



## News Release

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### **100 Years of Weeds in Montana. What have we learned? What have we forgotten?**

Summary: A review of a 100-years old publication entitled Weeds of Montana reveals that an early pioneer of integrated weed management and sustainable agriculture lived in our own backyard.

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By Fabian Menalled  
MSU Extension Cropland Weeds Specialist

BOZEMAN -- Recently, a colleague gave me a copy of the June 1901 Montana Experiment Station Bulletin No. 38 where Joseph W. Blankinship published his essay entitled "Weeds of Montana." A review of this publication quickly reveals that not only was J. W. Blankinship an outstanding botanist of the late 19th Century; but that even by today standards he would be considered an excellent weed scientist.

Joseph W. Blankinship was born on Feb. 23, 1862 and was one of the first full-time botanists living in Montana. After graduating from Duruy College, a Christian school near Springfield Missouri, "J. W. Blankinship," as he is often referred to, accepted an appointment at the Custer Station near the Big Horn River to teach Native American boys from the Crow Reservation. It was there where Blankinship made his first collections of Montana plants. Later, he became the first curator of the Montana State College herbarium in Bozeman. His passion for botany is reflected in the fact that he personally collected more than 10,000 specimens and convinced others to donate their private herbaria to "secure these collections...as a permanent record of the botanical discovery in this state."

Reading his essay made me realize that although we have incorporated a plethora of chemical- and molecular-based weed management technologies over the past 100 years, we have also forgotten an equal amount of biological and ecological knowledge.

For example, today we usually define a weed as "a plant that is growing where it is not wanted". By doing so, we forget to consider the biological, environmental, and ecological traits that turn a plant into a weed. In contrast, Blankinship reminds us that weeds are a "group of troublesome plants, which promptly occupy soil on which the native vegetation as been greatly weakened or

destroyed by the operations of man..." He further states that "to combat these pests intelligently...it is necessary to know their life history, their habits and their distribution." He also points out that "weeds, like all other plants, are dependent upon physical agencies for the distribution of their seed, but rely more largely upon man and domestic animals for this aid."

Therefore, he stresses that a program aimed at restraining or eradicating weeds should know "the sources of the infection and the means by which weeds spread when once introduced."

The management recommendations of this essay can also be used verbatim in this century. For example, he recommends a method for weed control consisting of hand pulling "by boys under competent supervision."

Okay, perhaps some of Blankinship's recommendations may require some update!

Yet, a revision of his essay reveals a deep understanding of the ecological basis for the sustainable management of agricultural weeds. Not surprisingly, crop rotation is at the core of his recommendations "as the growth of one kind of crop tends to restrain or destroy the weeds peculiar to the other..."

Although he acknowledges that the climatic conditions in Montana "limit crop rotation almost to cereal and hay-lands," he recommends to take advantage of grazing as a tool to manage weeds and to "keep a lookout for the appearance of any new or dangerous weeds."

It was refreshing to find that one of the fathers of integrated weed management and sustainable agriculture lived in our own backyard!

For copies of the 1901 essay on Weeds of Montana by Joseph W. Blankinship, please contact Fabian Menalled at (406) 994-4783 or [menalled@montana.edu](mailto:menalled@montana.edu)

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