

Carefully read the description of the experiment below. Be prepared to answer the questions that follow the design description as a class quiz.

Sweet potato (SP) is grown as dry season forage for sheep. In order to study the effect of the cutting schedule on the yield and quality, Sweet potato forage vines were subjected to four cutting regimes: pruning at 4, 6, 8 week intervals and uncut plots (control plots).

The experiment spanned a period of 216 days (about 31 weeks) and was conducted on a field that had been left to fallow for a year after several years of cultivation to maize and cassava crops. A dual-purpose variety of sweet potato collected from the National Root Crops Research Institute (NRCRI) of Nigeria was used in this study. The vines were cut into 30 cm pieces with a minimum of 4 nodes. The plot size in this experiment was 4 x 6 m. Plots were created in 3 groups of 4 so each treatment was replicated three times, randomly assigned to one plot in each plot group.

Results were presented as dry matter (DM) yield of forage, roots and the total biomass yield measured at 4, 6, 8 weeks cutting intervals plus an uncut control plots. We will be concerned with forage as dry matter yield of a plot. Pruning at 6 and 8 week intervals significantly ($P < 0.05$) improved forage yield per plot at the expense of root yield.

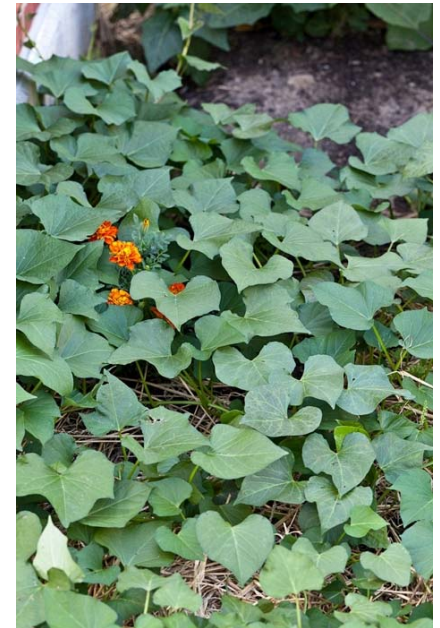


Table 2. Dry matter yield (t/ha) of sweet potato cut at different intervals

Cutting interval, weeks	Forage	Root	Total biomass
4 weeks	8.58 ^b	4.34 ^c	12.92 ^b
6 weeks	11.95 ^a	5.08 ^b	17.03 ^a
8 weeks	12.16 ^a	5.96 ^b	18.12 ^a
Control	8.06 ^b	8.98 ^a	17.04 ^a
SEM	0.68	0.50	0.73

a, b, c: means with same superscripts within the column are not significantly different ($P > 0.05$)

Answer choices:	(A) plot groups	(B) Sweet Potato vines	(C) cutting regimes
	(D) uncut control	(E) dry matter yield	(F) a plot

Name _____ Quiz Number _____ Date _____ / _____ / 2012

Circle the appropriate letter for each question.

- 1) What is the experimental unit for this experiment? A B C D E F
- 2) What is the sampling unit for this experiment? A B C D E F
- 3) What is the dependent variable for this experiment? A B C D E F
- 4) What is the treatment variable for this experiment? A B C D E F
- 5) If the design is RBD, what are the blocks? A B C D E F NA
- 6) Does it seem more likely that the treatments are fixed or random? (A) fixed (B) random
- 7) What is the treatment arrangement for this experiment? (A) single factor (B) factorial (C) nested
- 8) What is the experimental design? (A) CRD (B) RBD (C) LSD (D) Split-plot (E) Repeated Measures
- 9) The treatment degrees of freedom are _____ .
- 10) The degrees of freedom for the error used for testing treatments are _____ .