

Adaptation of Palmer amaranth to the upper Midwest

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2 ABSTRACT

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4 www.frontiersin.org/about/AuthorGuidelines for abstract requirement and length
5 according to article type.

6 **Keywords:** Text Text Text Text Text Text Evolution Weed

INTRODUCTION

7 Cite fancy references (**Neuro2013?**). As demonstrated in (**Gene2012?**), citations can also be automatically
8 reference. Multiple references are separated by semicolons (**Neuro2013?; Neurobot2013?**).

MATERIAL AND METHODS

9 Plant material

10 The study was performed with a *A. palmeri* accession (Per1) from Perkins County, Nebraska. Per1
11 accession collection is documented in (Oliveira et al., 2021), with no reported herbicide resistance. Seeds
12 were planted in plastic trays containing potting-mix. Emerged seedlings (1 cm) were transplanted into 200
13 cm³ plastic pots. Palmer amaranth seedlings supplied with adequate water and kept under greenhouse
14 conditions at 28/20 C day/night temperature with 80% relative humidity. Artificial lighting was provided
15 using metal halide lamps (600 mmol m⁻² s⁻¹) to ensure 15-h photoperiod.

16 The experiment was conducted under field conditions at five locations: Arlington, WI (Washington
17 County), Clay Center, NE (Clay County), Grant, NE (Perkins County), Lincoln, NE (Lancaster County),
18 and Macomb, IL (McDonough County)

RESULTS

19 Subsection 1

20 You can use R chunks directly to plot graphs.

```
x <- 0:100
set.seed(999)
y <- 2 * (x + rnorm(length(x), sd = 3) + 3)
plot(x, y)
```

21 Subsection 2

22 Frontiers requires figures to be submitted individually, in the same order as they are referred to in the
23 manuscript. Figures will then be automatically embedded at the bottom of the submitted manuscript. Kindly
24 ensure that each table and figure is mentioned in the text and in numerical order. Permission must be
25 obtained for use of copyrighted material from other sources (including the web). Please note that it is
26 compulsory to follow figure instructions. Figures which are not according to the guidelines will cause
27 substantial delay during the production process.

1 DISCUSSION

DISCLOSURE/CONFLICT-OF-INTEREST STATEMENT

28 The authors declare that the research was conducted in the absence of any commercial or financial
29 relationships that could be construed as a potential conflict of interest.

AUTHOR CONTRIBUTIONS

30 The statement about the authors and contributors can be up to several sentences long, describing the tasks
31 of individual authors referred to by their initials and should be included at the end of the manuscript before
32 the References section.

ACKNOWLEDGMENTS

33 Funding:

2 SUPPLEMENTAL DATA

34 Supplementary Material should be uploaded separately on submission, if there are Supplementary Figures,
35 please include the caption in the same file as the figure. LaTeX Supplementary Material templates can be
36 found in the Frontiers LaTeX folder

3 REFERENCES

37 A reference list should be automatically created here. However it won't. Pandoc will place the list of
38 references at the end of the document instead. There are no convenient solution for now to force Pandoc to
39 do otherwise. The easiest way to get around this problem is to edit the LaTeX file created by Pandoc before
40 compiling it again using the traditional LaTeX commands.

FIGURES

41 Oliveira, M. C., Giacomini, D. A., Arsenijevic, N., Vieira, G., Tranel, P. J., and Werle, R. (2021).
42 Distribution and validation of genotypic and phenotypic glyphosate and PPO-inhibitor resistance in
43 Palmer amaranth (*Amaranthus palmeri*) from southwestern Nebraska. *Weed Technology* 35, 65–76.
44 doi:10.1017/wet.2020.74.

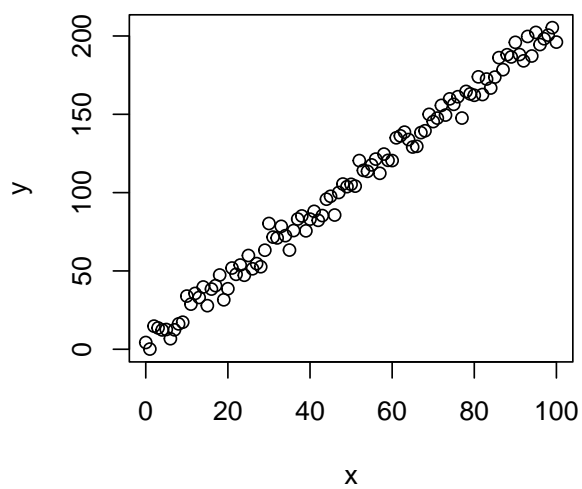


Figure 1. Figure caption