

The Origin of 'Cossack' Alfalfa

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The origin of Cossack alfalfa as described by Rumbaugh (1979) is correct. Professor V. R. Williams of the Imperial Agricultural College in Moscow collected the wild germplasm from which the cultivar was developed. There can be no doubt that N. E. Hansen obtained the seedstock from Professor Williams in 1906 (Hansen 1912). Excellent descriptions of the 'Cossack' and 'Cherno' accessions were included by Hansen on pages 78 to 82 of his 1913 Bulletin entitled "Cooperative Tests of Alfalfa From Siberia and European Russia". In this section he discussed naturally occurring hybridization between *Medicago falcata* L. and *M. sativa* L. and then stated the following:

"In 1910 I named two of these three Russian hybrid alfalfas, the Cossack and Cherno, both of them descended from single plants found wild by Prof. V. R. Williams, Imperial Agricultural college at Moscow, in the steppes of Voronesh province of southern Russia, the land of the Don Cossacks. As near as can be judged, they combine the good qualities of both parents.

The original plant of Cossack, S. P. I. 20714, as found wild in the dry steppes, had blue flowers on one branch, yellow on another, and sometimes both colors on the same branch.

The original plant of Cherno., S. P. I. 20716, as found growing wild, was described as a beautiful plant, very hardy, very productive and with black green flowers."

Hansen included similar descriptions in a number of his other publications. The best of these was printed in 1912.

HANSEN'S CHERNO ALFALFA

This is my No. 196 of the 1906 trip (S. P. I. 20716). A Sand Lucern or hybrid alfalfa (*Medicago media*) descended originally from a single plant found wild on the steppes of the Voronesh province, southeastern Russia, land of the Don Cossacks. The flowers are called black-green, but are really a very dark purple changing to a rich green with dark purple veins; plant of strong, very upright growth, a heavy seeder here the past three years. In my opinion this hybrid condition of the plant should be continued and the colors not isolated by selection as it appears to add extra vigor.

Cherno refers to the dark-colored flowers, being the Russian word for "black". Of course, as a matter of experiment, I am isolating single plants of both Cherno and Cossack.

HANSEN'S COSSACK ALFALFA

This is my No. 194 of my trip (S. P. I. No. 20714). A sand Lucern (*Medicago media*), a hybrid alfalfa from the Voronesh or Voronezh province of the Don river region of southeastern Russia. This spontaneous or natural hybrid of *M. falcata* and *M. sativa* will sometimes have blue flowers on one branch, yellow on another, sometimes both colors on the same branch; a heavy seeder the past three years. This stock descended originally from a single plant growing wild and in my opinion this hybrid condition should be continued and the colors not isolated by selection as it appears to add extra vigor.

Rumbaugh (1979) wrote that Cherno and Cossack were merged and that the result retained the name, 'Cossack'. Hansen documented this, although in a publication that probably was not widely distributed in states other than South Dakota. The following description of 'Cossack' was included on the third and fourth pages of an untitled circular authored by N. E. Hansen in his capacity as "Secretary South Dakota State Horticulture Society" and published by the Department of Horticulture, South Dakota State College of Agriculture and Mechanic Arts, Brookings, South Dakota, on February 26, 1918.

Cossack Alfalfa

1916 CROP, 1,000 BUSHEL SEED

The Strongest and best one of these hybrid alfalfas is the one I have named Cossack, noted in bulletins 159 and 167. The Cherno Alfalfa, sister plant of the Cossack, has been consolidated with the Cossack as it is not possible to distinguish between them. The small spoonful of seed which I brought from Russia in 1906 and named Cossack has been developed in the hands of many farmers so that the 1916 crop in the western part of South Dakota was fully One Thousand bushels. In 1917 the crop of seed was reduced by crickets and grasshoppers. Buyers for the leading seedsmen have been busy in these fields and the seed is now being offered. Many farmers have found by their own experience that Cossack is the heaviest and best seeder of any alfalfa they have ever tested. Seedsmen are ready to handle many car loads more as soon as available. The dry seasons of 1911, 1912, 1913, demonstrated the value of Cossack. Very favorable reports of the Cossack come from many sections, including the far north west prairie region of Saskatchewan, Canada. We have only a few pounds of Cossack seed available for the special experimenters who wish to get their start from the original stock. Price, \$2.00 per pound.

Our Cossack plants are only half size this year because the seed got planted too thick, hence they are priced accordingly. Plants, one pound, (Containing about 100 plants,) 30 cents; 10 pounds for \$2.00.

Therefore, when first distributed to growers, Cossack was descended from a single *M. falcata* x *M. sativa* hybrid plant as stated by Barnes, et al. In 1977. In later years, Cossack, was the result of the merger of Cherno with the original

Cossack. Seeds of both

versions of the Cossack cultivar were not distinguished from each other in commerce and various small seed lots probably were composited prior to retail sale. Since Cherno and Cossack were nearly identical in origin and performance, growers and scientists apparently accepted the merger without comment.

References

Barnes, D. K., E. T. Bingham, R. P. Murphy, O. J. Hunt, D. F. Beard, W. H. Skrdla, and L. R. Teuber. 1977. Alfalfa Germplasm in the United States: Genetic Vulnerability, Use, Improvement, and Maintenance. USDA Agricultural Research Service Tech. Bul. 1571.

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Epilogue: Melvin D. Rumbaugh held the alfalfa breeding position at South Dakota for several years before being hired by the USDA-ARS at Utah State University, Logan, Utah, where Mel finished his distinguished career with alfalfa. The diploid *Medicago* strain 'DON' mentioned prominently by both Adams and Rumbaugh currently is maintained by Kay Asay, USDA-ARS at Utah State University, at Logan, Utah. E. T. Bingham, 2001.