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Chenopodiaceae

(*Spinacia oleracea* L.)

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(*Spinacia oleracea* L.)

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(*Chenopodiaceae*)

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(Seed Pelleting)

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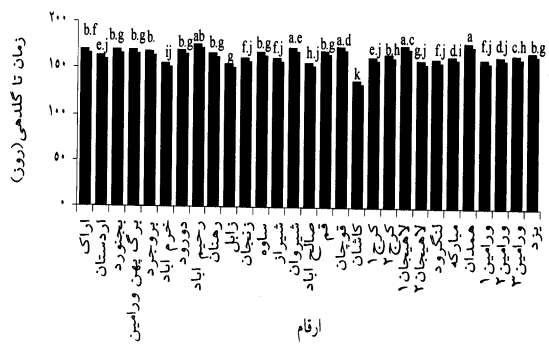
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(*Spinacia turkestanika* *Spinacia tetrandia*)

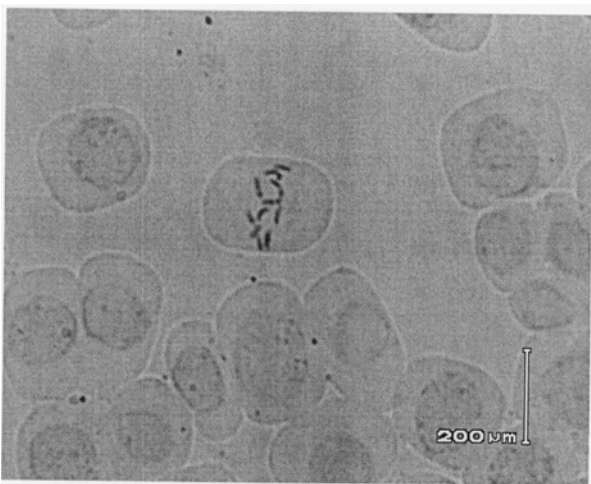
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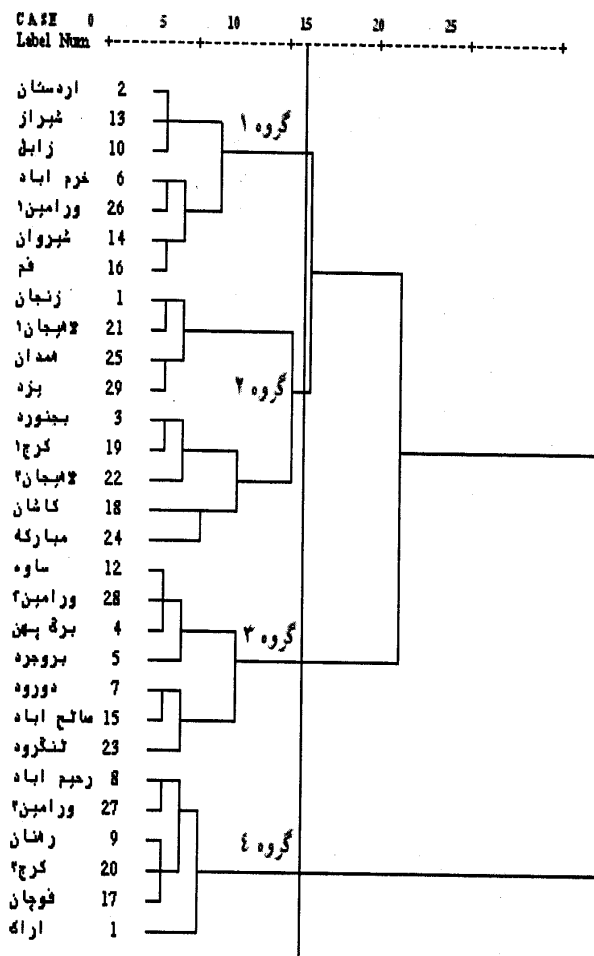


n= x=

(*Spinacia oleracea*)

1. Bolting

Rescaled Distance Cluster Combine



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REFERENCES

5. AVRDC. 1990. Vegetable Production Training Manual. AVRDC Publication. 61 p.

6. Campion, B. E. Perri, M. T. Azzimonti, E. Vicini & M. Schiavi. 1995. Spontaneous and induced chromosome doubling in gynogenic lines of onion (*Allium cepa* L). Plant Breeding 114: 243-246.

7. Hochmuth, G. J. C. S. Vavrina, W. M. Stall & T. A. Kucharek. 2003. Spinach production in Florida. University of Florida. Chapter 37: 247-249.

8. Kallo, G. & B. O. Bergh. 1993. Genetic Improvement of Vegetable Crop. Percamon Press. 833 p.

9. Kawazu, Y. M. Okimura, T. Ishii & S. Yui. 2003. Varietals and seasonal difference in oxalate content of spinach. Scientia Horticulturae 97: 203-210.

10. Lorenz, O. A. 1978. Potential nitrate levels in edible plant parts. In: D. R. Nielsen *et al.* (eds.). Nitrogen in Environment. Vol. 2, Soil-Plant-Nitrogen Relationships, Academic Press, New York, U.S.A. 210-220 pp.

11. Rubatzky, E & M. Yamaguchi. 1997. World Vegetables, Principles, Production and Nutritive Values. Chapman and Hall. 843 p.

12. Salunkhe, D.K., H .R .Bilon & N. R. Reddy.1991. Storage, Processing and Nutritional Quality of Fruits and Vegetables.Vol 1. CRC Press, Boca Raton. 285 p.

13. Sanders, D. C. 2000. Spinach. NC State University. Published by the North Carolina Cooperative Extension Service. 3 p.

14. Splittstosser, W. E. 1990. Vegetable Growing Hand Book, Organic and Traditional Methods. Published By Van Nostrand Reinhold New York. 362 p.

15. Thomas, G. D. Astley, I. Boukema, M. C. Daunay, A. Del Greco, M. J. Diez, W. Van. Dooijeweert, J. Keller, T. Kotlinska, A. Lebeda, E. Lipman, L. Maggioni & E. Rosa. 2003. Report of a Vegetables Network and hoc Leafy Vegetables meeting. 61 p.