

CALIFORNIA LEAFY GREENS RESEARCH PROGRAM

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WEED MANAGEMENT SYSTEMS FOR LEAFY GREENS

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SUMMARY

Projects reported here were undertaken to develop new weed control options for lettuce and spinach. Prowl H₂O (pendimethalin) has been granted a maximum residue limit (MRL) for use on lettuce, and may be labelled for use on transplanted leaf lettuce at a *proposed* rate of 2.1 pints/A. Evaluations of Prowl in transplanted lettuce in 2013 at commercial and research station trials found good lettuce tolerance to the treatment and no effect on lettuce yields.

Spin-Aid (phenmedipham) is registered for use on processing spinach but not fresh market spinach. We undertook a series of trials to try to find a safe method to use this herbicide in fresh market spinach. We found that spinach was more tolerant to Spin-Aid at the 4-leaf stage than at the 2-leaf stage. To overcome the larger weeds at the 4-leaf stage we tested sequential application of Ro-Neet PRE followed by a POST application of Spin-Aid at the 4-leaf stage. This sequential treatment provided the best combination of weed control and spinach tolerance.

Culticlean, from Struik in The Netherlands (<http://www.culticlean.com/>), is a roto-tiller with a propane burner designed to heat the soil to 176° F for a specific duration, i.e., “dwell time”, to kill soil pests, such as weed seed and pathogen propagules, e.g. lettuce drop microsclerotia. We tested it in research station and commercial trials. At the research station we found some suppression of lettuce drop, but poor weed control. In three commercial trials weed control was good in one trial but poor in the other two.