

Abstract

Evaluation and Use of Sunn Hemp (*Crotalaria juncea* L.) at the Manhattan Plant Materials Center (PMC), Manhattan, Kansas

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Sunn hemp (*Crotalaria juncea* L.) is an annual tropical legume that was identified in the 1930's as a green manure and cover crop. Sunn hemp is very sensitive to frost and does not produce seed above 28 degrees north latitude; therefore, it has little potential to become a weed problem in the continental U.S. Until recently, sunn hemp has not been an ideal forage for livestock because it contains high levels of poisonous alkaloids. The variety 'Tropic Sun', released cooperatively by the University of Hawaii and the U.S. Department of Agriculture (USDA) – Natural Resources Conservation Service (NRCS) Ho'olehua Hawaii Plant Materials Center, produces very low amounts of alkaloids, making sunn hemp a viable option for livestock forage, and giving it potential for use as a cover crop that can also be grazed. Studies have been initiated at the PMC to evaluate sunn hemp. Plantings using different seeding rates and different planting dates were established and measures of above ground biomass, forage quality, photosynthetically active radiation (PAR) through the canopy, germination percentages, and frost dates were recorded. During the 2009 growing season, 30 days after planting, mean plant height was 7.7 inches and above-ground biomass ranged from 155 to 413 pounds per acre. At 60 days after planting mean plant height was 70.7 inches and above-ground biomass ranged from 1.8 to 4.3 tons per acre.