

Integrated Weed Management Practices at Teixeira Farms Inc.

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Lettuce, broccoli, cauliflower, cabbage celery and romaine are the main vegetable crops at the 4800 acre Teixeira Farm near Santa Maria, CA. Weed control for a new cropping season starts with field preparation after harvest. Repeated use of 'Sundance' type cultivator to break and incorporate the foliage of the previous crop also ensures weed and residue-free soil surface. Shallow tillage does not disturb and bring to the surface the weeds from the seed bank at greater depths. Fertilizer application is timed to disturb emerging weeds before they establish true leaves. Ammonium nitrate is applied in the areas of weed germination in the seed line as a foliar application on cole crops to suppress weed growth. Herbicides are sprayed on small germinating weeds in non-crop areas, which allows to lower the application rate. Crop maintenance also includes hoeing and weeding during thinning (for example for lettuce). Cover crops such as barley or oats are planted between production seasons to occupy the fields and provide competition with weeds and surface cover.

Weed control is not limited to the crop-growing area in the field. Field edges, roadsides, ditches or canal banks may become reservoir for weed seed production and spread, and therefore, are kept weed free. Besides herbicidal sprays, weed management is accomplished by planting trailing ice-plant on steep banks. Trailing ice-plant colonizes these sites, provides weed competition, dust and erosion control, while its flowers have aesthetic value. Weeds are hoed near the water edges in canals and in areas where ice-plant did not establish. Careful management of these artificial riparian zones improves water quality and is supported by the Fish and Game Department.

Area-wide approach to weed control is accomplished by communicating with neighbors about problem areas and cooperating to destroy weeds on the property borders, along fences and other areas that may become distribution sources for weed populations. Borders and non-crop areas are subject of constant monitoring for weed emergence, weed species and growth stages, to ensure that escape weeds do not produce seed and re-infest the area.