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| Table 4.1 Field study: Above-ground legume biomass eight weeks after herbicide application in spring 2010. | | | | | |
| Glyphosate rate  (kg a.e./ha) | Alfalfa | Birdsfoot trefoil | Red clover | White clover | Avg. |
|  | ---------------------- Biomass relative to control (%) ---------------------- | | | | |
| 1.0 | 2.7 aC § | 5.3 bC | 26.5 aB | 78.4 aA | 28.3 |
| 1.5 | 2.0 abC | 11.1 aB | 16.5 bB | 65.6 abA | 23.8 |
| 2.0 | 0.0 bC | 0.7 cC | 11.5 bB | 58.7 bA | 17.7 |
| 2.5 | 0.0 bC | 2.9 bcB | 4.9 cB | 49.4 bA | 14.3 |
| Avg. | 1.2 | 5.0 | 14.9 | 63.0 |  |
| §The interaction of legume treatment by annual crop was significant. Herbicide treatment means followed by the same lowercase letter are not different. Legume means followed by the same uppercase letter are not different. Differences were declared significant at the 0.05 probability level. | | | | | |

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| Table 4.2 Field study: Above-ground legume biomass sixteen weeks after herbicide application in spring 2010. | | | | | |
| Glyphosate rate  (kg a.e./ha) | Alfalfa | Birdsfoot trefoil | Red clover | White clover | Avg. |
|  | ---------------------- Biomass relative to control (%) ---------------------- | | | | |
| 1.0 | 15.5 aC § | 54.7 aB | 69.4 aAB | 98.1 aA | 59.4 |
| 1.5 | 1.0 bC | 22.2 bB | 66.7 aA | 106.3 aA | 49.1 |
| 2.0 | 1.4 bD | 15.6 bC | 57.9 aB | 101.6 aA | 44.1 |
| 2.5 | 0.1 bC | 6.3 cC | 29.5 bB | 99.5 aA | 33.9 |
| Avg. | 4.5 | 24.7 | 55.9 | 101.4 |  |
| §The interaction of legume treatment by annual crop was significant. Herbicide treatment means followed by the same lowercase letter are not different. Legume means followed by the same uppercase letter are not different. Differences were declared significant at the 0.05 probability level. | | | | | |

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| Table 4.3 Field study: Above-ground weed biomass sixteen weeks after herbicide application in spring 2010. | | | | | | | |
| Glyphosate rate  (kg a.e./ha) | Alfalfa | Birdsfoot trefoil | | Kura clover | Red clover | White clover | Avg. |
|  | ----------------------------------DM yield (kg/ha)-------------------------------- | | | | | | |
| 1.0 | 2722 § | | 2059 | 368 | 609 | 50 | 1201 a † |
| 1.5 | 2710 | | 2686 | 680 | 817 | 10 | 1380 a |
| 2.0 | 3656 | | 3290 | 959 | 955 | 37 | 1779 b |
| 2.5 | 4002 | | 3161 | 1462 | 1890 | 29 | 2109 b |
| Avg. | 3273 C ‡ | | 2799 C | 867 B | 1068 B | 32 A |  |
| §The interaction of legume species by herbicide rate was not significant at the 0.05 probability level.  †Herbicide rate means followed by the same lowercase letter are not different at the 0.05 probability level.  ‡ Legume species means followed by the same uppercase letter are not different at the 0.05 probability level. | | | | | | | |

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| Table 4.4 Pot study: Above-ground legume biomass eight weeks after herbicide application in spring 2010. | | | | | | |
| Glyphosate rate  (kg a.e./ha) | Alfalfa | Birdsfoot trefoil | Kura clover | Red clover | White clover | Avg. |
|  | ------------------------- Biomass relative to control (%) ----------------------- | | | | | |
| 1.0 | 2.2 § | 9.4 | 26.3 | 3.1 | 13.5 | 10.9 a † |
| 1.5 | 0.4 | 2.1 | 18.0 | 1.0 | 4.2 | 5.1 b |
| 2.0 | 0.5 | 2.9 | 12.6 | 1.2 | 2.2 | 3.9 b |
| Avg. | 1.1 D ‡ | 4.8 C | 19.0 A | 1.8 CD | 6.7 B |  |
| §The interaction of legume species by herbicide rate was not significant at the 0.05 probability level.  †Herbicide rate means followed by the same lowercase letter are not different at the 0.05 probability level.  ‡ Legume species means followed by the same uppercase letter are not different at the 0.05 probability level. | | | | | | |

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| Table 4.5 Pot study: Legume root/crown biomass eight weeks after herbicide application in spring 2010. | | | | | | |
| Glyphosate rate  (kg a.e./ha) | Alfalfa | Birdsfoot trefoil | Kura clover | Red clover | White clover | Avg. |
|  | ----------------------- Biomass relative to control (%) ----------------------- | | | | | |
| 1.0 | 22.4 § | 27.7 | 35.4 | 23.9 | 21.2 | 26.1 a † |
| 1.5 | 13.8 | 18.6 | 29.8 | 15.3 | 9.3 | 17.4 b |
| 2.0 | 17.3 | 17.4 | 26.7 | 16.6 | 6.2 | 16.8 b |
| Avg. | 17.8 ‡ | 21.2 | 30.6 | 18.6 | 12.2 |  |
| §The interaction of legume species by herbicide rate was not significant at the 0.05 probability level.  †Herbicide rate means followed by the same lowercase letter are not different at the 0.05 probability level.  ‡ The effect of legume species was not significant at the 0.05 probability level (p=0.1225). | | | | | | |