



# รายงานการวิจัย

## ศูนย์วิจัยไฟฟ้าห้วยขาแข้ง จ.อุทัยธานี

ลักษณะเชื้อเพลิงในป่าเต็งรัง เขตรักษาพันธุ์สัตว์ป่าห้วยขาแข้ง  
Fuel Characteristics in Dry Dipterocarp Forest at  
Huai Kha Khaeng Wildlife Sanctuary



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## Abstract

The objectives of the study on fuel characteristics in dry dipterocarp forest at Huai Kha Khaeng Wildlife Sanctuary were to identify the significant characteristics of fuel and to analyse the relationship between fuel characteristics and fuel types as well as weather factors. 1x1 m<sup>2</sup> sample plots were laid out for collecting 4 types of fuel namely; litter, twig, grass and undergrowth. 60 sample plots were used monthly for data collection from October, 2000 to September, 2002.

The results showed that; Average loading of gross fuel was 4,004.16 kg/ha., which was composed of litter, twig, grass and undergrowth at amount of 1,243.53, 1,162.58, 803.78 and 794.27 kg/ha., respectively. Average coverage of gross fuel was 60.91 %, while those of each fuel types were 16.16, 8.67, 18.85 and 17.23 %, respectively. Average height of gross fuel was 33.56 cm., while those of each fuel types were 5.27, 4.72, 61.99 and 62.27 cm., respectively. Average moisture content of gross fuel was 75.08 %, while those of each fuel types were 26.97, 32.20, 136.41 and 151.10 %, respectively. Average dispersal of each fuel types were 67.50, 92.50, 93.47 and 96.39 %, respectively. Average importance value (IV) of each fuel types were 74.24, 70.27, 78.78 and 76.71, respectively. In February, there were the highest average loading of gross fuel of 5,693.35 kg/ha. And the lowest average moisture content of gross fuel of 21.19 %. In March there were the highest average; gross fuel coverage of 84.18 % and fuel dispersal of 99.17 %. In June, there was the highest average fuel height of 39.12 %. The relationship between fuel characteristics and fuel types and weather factors showed that; Loading of gross fuel was related to loading of litter, decreasing of gross fuel loading should be conducted to loading of litter. Coverage of gross fuel was related to coverage of under growth, decreasing of gross fuel coverage should be conducted to coverage of undergrowth. Height of gross fuel was related to height of grass and under growth, decreasing of gross fuel height should be conducted to height of grass and undergrowth. Moisture content of gross fuel was related to moisture content of litter, grass and undergrowth, increasing moisture content of gross fuel should be conducted to moisture content of grass and undergrowth. Dispersal of litter was related to rain. Height of undergrowth was related to rain. The dispersal of litter would increase, if a few raining. On the other hand height of undergrowth would increase, if more raining. During fire season, the top alert and carefulness should be in February, where extreme loading and dry of gross fuel and in March, where extreme coverage and dispersal of gross fuel.

**Key word:** fuel, dry dipterocarp forest, loading, coverage, dispersal, height, moisture and importance value