

Figure 1. Map of Mo'orea in black outline, with grey outline of the surrounding reef. Rangeland sampling site noted by "R", grassland site noted by "G", and forest site noted by "F".

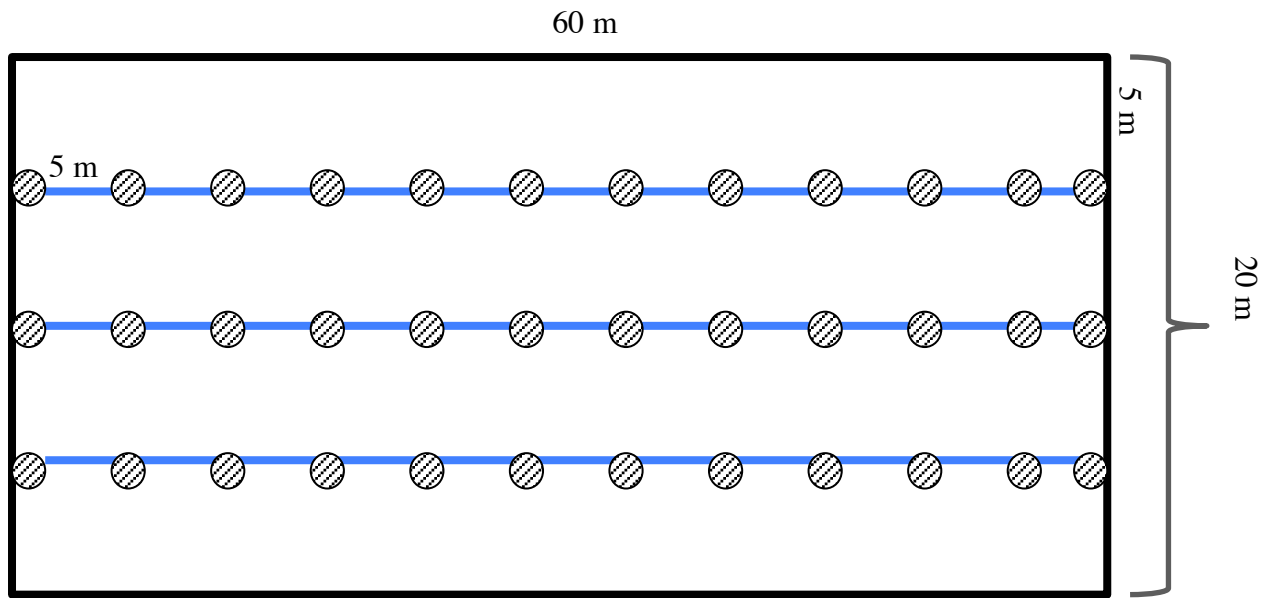


Figure 2. Field sampling design of 60m by 20m plots. Blue line represents 60 m line transects. Striped circles represent sampling points, where the soil auger was used to collect 15 cm deep samples at each study site.

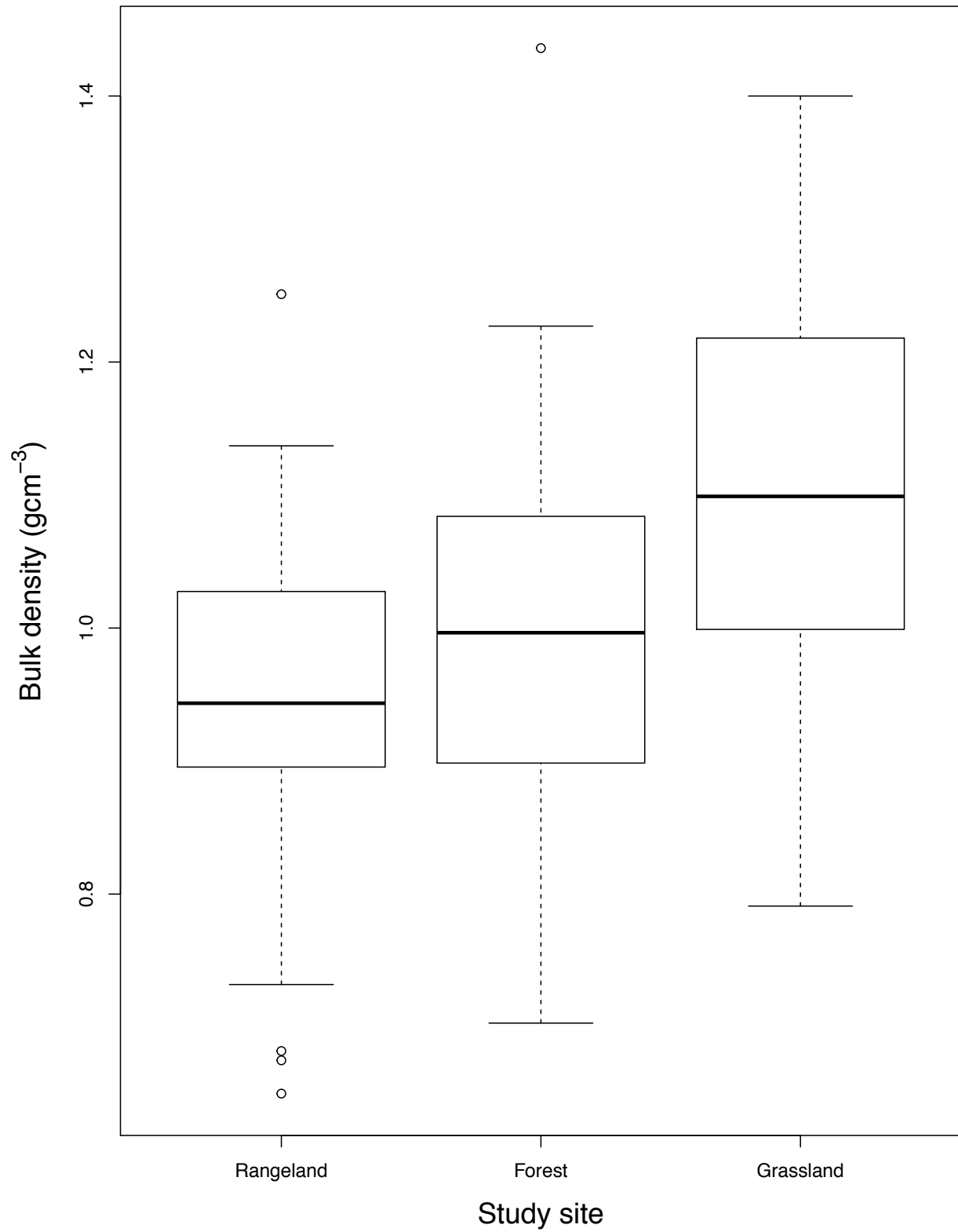


Figure 3. Average soil bulk density measurements compared by each study site. Grassland soil had significantly higher average soil bulk density (p-value < 0.001).

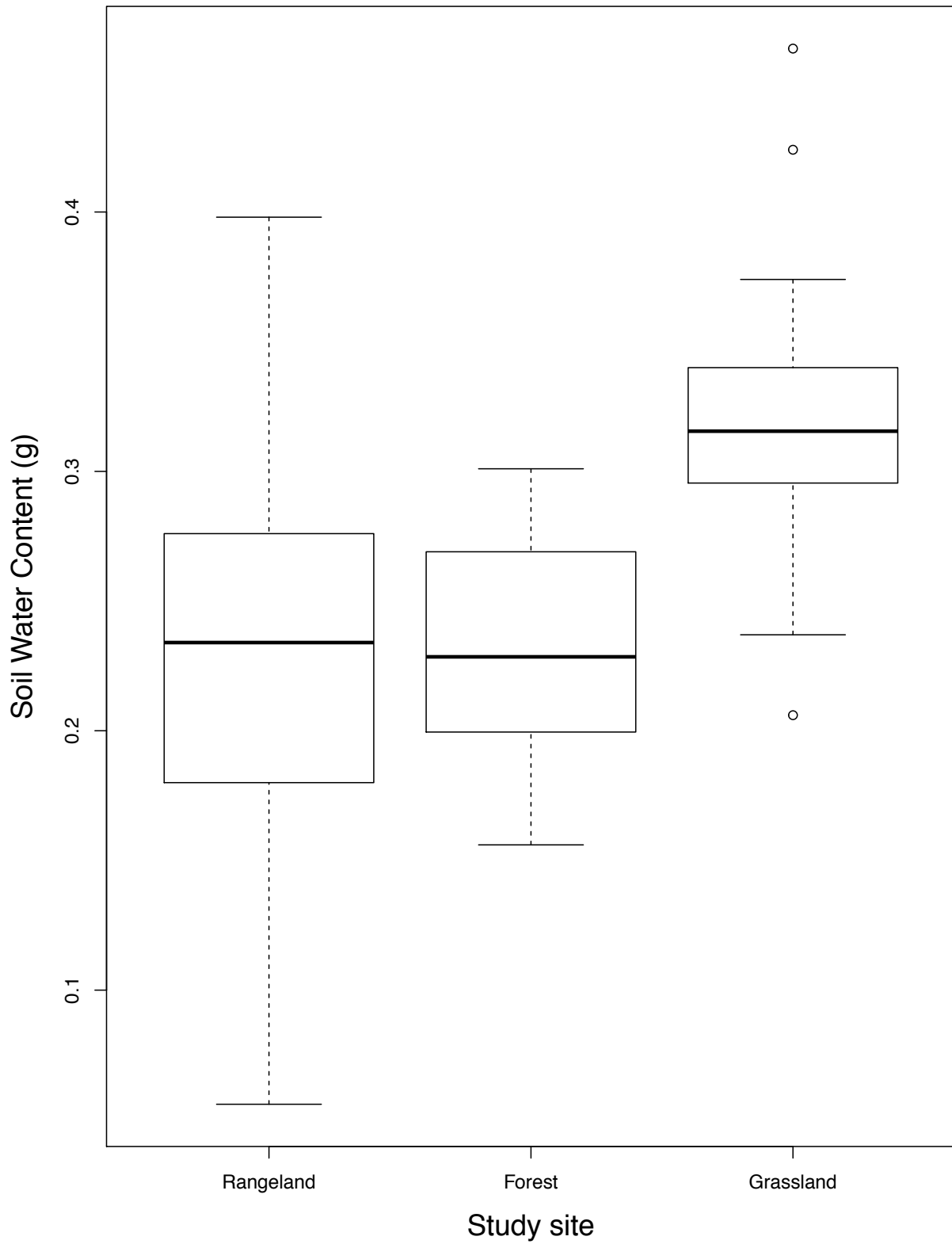


Figure 4. Average soil water content measurements compared by each study site. Grassland soil had significantly higher average soil water content (p-value <0.001).

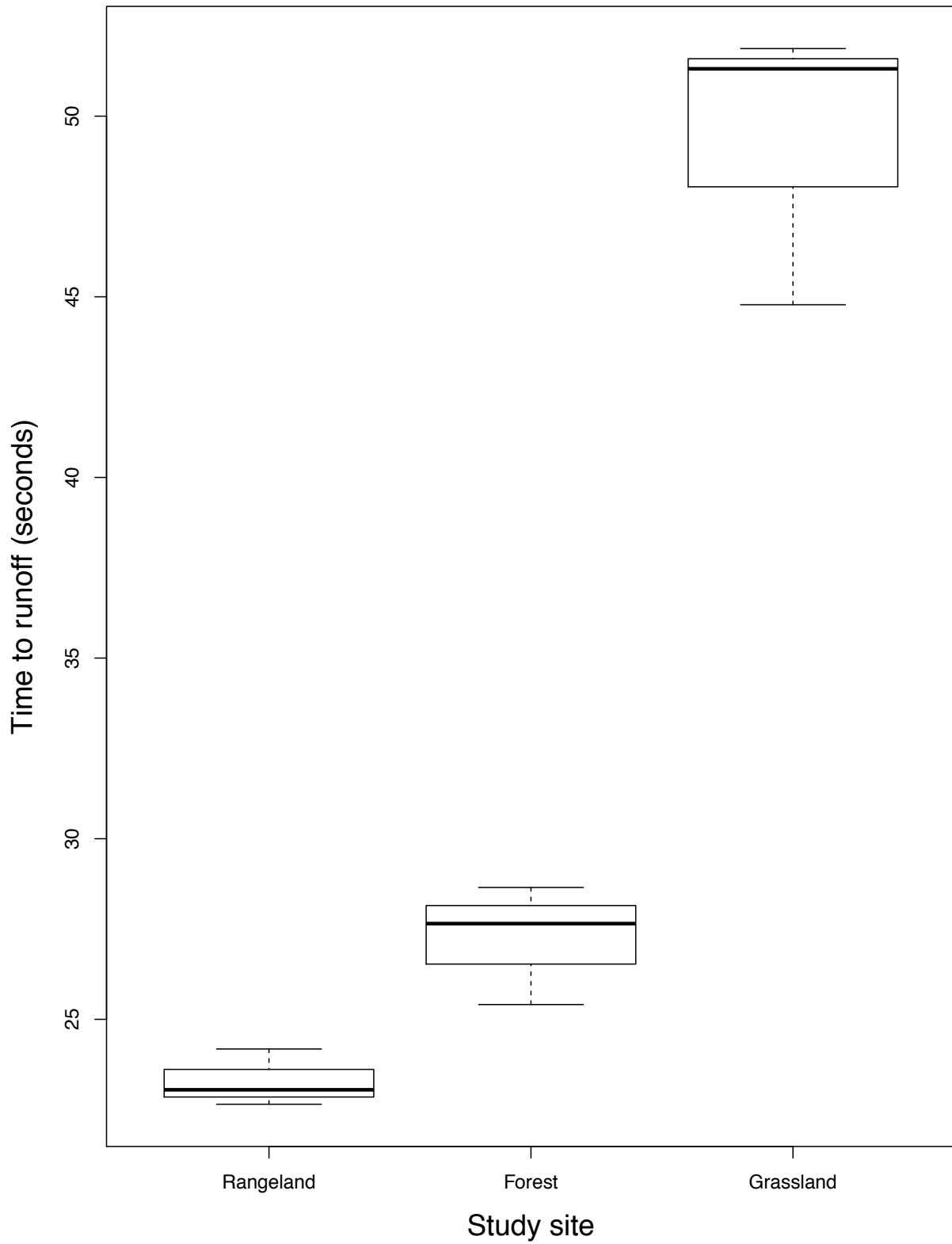


Figure 5. Average time for water to flow off soil samples in simulated rainfall trials. Grassland soil had a significantly longer average time to runoff (p-value <0.05).

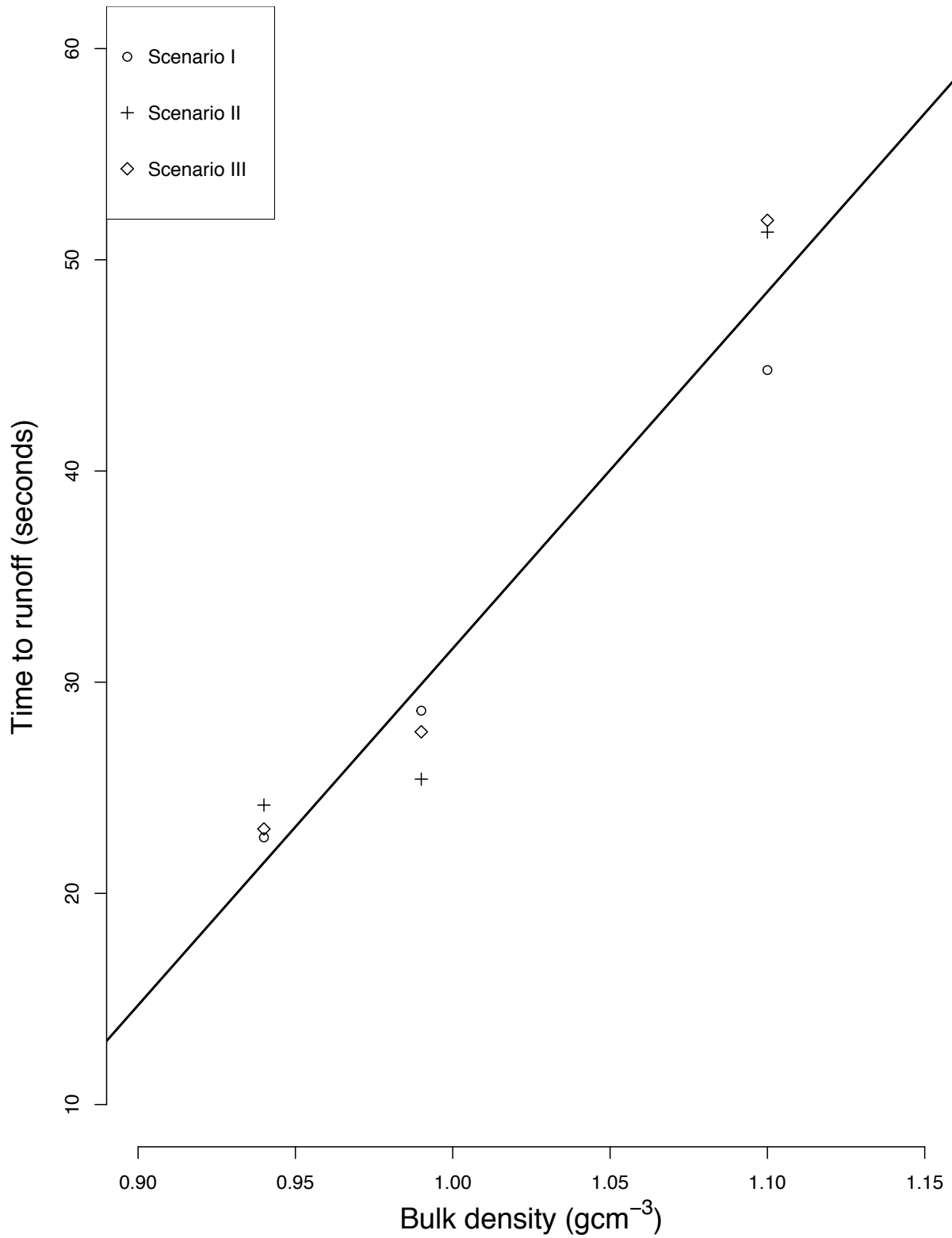


Figure 6. Correlation of average soil bulk densities and average time it took for water to runoff in simulated rainfall trials. Significant relationship found (R-squared = 0.948).

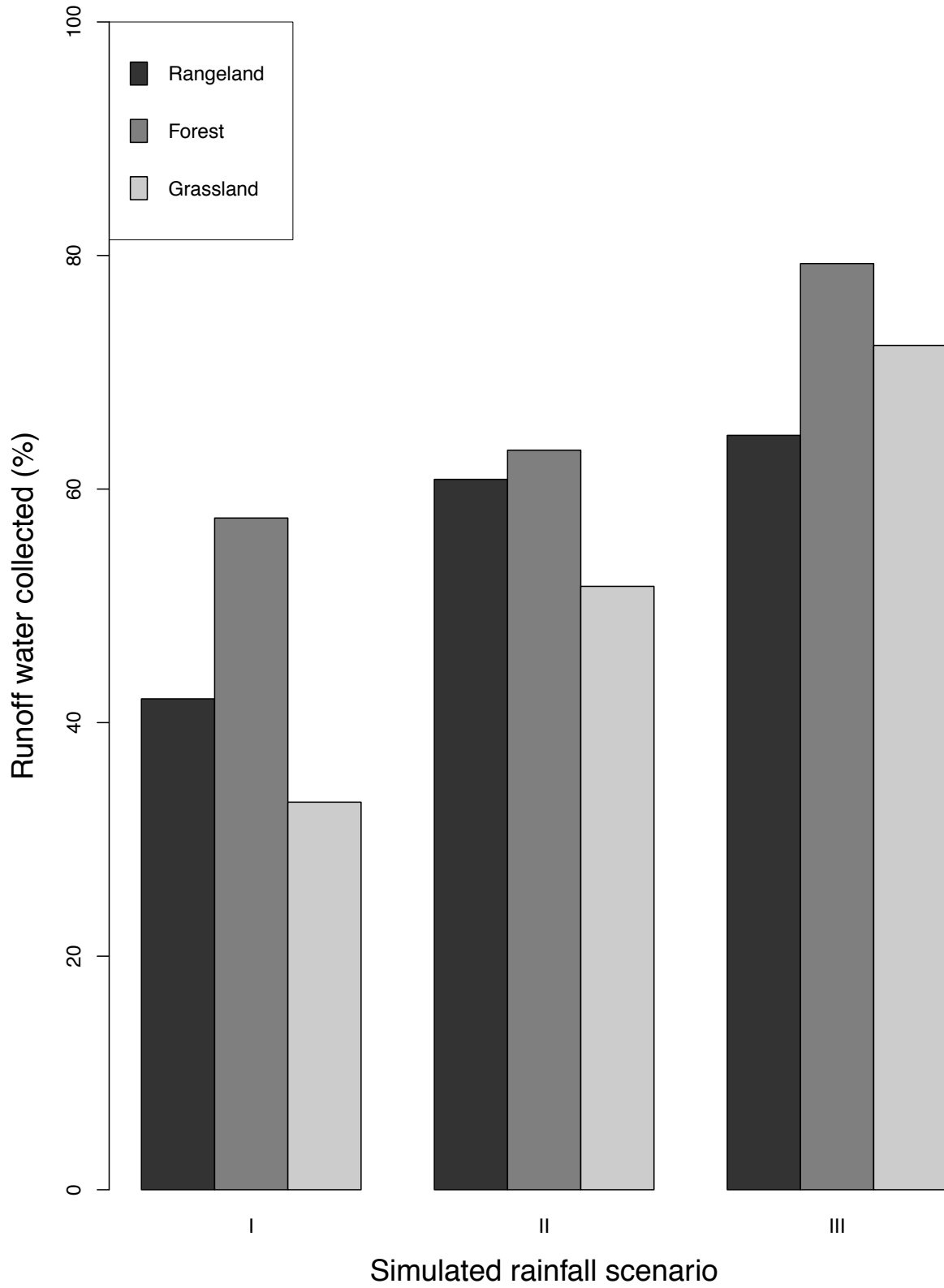


Figure 7. Percent runoff water collected from each study site, separated by simulated rainfall scenarios. No significant difference found ( $p$ -value  $> 0.05$ ).