

## EFFECTS OF TWO SURFACTANTS ON PERFORMANCE OF GLYPHOSATE

M. R. MOUSSAVI and H. MIRKAMALI

Plant Pests and Diseases Research Institute

### Summary

Two surfactants were tested on several perennial weeds to determine their enhancing effects on the herbicidal activity of glyphosate in non-cropped lands and greenhouse in Varamin. The main target weeds were:

*Sorghum halepense* (L.) Pers.

*Convolvulus arvensis* L.

*Alhagi persorum* Boiss.

*Acroptilon repens* (L.) DC.

The results indicated that alkylaryl polyglycol (Cittovet) has no significant effect on the efficacy of glyphosate but T. amine ethoxylate a cationic surfactant could improve the weed control performance of glyphosate up to 30% when its concentration was not less than 0.5% in total spray volume. Best results were obtained with medium rates of glyphosate. At higher rates the enhancing effect was not significant.

### References

- DEKKER, J. 1984. Effect of rate, carrier volume and additives on glyphosate and sulphate activity in quackgrass rhizoms. *Proc. North Cent. Weed*

- Cont. Conf. p. 98-99.
- GROSSBARD, E. and D. AKTINSON 1983. The Herbicide Glyphosate. Butterworth, London.
- HODGSON, H. R. 1982. Adjuvants for herbicides. **Weed Science Society of America.**
- HORLEY, S. B. 1988. Tankmixing glyphosate with adjuvants and other herbicides for striped maple control. Abstract in **Weed Abst.** 1989, 38(11): 402.
- HUMBURG, N.E., E. R. HILL, and W. J. Mc AVOYS 1989. Herbicide handbook. **Weed Science Society of America.**
- IVANY, J. A. 1988. Control of quackgrass with glyphosate and additives. **Canadian Journal of Plant Science** 68(4): 1095-1101.
- KAMIRI, K. 1984. Use of Frigate to increase glyphosate activity against couchgrass *Digitaria scalarum* in sisal *Agave sisalana* in Kenia. Uni. of Nairubi, Kenia.
- KU, H.S., G.J. MISICH, L. E. LIMPEL, and D. C. FINDACK 1986. Enhancement of glyphosate activity by a fatty amine ethoxylate. Abst. in **Weed abstract** 1989, 38(7).258.
- MORROW, L. S. 1985. Effect of rate of glyphosate with and without Frigate surfactant on weed control in Orbit spring oats. **Proc. 39th Annual Meeting North. Weed Science Soc. USA.**
- NEURURER, H. 1986. Reduktion der Round - Up Aufwandmenge durch zusaetze oder erhoehung er sprueh-bzw spritzkonzentration. **Bayerisches Landwirtschaftliches Jahrbuch** 1986, 63(7): 872-874.
- PAWLAK, J.A., D.B. REYNOLDS, and D. S. MURRAY 1986. Enhancement of glyphosate activity with various ammonium carrier. **Proc. south Weed Sci. Soc. 39th Annual Meeting., USA**
- RICHARDS, M. C. 1987. The agronomic effects of glyphosate used as a harvest

- aid in barley. Abstract in **Weed Abst.** 1987, 37(2): 50.
- RICHARDSON, F.E., C.M. MARCH, and D.A. JUPP 1985. Enhanced efficacy from the addition of the adjuvant Frigate to Round-up for killing sugarcane. Proc. of the **South African Sugar Technologists.**
- TABBUSH, P.M., D.J. TURNER, and J.S. SALE 1986. Chemicals for the forester. What about additives? Forestry and British Timber. In **Weed Abstract** 1986, 35(6): 225.
- 

Address of the authors:

Eng. M. R. MOUSSAVI. Plant Pests and Diseases Res. Lab. P.O.Box 114, Varamin 33715, Iran.

Eng. H. MIRKAMALI. Plant Pests and Diseases Research Institute, P.O.Box 1454, Tehran 19395, Iran.