

Reflections About N. E. Hansen and His Contributions to Alfalfa

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I met Professor Hansen soon after taking up my position as alfalfa breeder at S.D.S.C. in 1947. Though retired at that time, he came to his office nearly every day, and sitting amidst his large untidy office surrounded by the accumulation of years - magazines, letters, books, pamphlets, etc. - he spoke to me not only of his alfalfa work, but of his introduction of bromegrass, crested wheatgrass, and the many fruits and vegetables he had brought back from his journeys in eastern Europe, Russia and Siberia.

The most memorable thing he said was that he had formed the habit early in life of arriving at his office in early morning to compose a few lines of poetry, which he claimed opened up the creative channels in his mind, stimulated his thinking process for the day ahead. I took him at this word, but he did not offer to show me examples of his poetry.

He had served as secretary of the S.D. State Horticultural Society for many years, and in that capacity had formed the practice of sending out to each society member renewal of membership or each new member, a teaspoon of seed of his Semipalatinsk alfalfa. Some of this seed ended up in the hands of homesteaders in Western South Dakota. (In the early teens of this century, by virtue of land speculators and popular advertising, nearly every quarter section of land was homesteaded, to a great extent by mid-western folk who believed the claims of the speculators that northwest South Dakota claims could become another Illinois or Iowa as a farmers paradise).

Hansen was convinced that the yellow-flowered alfalfa, particularly his Semipalatinsk strain, originating in the low rainfall region of what is now far eastern Kazakhstan, at about the same latitude as northern South Dakota, would find a home in the native grasslands of the Dakotas.

I was encouraged by his beliefs and optimism about the potential of the Russian and Turkestan alfalfa germplasm for introduction into the native pastures of South Dakota that I adopted his viewpoint and made it the basis of my program at S.D.S.U.

He turned over to me some of his notebooks and other records that provided names and addresses of homesteaders to whom he had sent seed. I then made exploratory trips in 1948 and '49 to northwestern S.D. and was, in fact, able to locate several sites where the yellow-flowered alfalfa still persisted in and around homesteads long since abandoned by those who had once settled there thinking to farm the land as though it were Illinois prairie.

In a roadside ditch near Lemmon, S.D., I found a single spreading yellow-

flowered plant covering an area of some 18 feet in diameter. This was the first true root proliferous type I had ever seen. Sam Garver had described this characteristic in a publication as early as 1912 or '13. I introduced this clone into my breeding populations as a source of the root - proliferating trait, and out of the resulting populations, aided by subsequently acquired clones, came the root-proliferous range type variety Travois.

Hansen produced a *M. sativa* x *M. falcata* hybrid population by interplanting alternate rows of his Turkistan blue-flowered strain with his yellow-flowered Semipalatinsk. This population was produced, if memory serves me correctly, in 1914, and was planted on land near the S.D.S.C. campus which subsequently became a portion of the College golf course. Under close mowing and the encroachment of grasses, the original plants or their descendants persisted for the next 35 or so years.

I more or less stumbled on this site in 1948 and discovered numerous wide-crowned plants of a rhizomatous nature and ultimately extracted from the area the clones that became the parents of Teton alfalfa, developed as a pasture type.

To Professor Hansen must go the credit for not only recognizing the agronomic potential of the Turkistan and Semipalatinsk alfalfas, but having the vision of placing them in the South Dakota grasslands for grazing purposes.

One final item of some small interest, at least to me: Someone had placed in the S.D.S.C. Agronomy herbarium, a couple of plants of alfalfa of the Don strain, introduced by Hansen from the area of the Don River of European Russia. Don was a *M. falcata* type with very fine stems and small sickle-shaped pods.

Noticing that one of the pods still contained bright yellow seeds, I removed three such seeds, scarified them, germinated them and got two seedling plants. From root tips I determined that they were diploid. Thus, although unknown to Hansen at the time of his collecting this strain, he was responsible for introducing probably the first diploid stocks to the genetic resources of *M. falcata* in the U.S.

Personally, I still believe Hansen's vision of the potential of the Russian and Siberian alfalfas for the grasslands of the U.S. northern great plains was an inspired one, and I am pleased that you and your alfalfa breeder colleagues have thought it appropriate to memorialize him with the paper(s) being prepared in his name.

Epilogue: M. Wayne Adams went on to become an eminent breeder of Phaseolus beans at Michigan State University. His bean varieties made a large contribution, and his papers on the concept of breeding ideotypes continue to be studied by students of plant breeding. E. T. Bingham, 2001.

