

## HEMP AS WEED CONTROL

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Weed control is a recalcitrant issue in crops grown for organic certification. One approach is the prior use of a competitive crop. In his textbook, *Modern Weed Control*, A. S. Crafts cites as potential weed smothering crops: millet, Sudan grass, sweet clover, sunflower, rape, barley, rye, reed canary grass, crested wheatgrass, sorghums, buckwheat, soybeans, alfalfa, cowpeas, clovers, hemp, Jerusalem artichoke, and ensilage corn. Of these only one, hemp, can be taken seriously as an adequate weed controlling mechanism. The historical testimonials to hemp's ability to control weeds are numerous. For example:

**"...it is certain that hemp contributes more than any other crop towards repairing the damage done by its own growth through the return of the leaves to the soil, besides other matters while it is undergoing the process of retting. Hemp is an admirable weed killer and in flax countries is sometimes employed as a crop in rotation, to precede flax because it puts the soil in so good condition."**

**--Charles Dodge, Director, Office of Fiber Investigation, 1890.**

**"There will be little trouble with weeds if the first crop is well destroyed by the spring plowing, for hemp generally occupies all the ground giving weeds but little chance to intrude....In proof of this, a North River farmer a few years ago made the statement that thistles heretofore had mastered him in a certain field, but after sowing it with hemp not a thistle survived, and while ridding his land of this pest the hemp yielded him nearly \$60 per acre where previously nothing valuable could be produced."**

**--C. Dodge, Hemp Culture, USDA Yearbook of Agriculture, 1895**

**"Hemp prevents the growth of weeds and other vegetation which would be found on such soils in most other crops or after others are laid by, and its cultivation also seems to make the soil more uniform in character."**

**--Lyster Dewey, The Hemp Industry in the United States, USDA Yearbook of Agriculture, 1901**

**"Very few of the common weeds troublesome on the farm can survive**

**the dense shade of a good crop of hemp...In one 4-acre field in Vernon County, Wis., where Canada thistles were very thick, fully 95 per cent of the thistles were killed...."**

**--Lyster Dewey, Hemp. USDA Yearbook of Agriculture, 1913.**

**"Hemp has been demonstrated to be the best smother crop for assisting in the eradication of quack grass and Canada thistles....At Waupon in 1911 the hemp was grown on land badly infested with quack grass, and in spite of an unfavorable season a yield of 2,100 pounds of fiber to the acre was obtained and the quack grass was practically destroyed."**

**--Andrew Wright, Wisconsin's Hemp Industry, 1918.**

**"Hemp has been recommended as a weed control crop. Its dense, tall growth helps to kill out many common weeds. The noxious bindweed, a member of the morning glory family is checked to some extent by hemp."**

**--B. B. Robinson, Hemp, USDA Agric Bull #1453, 1943**

**"Among the species studied, the hemp species proved itself to be the best in fiber production. This plant was all the more interesting owing to its low fertilization requirements, and its ability to grow without being irrigated and without chemicals, whether it be for weed or pest control."**

**--Barriere, et al. 1994 (1)**

**"Hemp grows quickly, soon covers the ground and chokes out the weeds. So weed control is not necessary."**

**--Eddy A. A. de Maeyer. 1994 (1)**

In Holland, Lotz, et al. tested hemp's superior weed suppressing ability ([Figure 1](#)) against four other cropping situations in a controlled experimental setting. The target weed was yellow nutgrass (*Cyperus esculentus*), a weed also common in the US, which propagates by tubers and is difficult to control. The authors conclude, **"...hemp was the most competitive crop in this study. Selecting this crop in a rotation will cause the strongest population reduction of *C. esculentus* on infested farmland. This control option of hemp against harmful weeds as *C. esculentus* is an attendant benefit of the introduction of hemp as a commercial crop."**(2)

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1 From papers delivered at the Conference on Alternative Oilseed and Fiber Crops for the Cool and Wet Regions of Europe, Wageningen, The Netherlands, April 7-8, 1994.

2 Lotz, L. A., P. R. M. W. Groeneveld, B. Habekotte, and H. van Oene. 1991. Reduction of growth and reproduction of *Cyperus esculentus* by specific crops. *Weed Research* 31:153-160.

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**About the Author:** Dr. West holds a Ph.D. in Plant Breeding from the University of Minnesota and has spent 18 years as a commercial corn breeder. Since 1993 he has served as an advisor to the emerging hemp industry regarding industrial hemp germplasm.