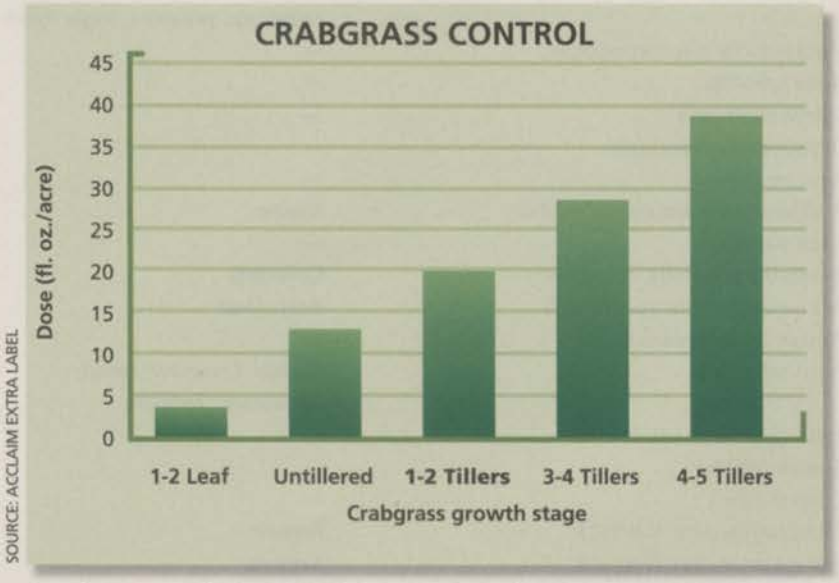
Why herbicides fail

1. Not reading and/or following label specifications
2. Improper weed identification
3. Improper herbicide selection
4. Improper method of application
5. Improper timing of application
6. Unfavorable temperature and/or moisture conditions affecting poor weed growth
7. Age and growth stage of the weed plant — young vs. mature target weed
8. Temperature too hot or too cold
9. Skipped area — spot treating/poor overlapping resulting in poor coverage
10. Foliage not wet — product failed to penetrate leaf hairs
11. Low concentration of mix — not enough active ingredient to manage weed
12. High concentration of herbicide killed the top, not the roots
13. Wind drift — failure to deliver herbicide to the target
14. Rain following application washed off treatment
15. Product too old — deactivated
16. Product caked — spoiled
17. Product separated into layers
18. Chemical and/or physical incompatibility
19. Alkaline (high pH of water) hydrolysis and herbicide degradation
20. Droplet size too large — some herbicides perform better if particle size is finer
21. Improper mixing sequence while using multiple products
22. Insufficient agitation while mixing
23. Past residue in the tank
24. Improper tank cleaning — herbicide residues are difficult to rinse
25. Failure to agitate or shake product containers to mix ingredients before using
26. Failure to add surfactant as needed
27. Weed is difficult to control — morphological, waxy cuticle
28. Failure to incorporate into soil, if required
29. Too much organic matter such as mulch ties up herbicide
30. Product is a contact herbicide and not translocated
31. Pre-emergent activity only
32. Post-emergent activity only
33. Poor systemic activity — foliar vs. root absorbed
34. High temperature closed the stomata opening
35. Large number of weed seeds remains viable in soil for a long time
36. Open bare ground — no mulch or other cover
37. Not post watered in, if needed
38. Water quality of mix — muddy water ties up some herbicides
39. Weed resistance from repeated use of a specific herbicide-resistant biotypes
40. Host plant age — newly planted vs. established trees and shrubs
41. Winter annual weeds in established plantings may need fall or early winter application
42. Booster application not received
43. Booster application not complimentary — e.g. Princep followed by Ronstar
44. Application of herbicide over top of plants may cause injury
45. A combination of pre- and post-herbicides may be needed
46. Insufficient time for the herbicide to act — activity may start in a few days, weeks or may be delayed for a year
47. Weeds blownor carried from nearby areas
48. Susceptible plants — some ground covers may not be labeled
49. Plant with deep growing parts in soil — rhizomes or tubers
50. High weed pressure — too many weed seeds: crabgrass, dandelion or annual bluegrass

— Bal Rao, Ph.D.



As crabgrass grows, higher herbicide doses are required to obtain control. This chart illustrates the doses of Acclaim Extra recommended to control different sized crabgrass plants.