Version 1

Results

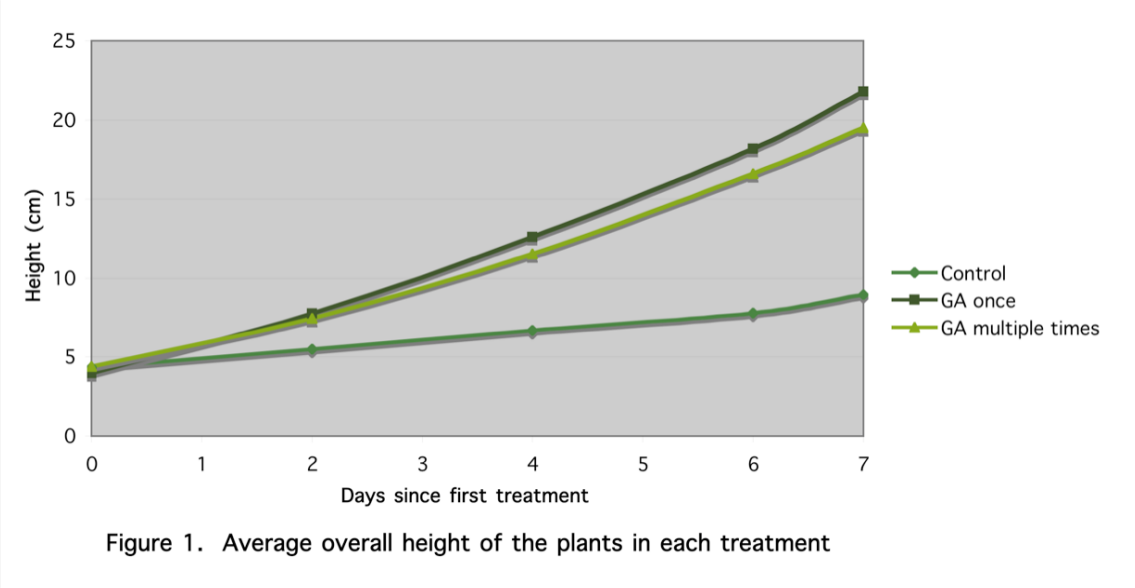

Figure 1. Average overall height of the plants in each treatment

Application of gibberellic acid had a significant effect on the height of the plants (d.f. = 2, $p = 0.007$). Figure 1 shows the average overall height of the plants in each treatment over time. At the beginning of the experiment, all plants were a very similar size, within a range of 0.3 cm; by the end, the mean height of the control was 8.5 cm, while the mean heights of 23.5 cm for the single application of GA, and 19.1 cm for the plants that had been exposed multiple times. The number of nodes did not vary significantly ($X^2 = 1.24$, d.f. = 1, $p = 0.27$). On the first day of the experiment each plant had 4 nodes, on the fourth day 6, and on the seventh day almost all had 7,

although a two in the single application treatment had 8 each.

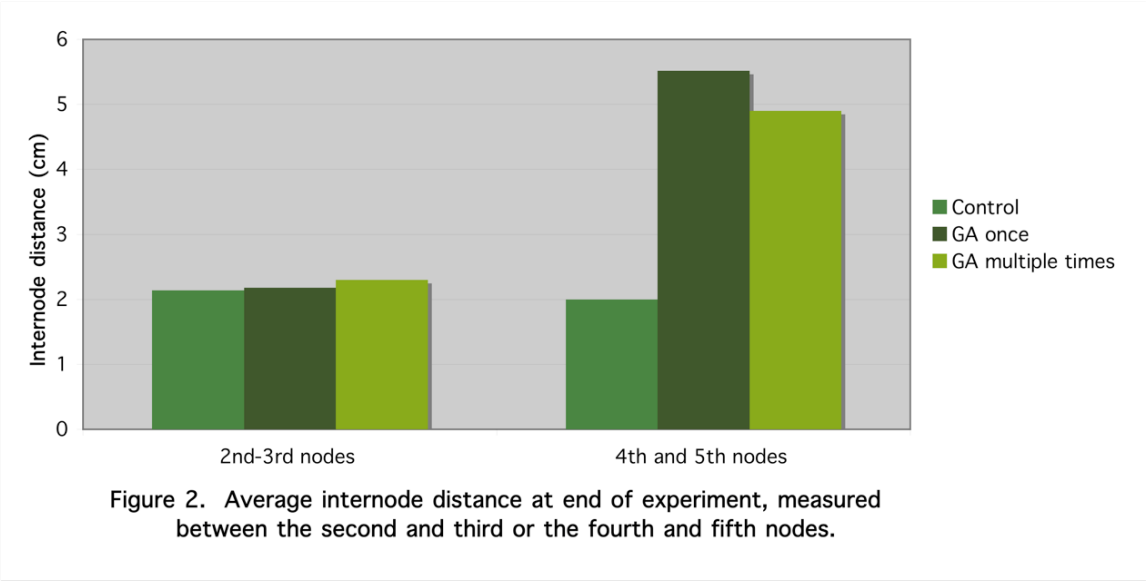

Figure 2. Average internode distance at end of experiment, measured between the second and third or the fourth and fifth nodes.

Internode distance is shown in Figure 2. There was no significant difference in the internode distance between the second and third nodes among the treatments (d.f. = 2, p = 0.49). There was a highly significant effect of treatment on the distance between the 4^{th} and 5^{th} nodes, however (d.f. = 2, p = 0.001). The control had a mean distance of 2.0 cm, very similar to the distance between the second and third nodes. In the experimental treatments, the mean distance was highest for the single application, with a mean of 5.5 cm, and slightly lower for the multiple applications, with a mean of 4.9 cm.

Version 2

Results

We applied gibberellic acid to 10-day-old pea seedlings and measured their growth over the course of 7 days (Figure 1). One treatment received a single application, one was treated every other day, and the control group received only water. Application of gibberellic acid had a significant effect on the height of the plants. At the beginning of the experiment, all plants were a very similar size, within a range of 0.3 cm; by the end, the mean height of the control was 8.5 cm, while the mean heights of 23.5 cm for the single application of GA, and 19.1 cm for the plants that had been exposed multiple times. We used a chi-square goodness-of-fit test, with equal variance, to test whether the number of nodes varied significantly between treatments; it did not ($X^2 = 1.24$, d.f. = 1, $p = 0.27$). On the first day of the experiment each plant had 4 nodes, on the fourth day 6, and on the seventh day almost all had 7, although a two in the single application treatment had 8 each.

Figure 1. 10-day-old pea seedling.

We measured internode distance on the last day of the experiment, which is shown in Figure 2. There was no significant difference in the internode distance between the second and third nodes among the treatments (d.f. = 2, p = 0.49). There was a highly significant effect of treatment on the distance between the 4^{th} and 5^{th} nodes, however (d.f. = 2, p = 0.001). The control had a mean distance of 2.0 cm, very similar to the distance between the second and third nodes. In the experimental treatments, the mean distance was highest for the single application, with a mean of 5.5 cm, and slightly lower for the multiple applications, with a mean of 4.9 cm.

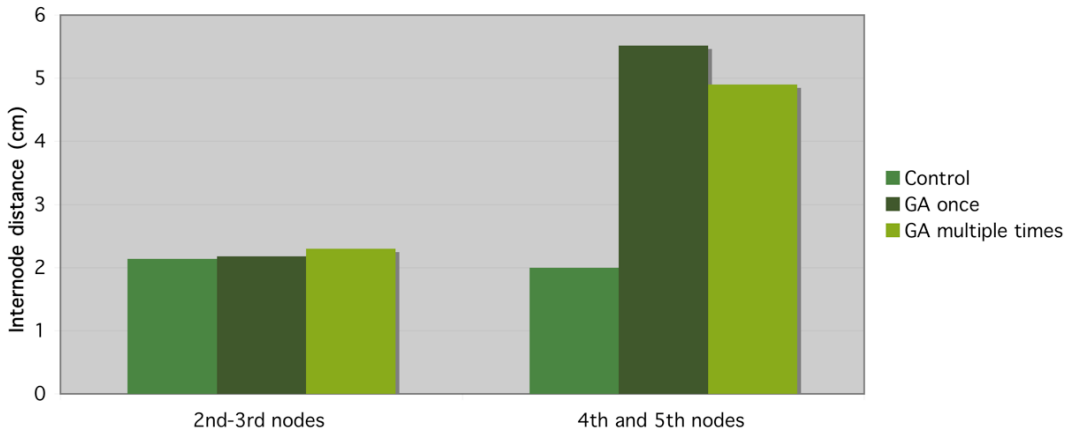

Figure 2. Average internode distance at end of experiment, measured between the second and third or the fourth and fifth nodes.

Version 3

Results

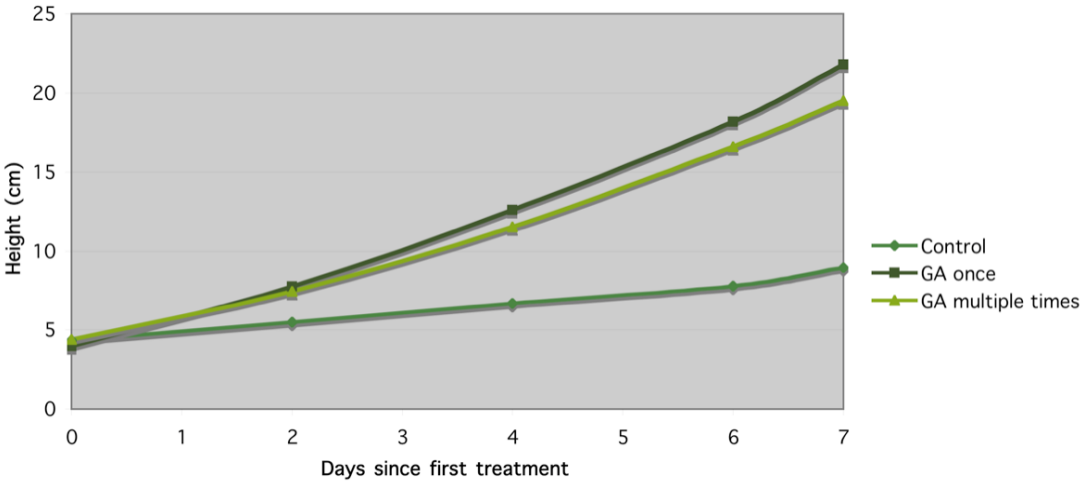

Figure 1. Average overall height of the plants in each treatment

Application of gibberellic acid had a significant effect on the height of the plants. The p-value for the ANOVA analysis of height at the end of the experiment was 0.007. Figure 1 shows the average overall height of the plants in each treatment over time. At the beginning of the experiment, all plants were a very similar size, within a range of 0.3 cm; by the end, the mean height of the control was 8.5 cm, while the mean heights of 23.5 cm for the single application of GA, and 19.1 cm for the plants that had been exposed multiple times. This met our prediction that GA would cause increased stem elongation, as described in (hypothetical citation). The number of nodes did not vary significantly; the p-value was 0.27. On the first day of the experiment each plant had 4 nodes, on the fourth day 6, and on the seventh day almost all had 7, although a two in the single application treatment had 8 each. This makes sense, as the primary effect of GA is to increase elongation, rather than cell division; the exposed plants probably didn't have any additional cells, but the ones in the stem were longer.

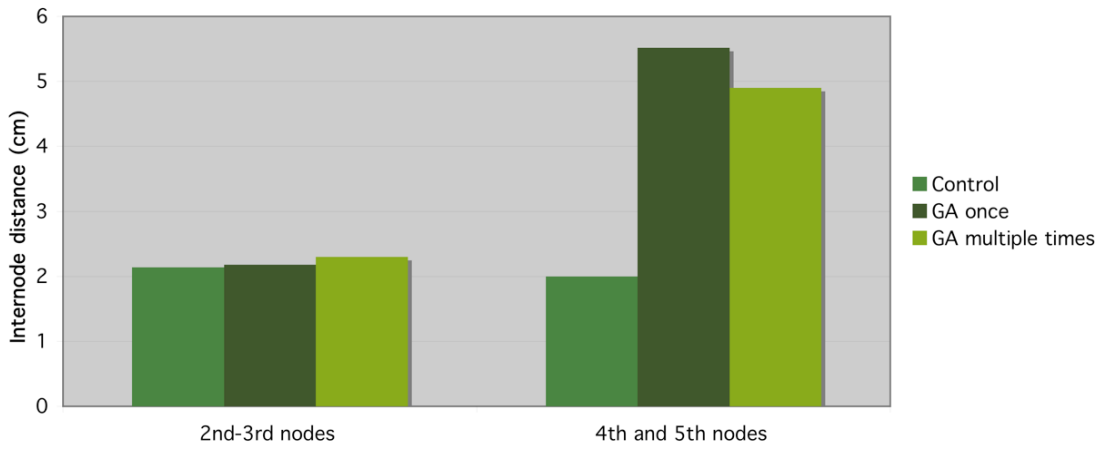

Figure 2. Average internode distance at end of experiment, measured between the second and third or the fourth and fifth nodes.

Internode distance is shown in Figure 2. There was no significant difference in the internode distance between the second and third nodes among the treatments. The p-value for this analysis was 0.49. There was a highly significant effect of treatment on the distance between the 4th and 5th nodes, however. The p-value for this analysis was 0.001. The control had a mean distance of 2.0 cm, very similar to the distance between the second and third nodes. In the experimental treatments, the mean distance was highest for the single application, with a mean of 5.5 cm, and slightly lower for the multiple applications, with a mean of 4.9 cm. This shows that the effect of the GA was on younger tissues that began growing after we started our treatments, rather than older, pre-existing tissues.