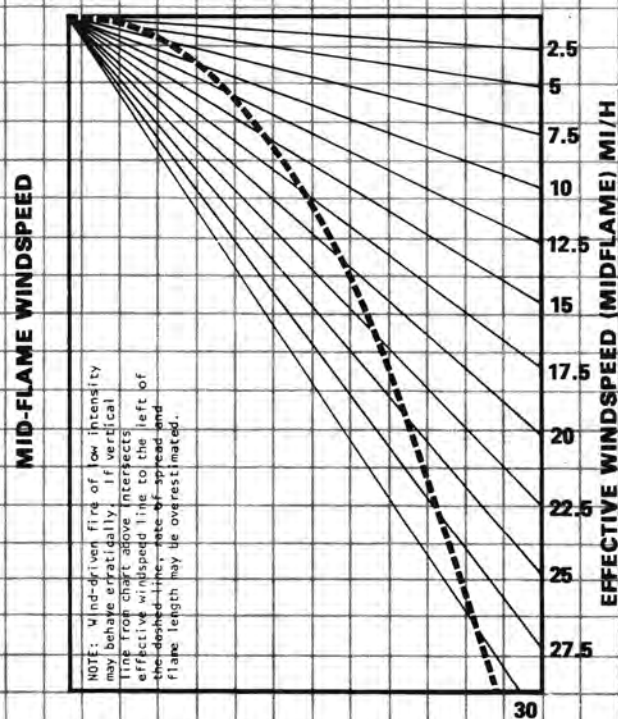
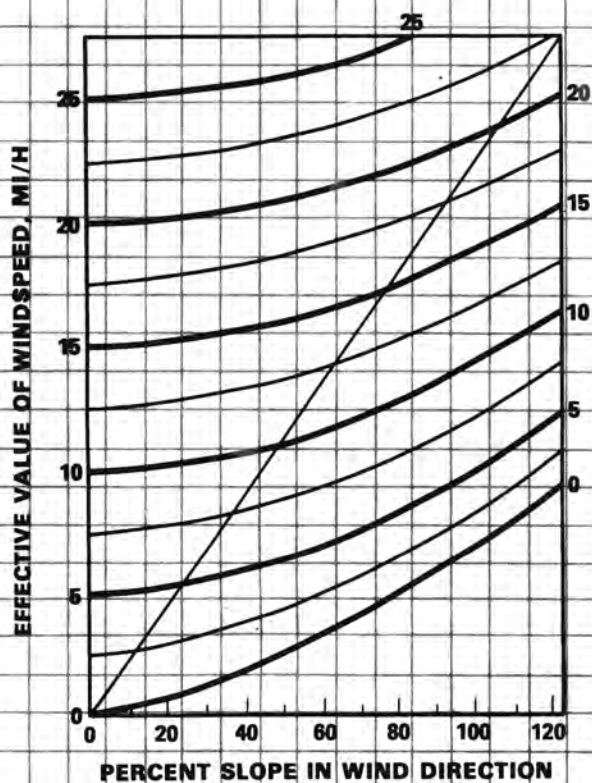
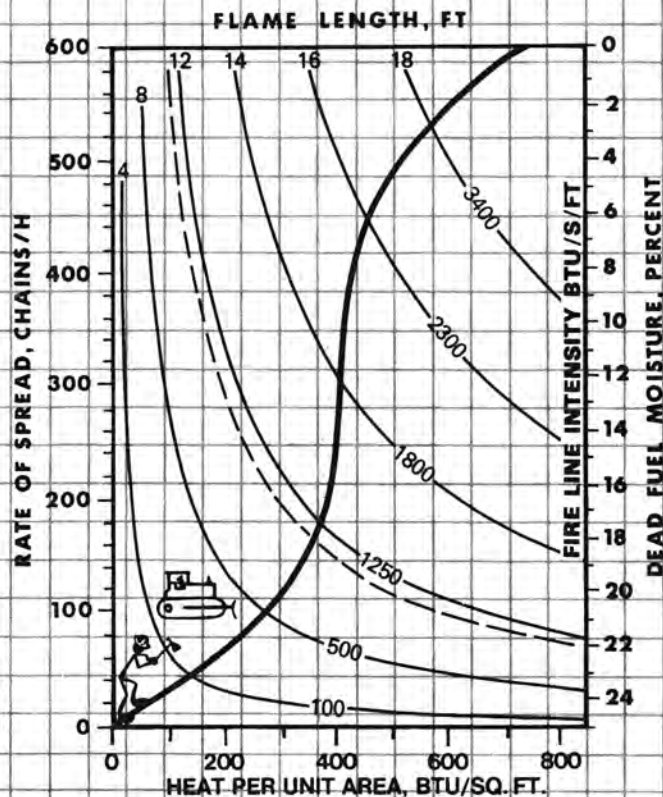
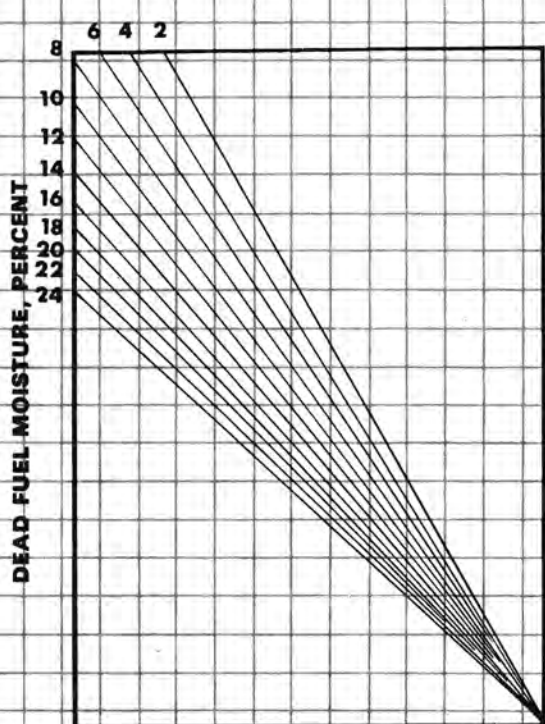


NOTE: Wind-driven fire of low intensity may behave erratically. If vertical line from chart above intersects effective windspeed line to the left of the dashed line, rate of spread and flame length may be overestimated.

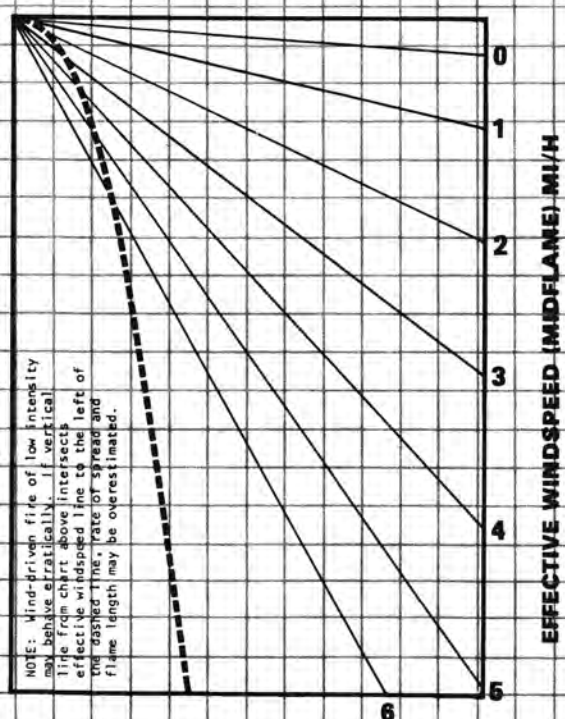
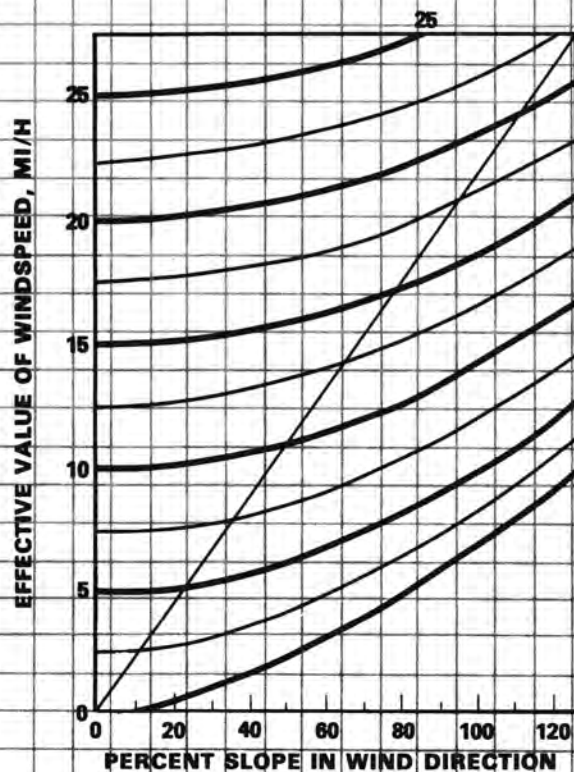
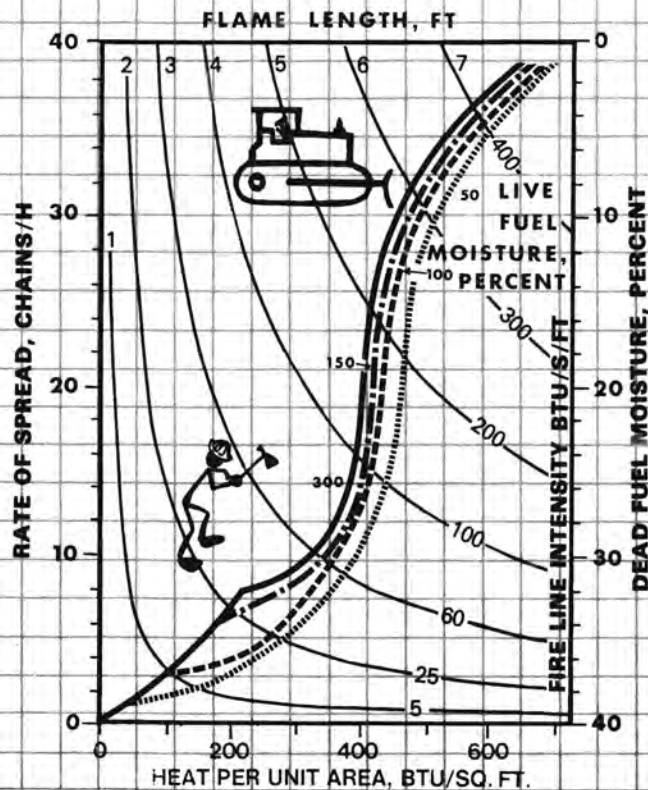
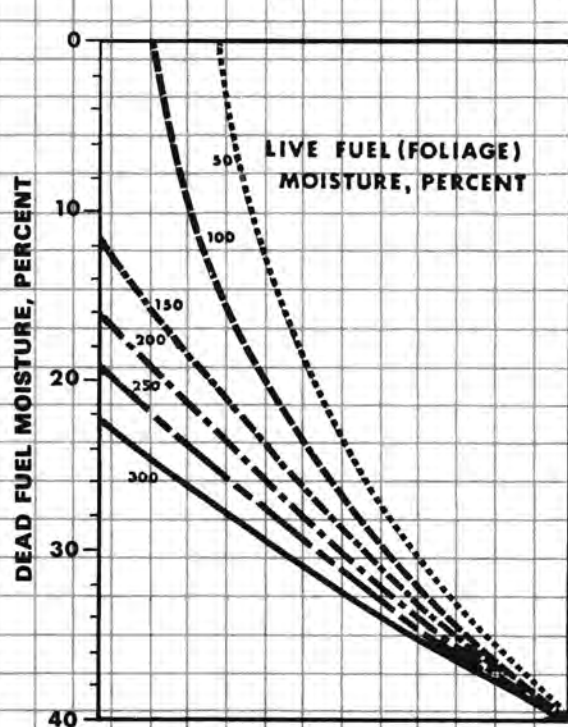
6. DORMANT BRUSH, HARDWOOD SLASH - LOW WINDSPEEDS



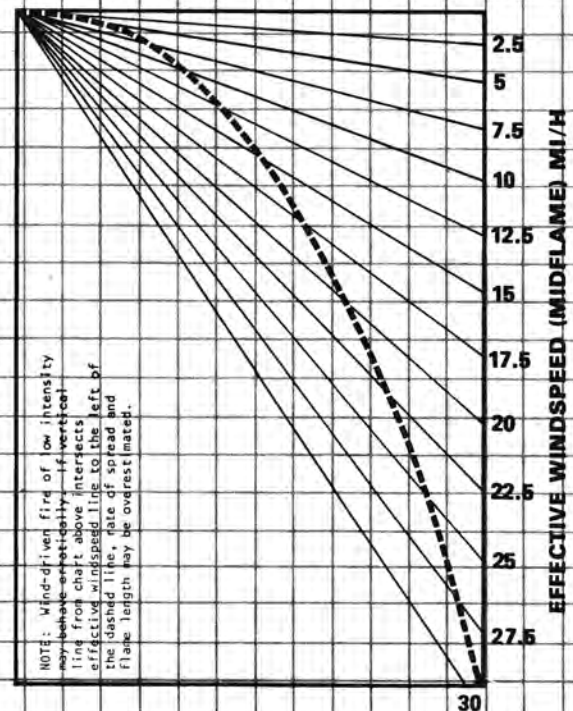
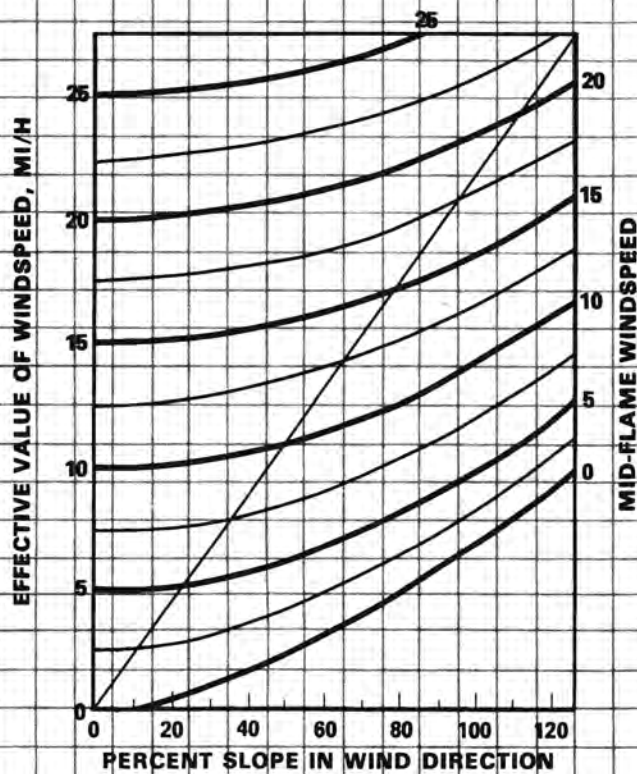
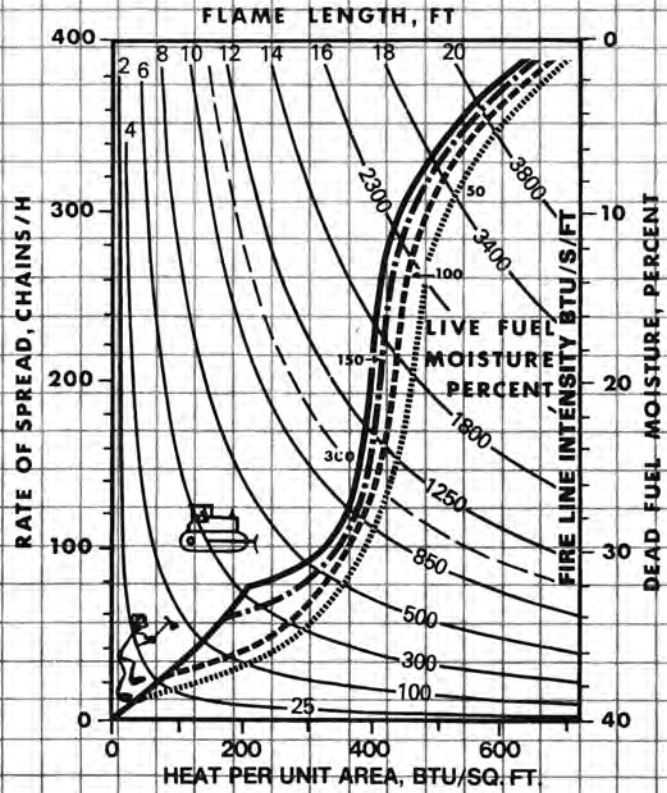
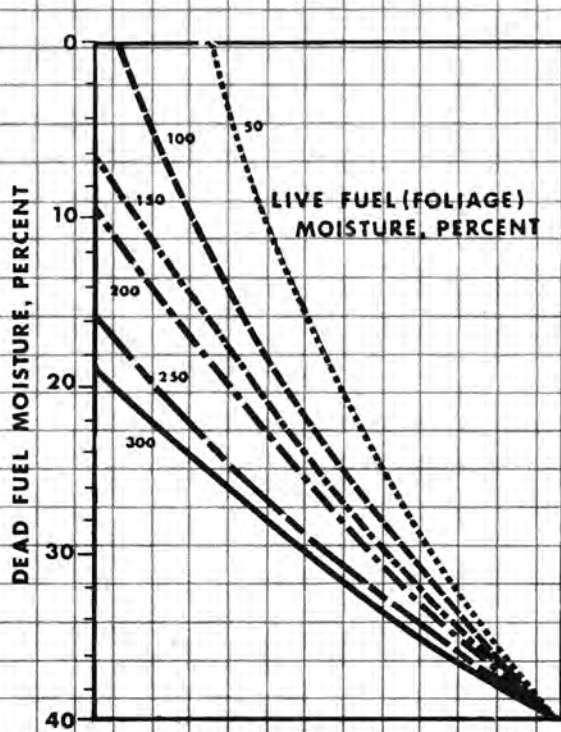
6. DORMANT BRUSH, HARDWOOD SLASH-HIGH WINDSPEEDS



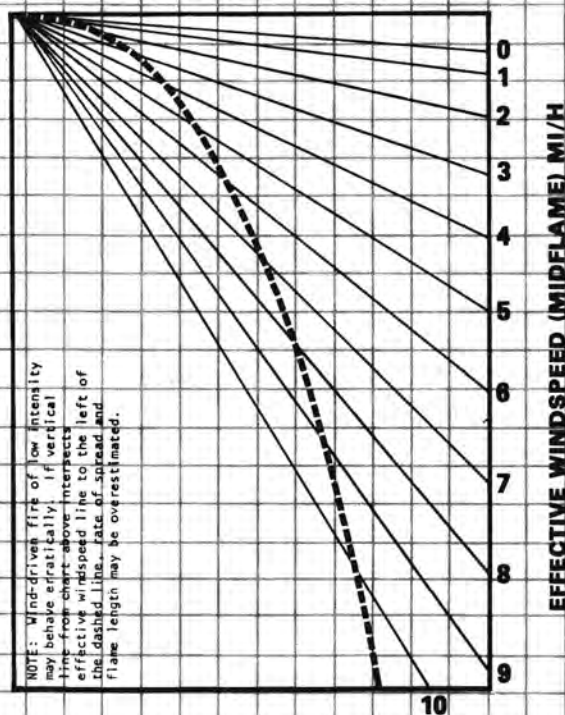
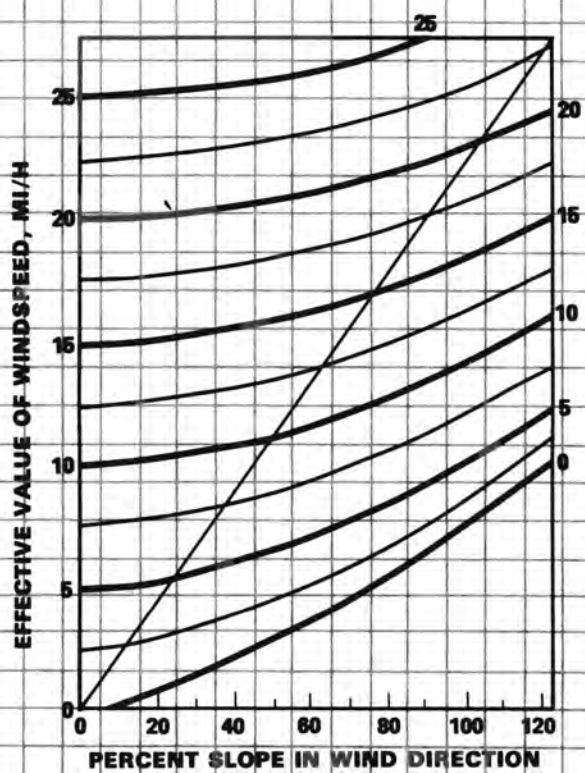
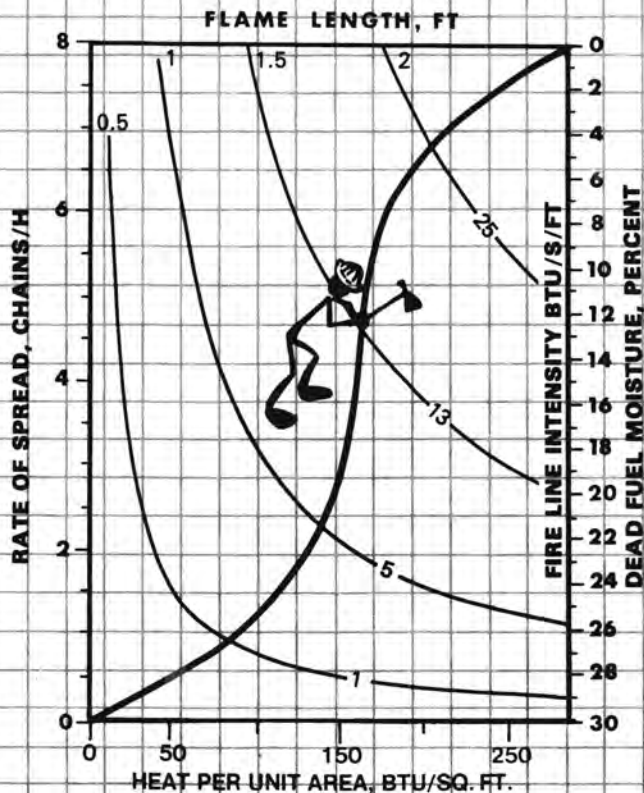
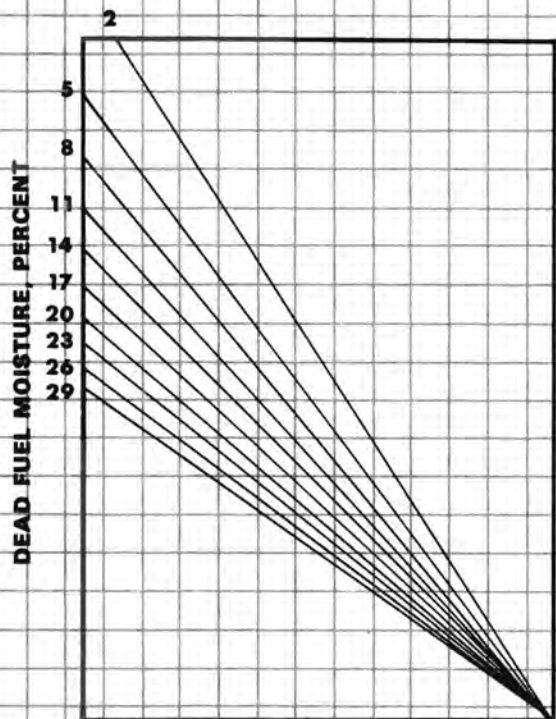
7. SOUTHERN ROUGH -LOW WINDSPEEDS



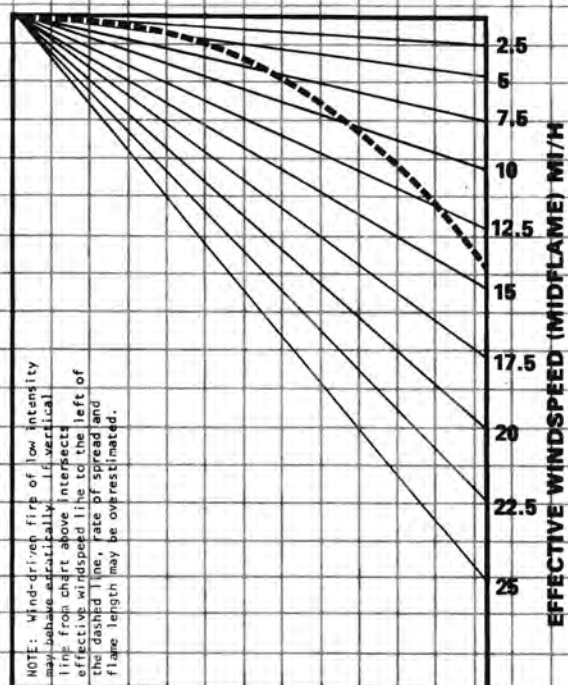
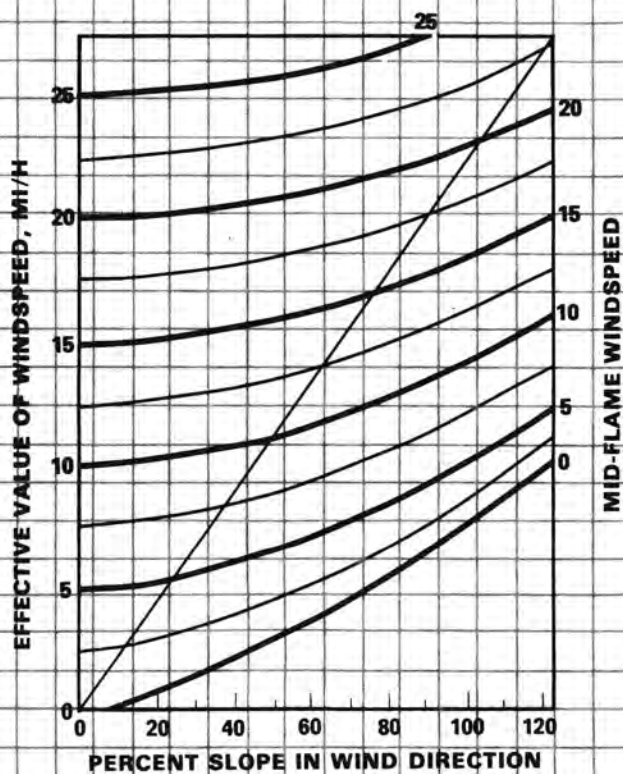
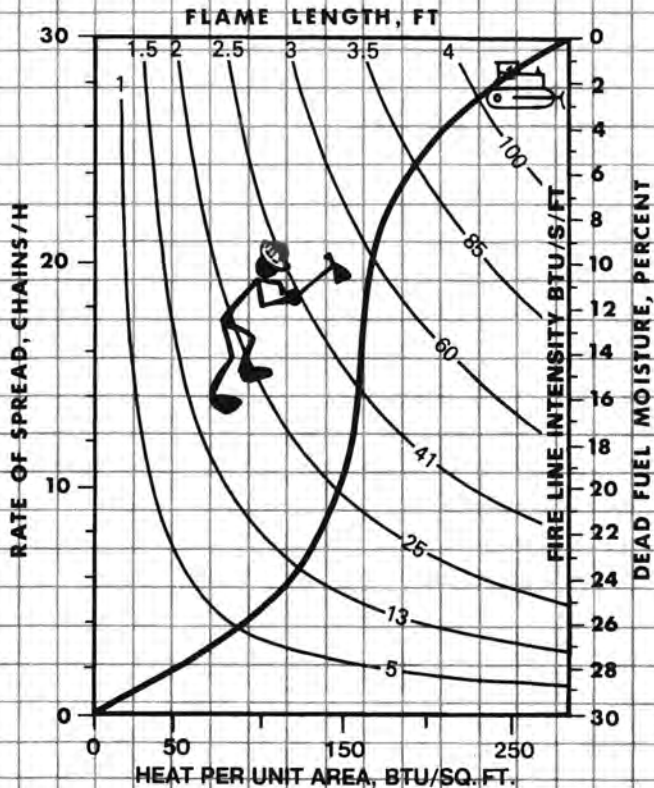
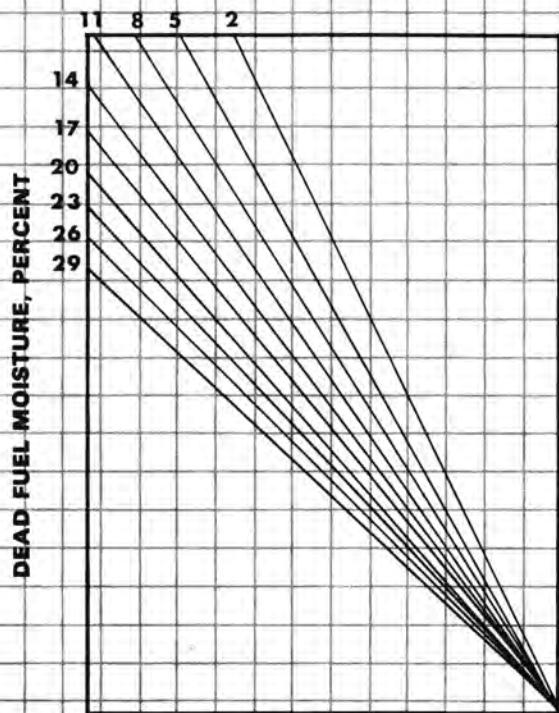
7. SOUTHERN ROUGH -HIGH WINDSPEEDS



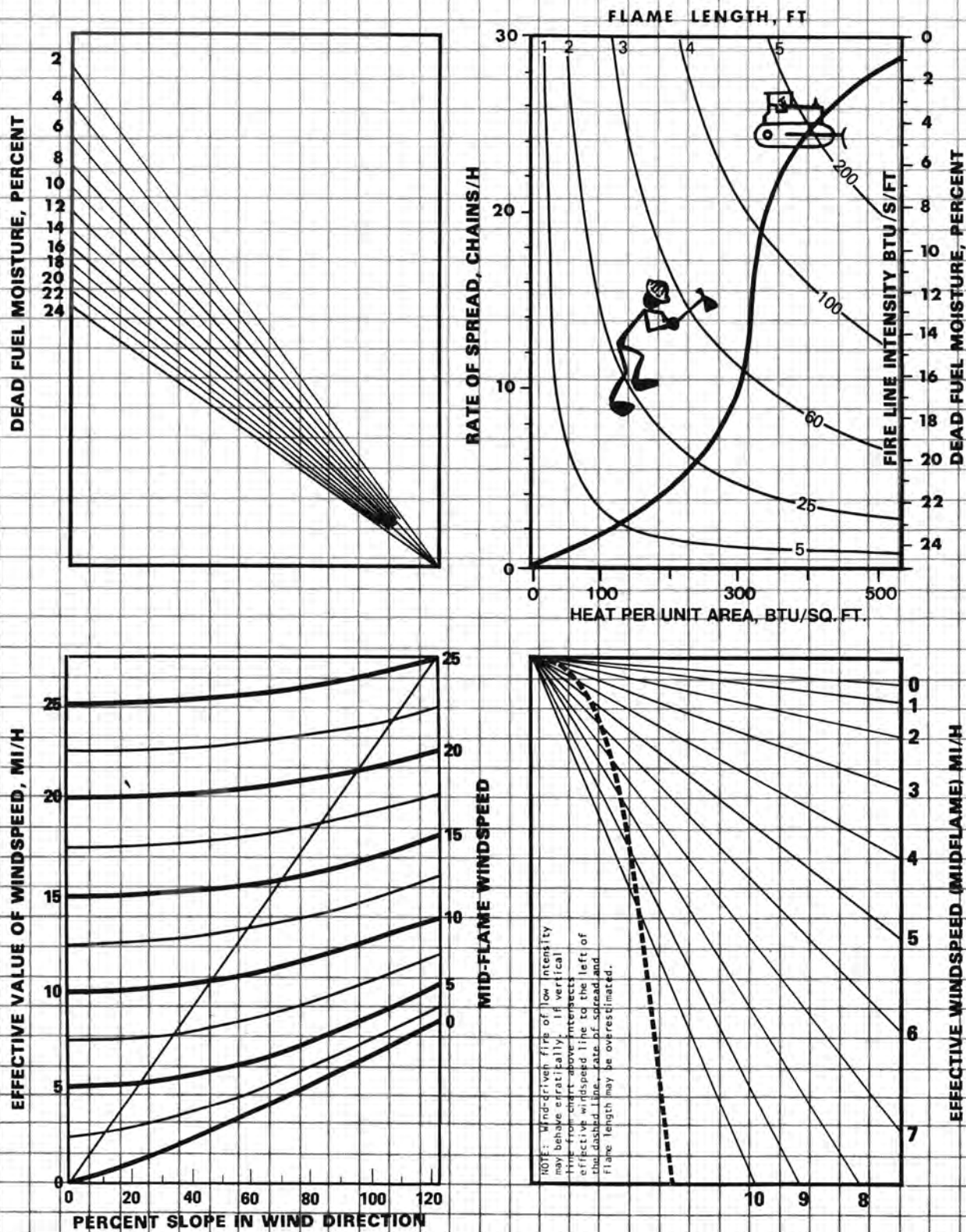
8. CLOSED TIMBER LITTER - LOW WINDSPEEDS



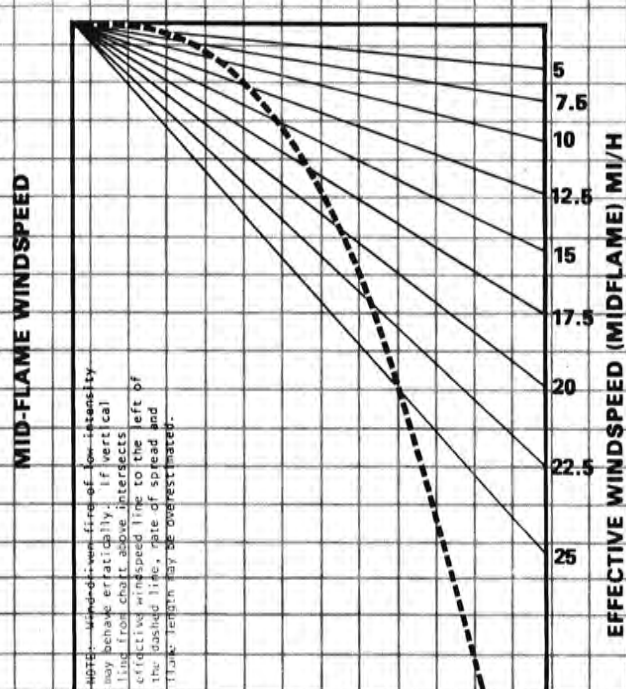
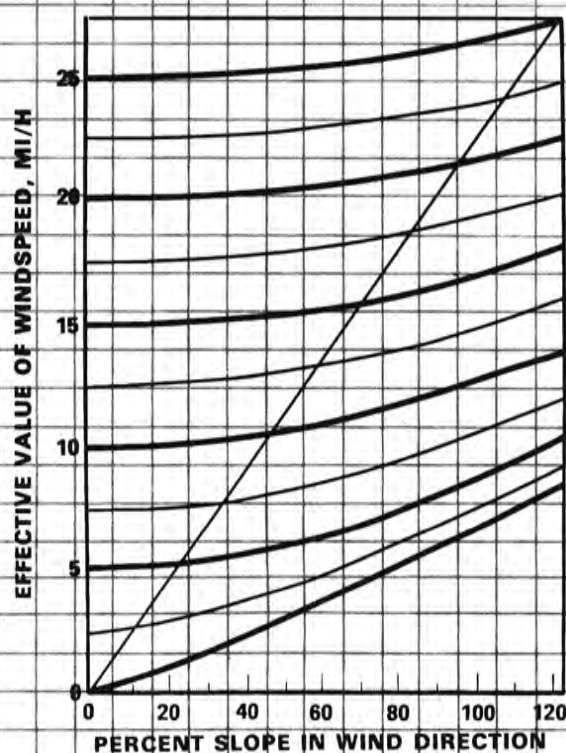
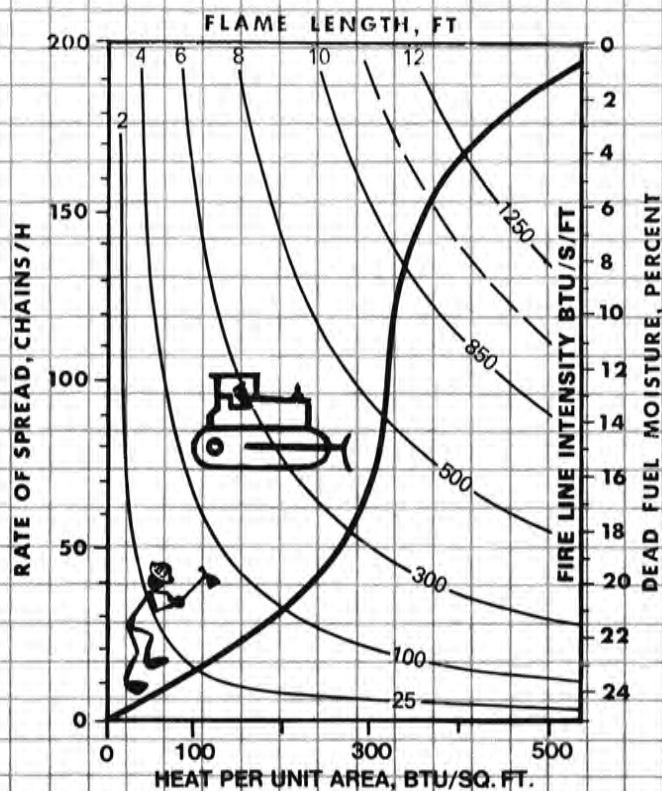
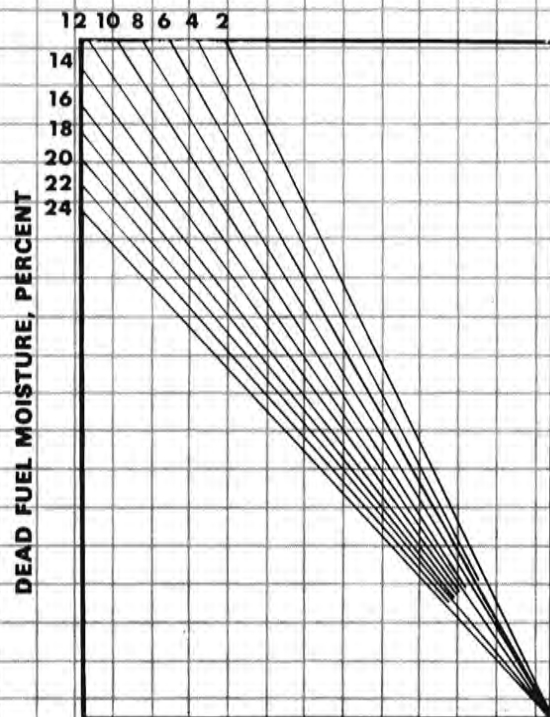
8. CLOSED TIMBER LITTER - HIGH WINDSPEEDS



9. HARDWOOD LITTER - LOW WINDSPEEDS



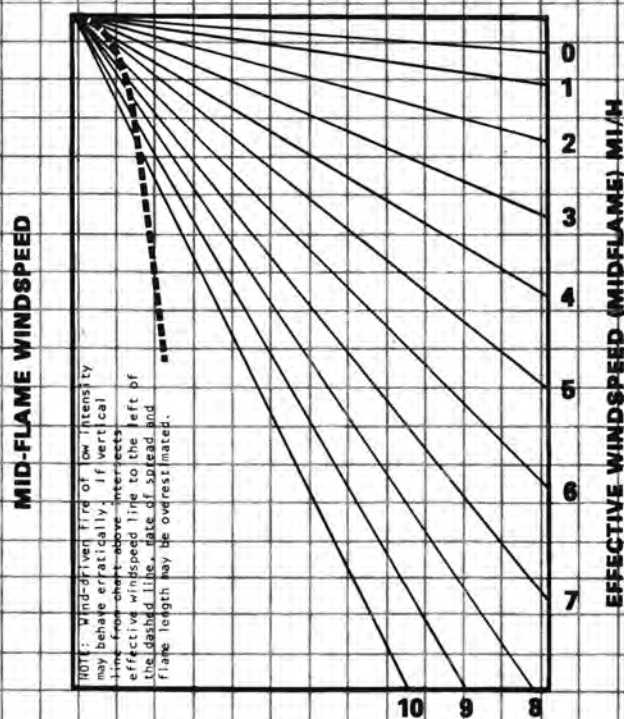
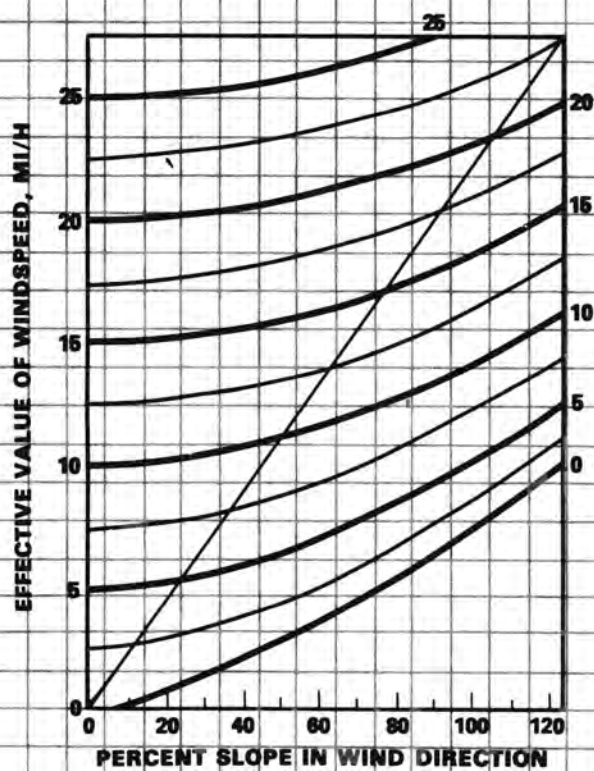
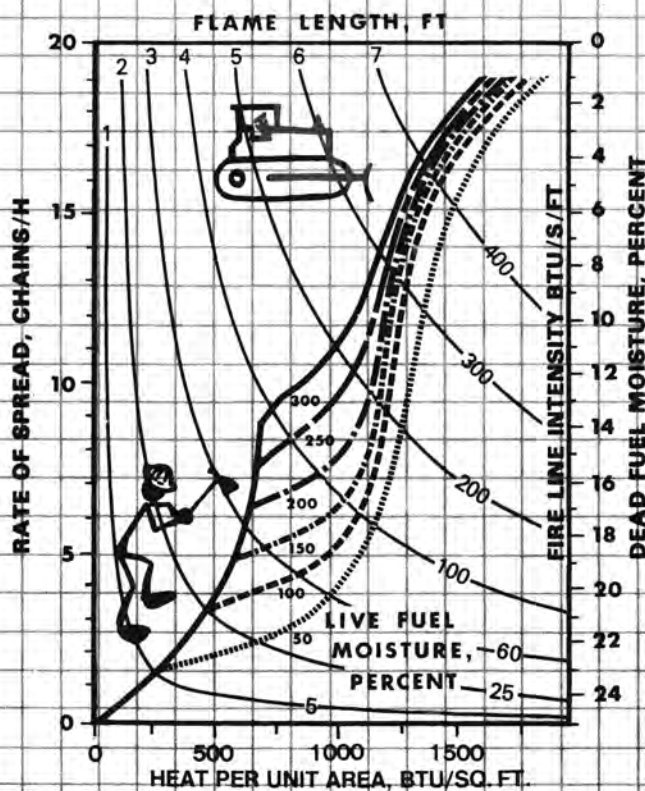
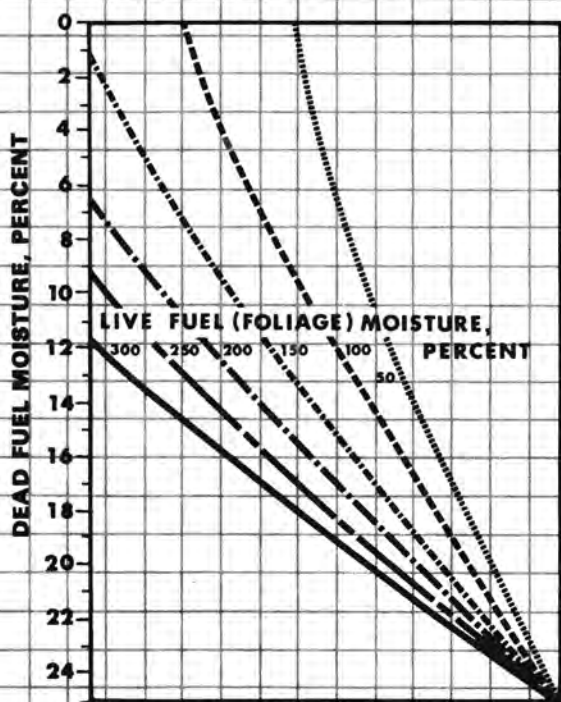
9. HARDWOOD LITTER - HIGH WINDSPEEDS



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

Fuel model 10 - low windspeeds

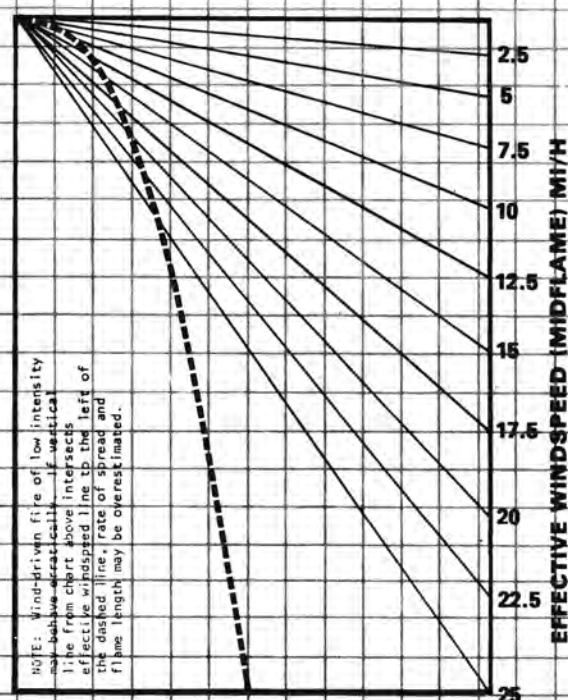
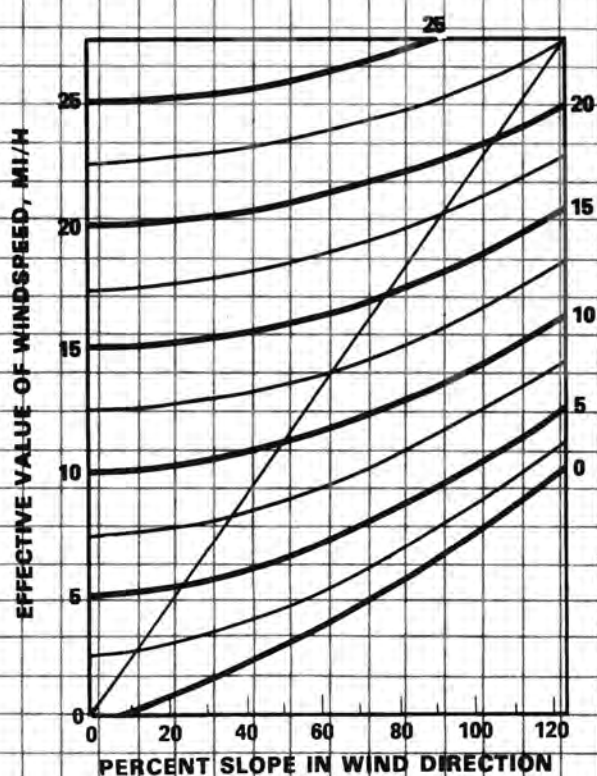
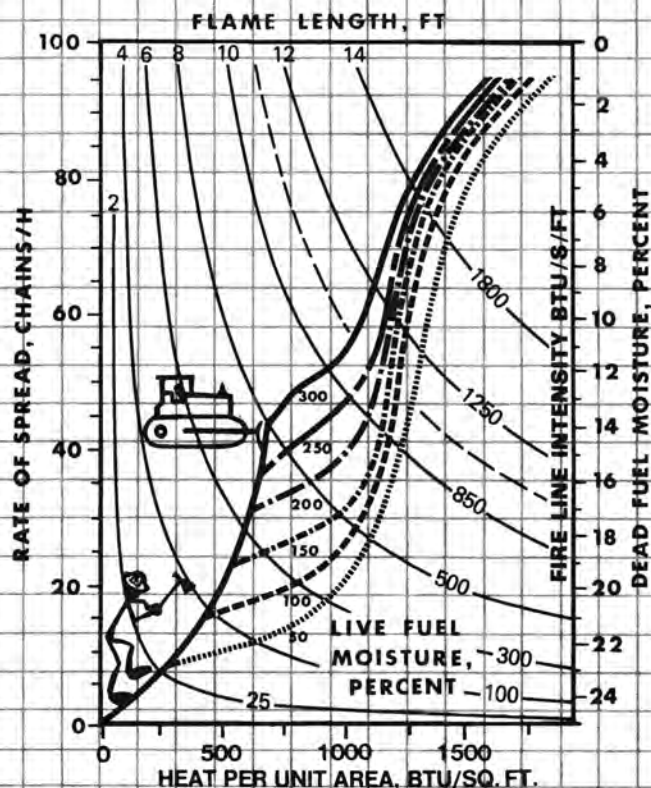
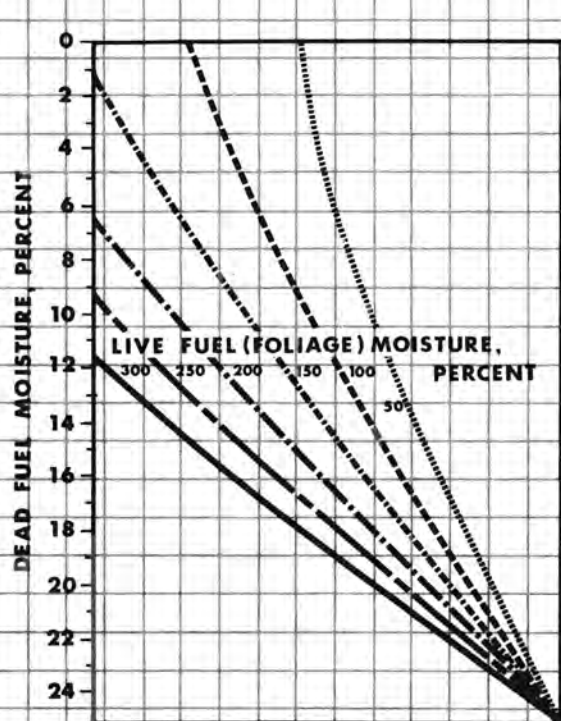
10. TIMBER (LITTER & UNDERSTORY) - LOW WINDSPEEDS



NOTE: Wind-driven fire of low intensity may behave erratically, if vertical spread is not checked, effective windspeed line to the left of the dashed line, rate of spread and flame length may be overestimated.

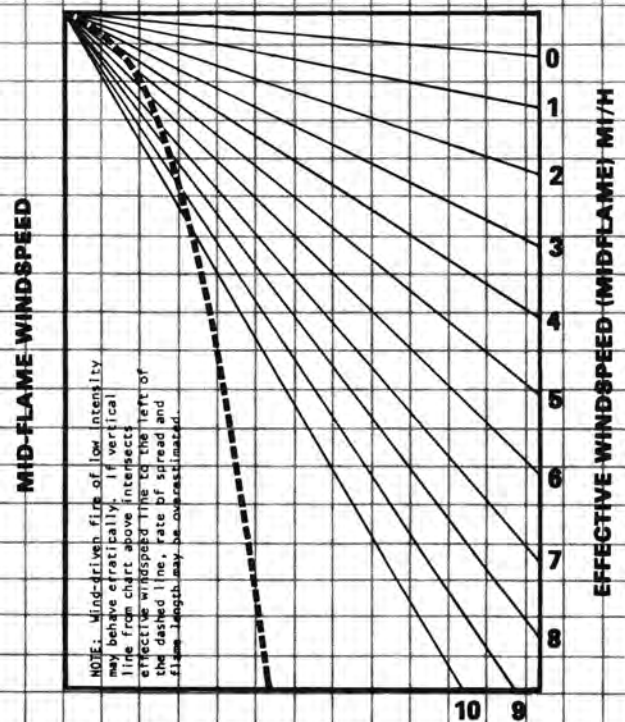
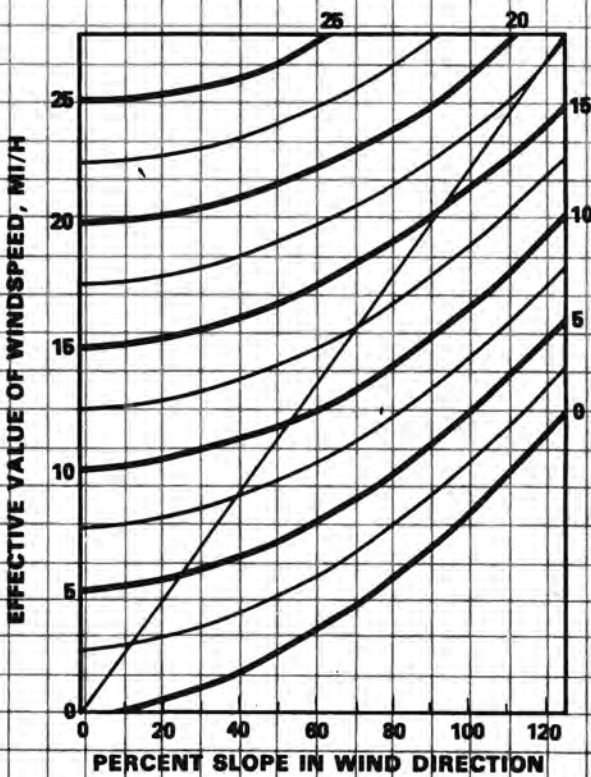
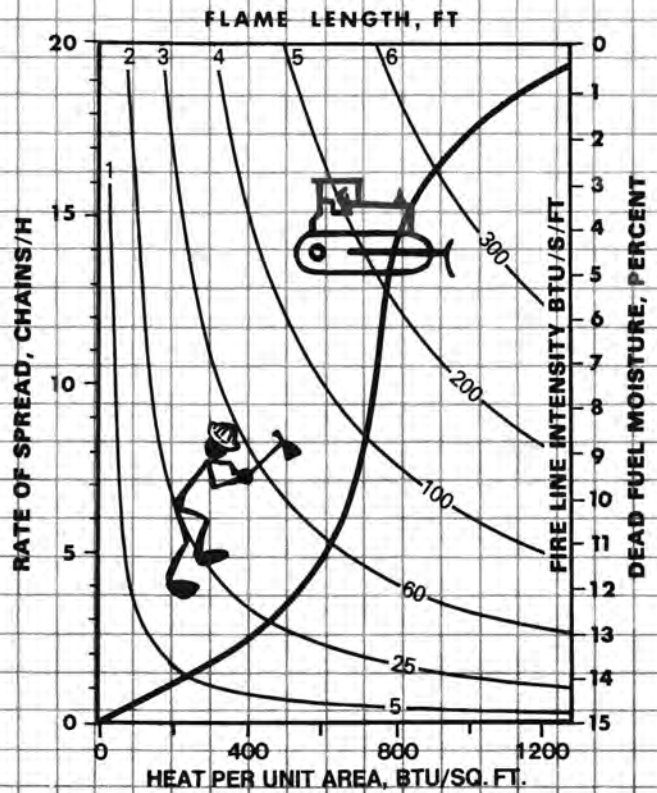
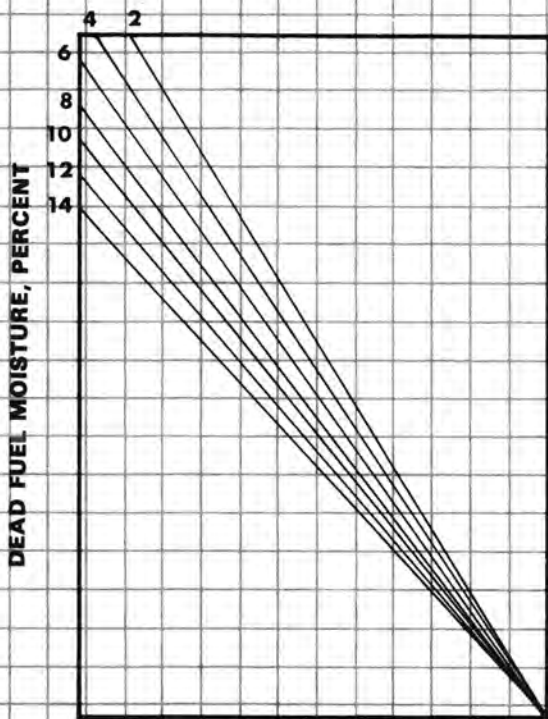
Fuel model 10 - high windspeeds

10. TIMBER (LITTER & UNDERSTORY)-HIGH WINDSPEEDS



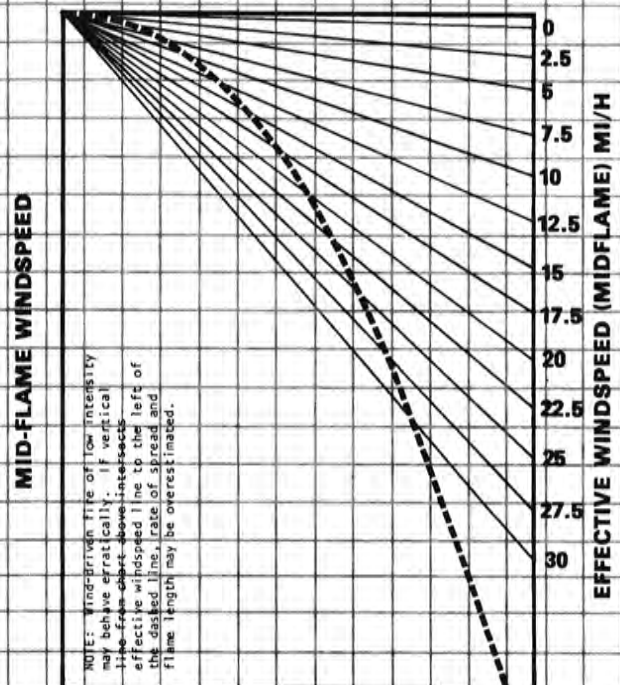
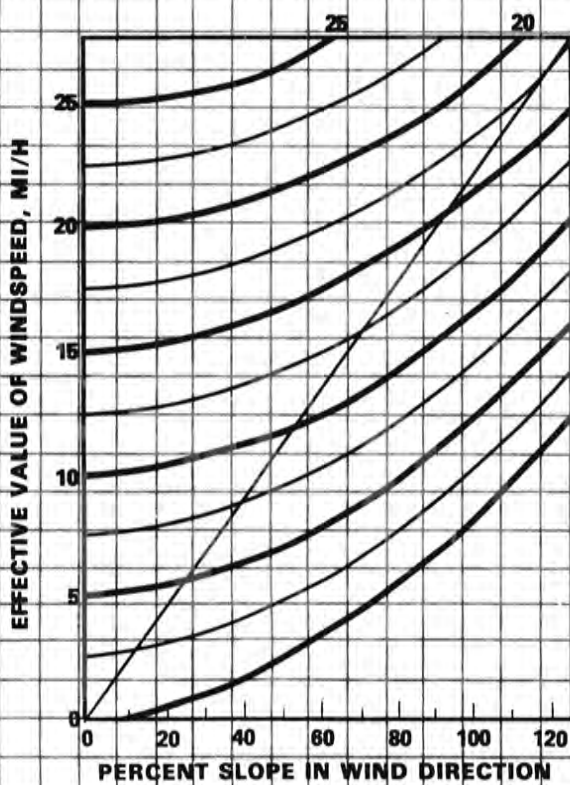
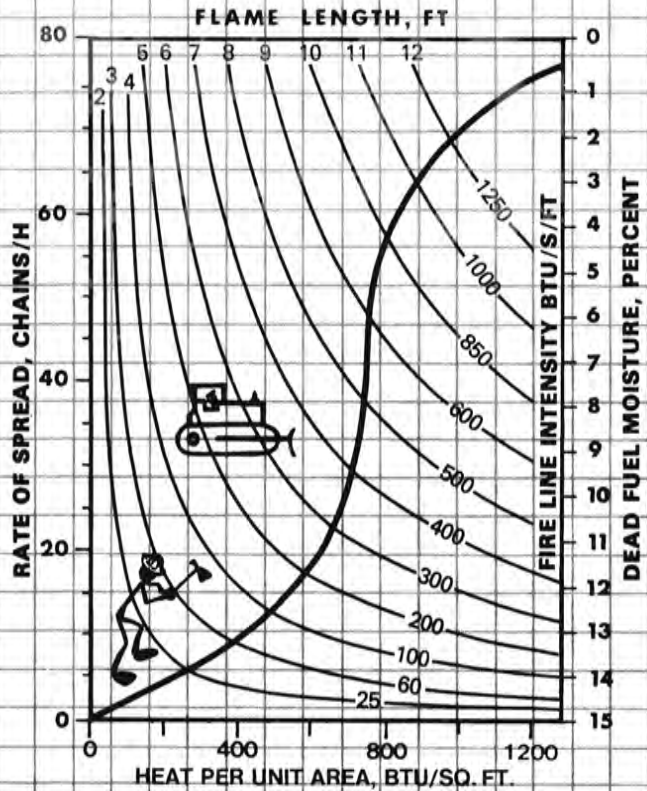
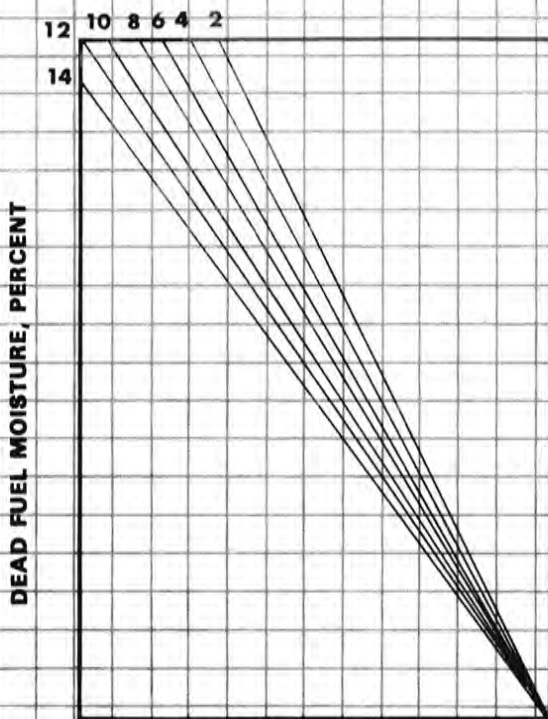
NOTE: Wind-driven fire of low intensity may behave erratically. If wind speed line from chart above intersects effective windspeed line to the left of the dashed line, rate of spread and flame length may be overestimated.

11. LIGHT LOGGING SLASH - LOW WINDSPEEDS

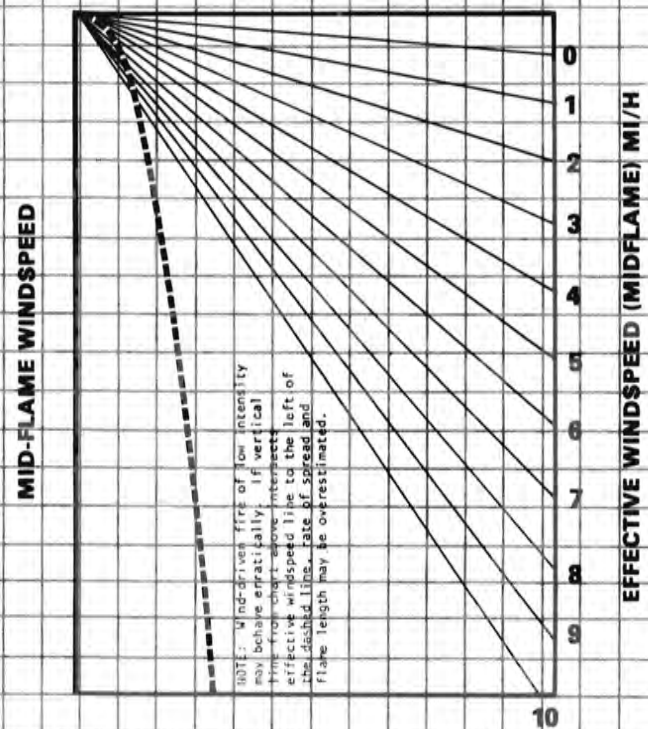
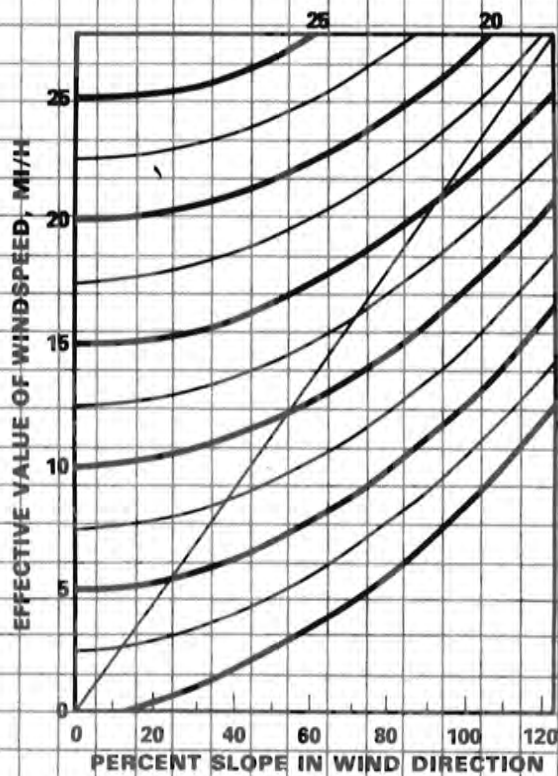
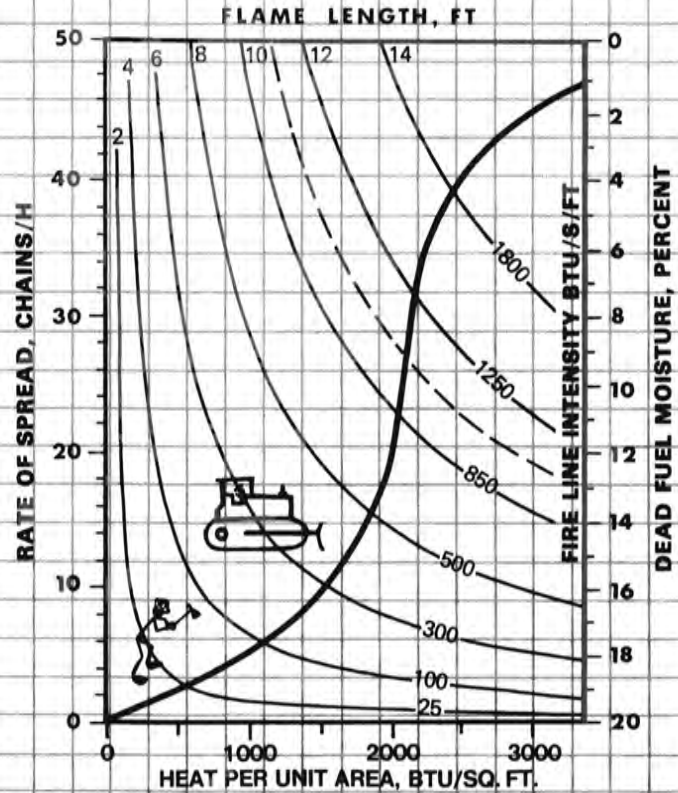
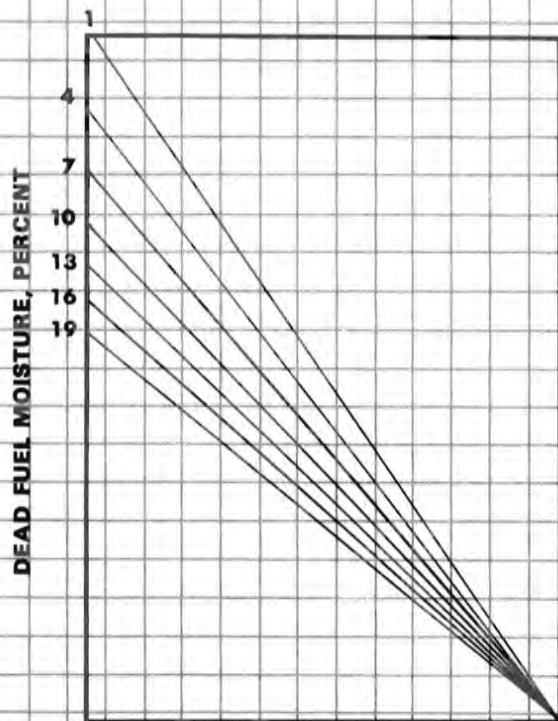


Fuel model 11 - high windspeeds

11. LIGHT LOGGING SLASH - HIGH WINDSPEEDS

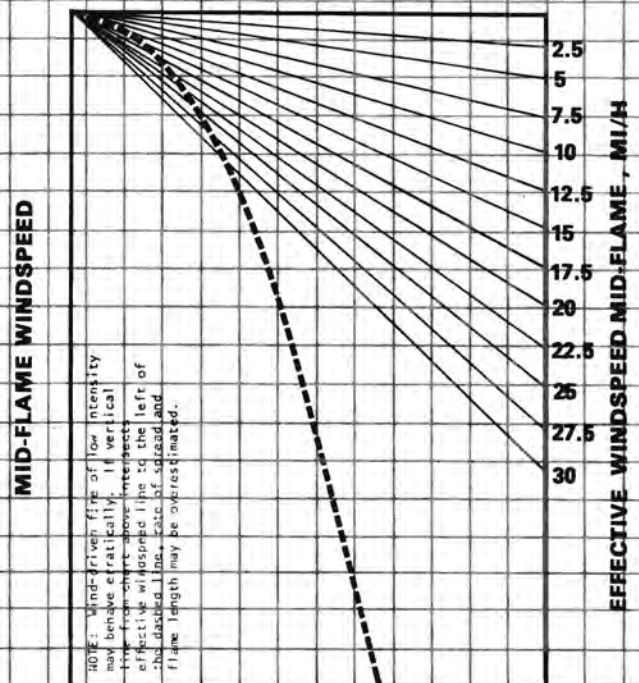
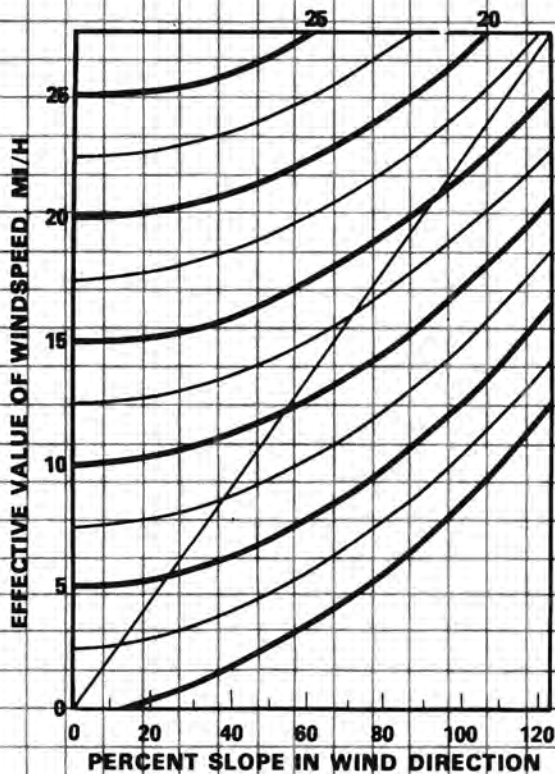
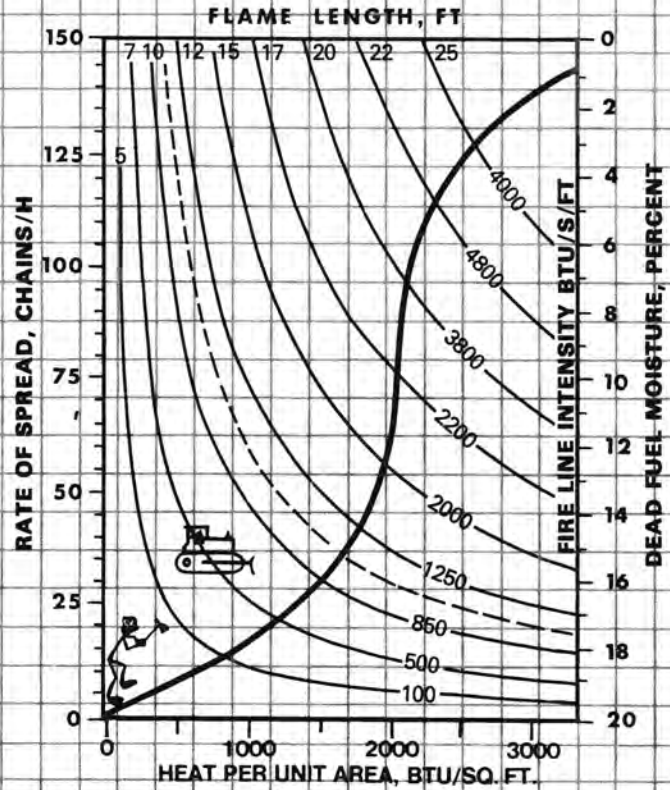
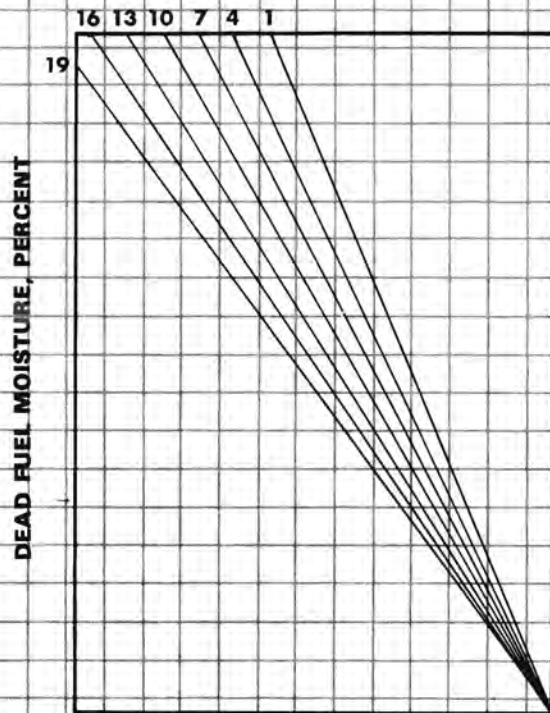


12. MEDIUM LOGGING SLASH -LOW WINDSPEEDS



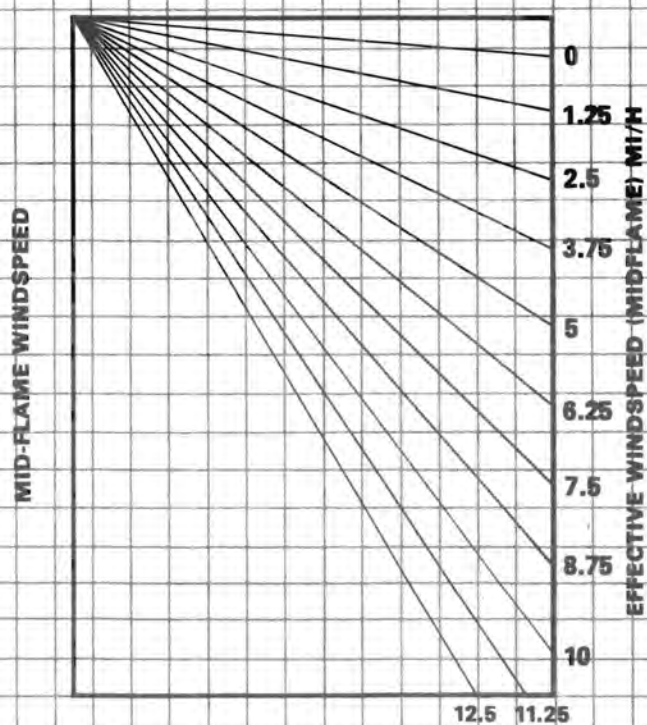
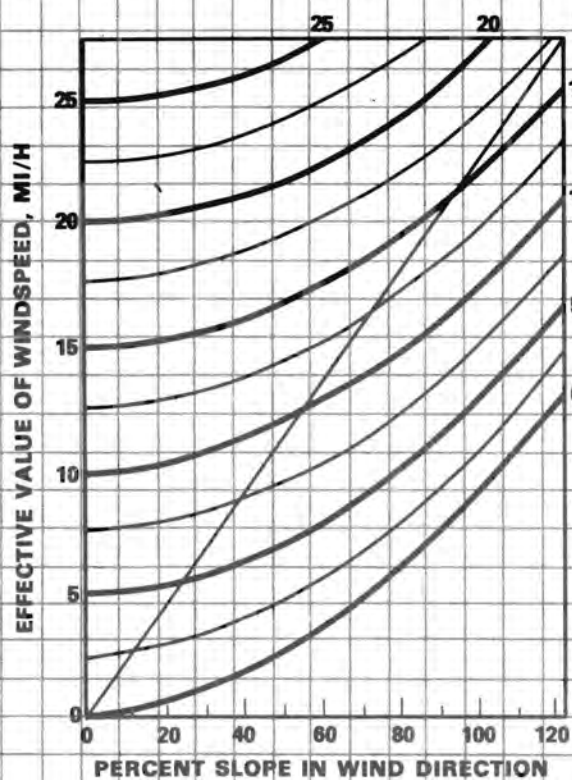
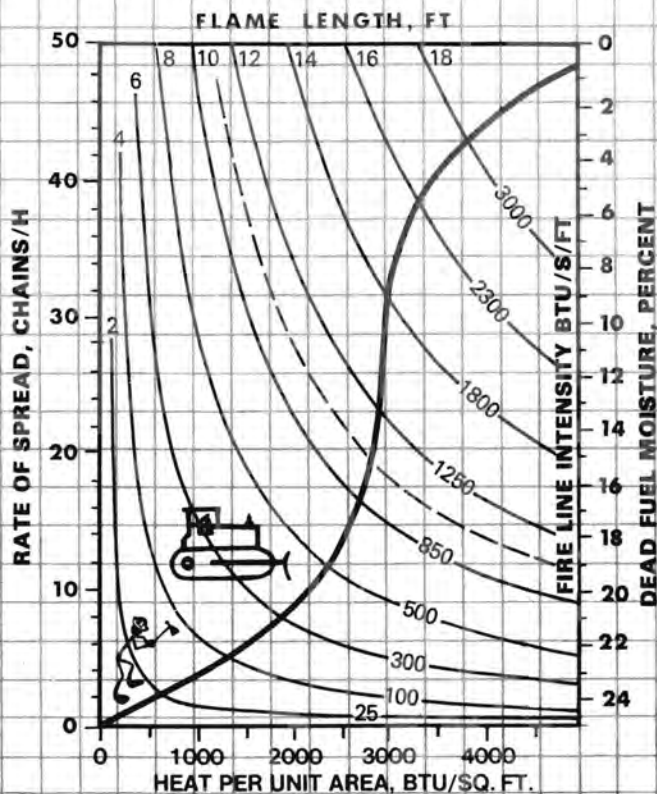
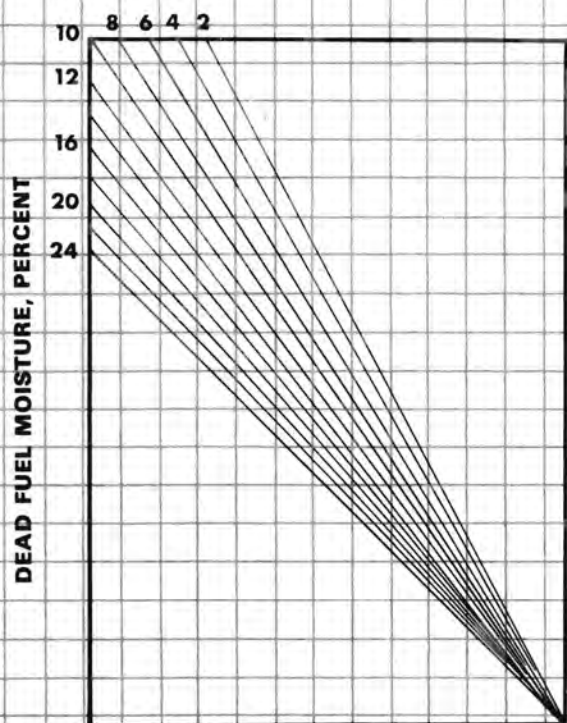
Fuel model 12 - high windspeeds

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

