

Kyrgyzstan Agriculture

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Agricultural production practices vary widely even from county to county, but half-way around the world from here agricultural production is accomplished completely different. Last year I was invited to assist farmers in the Central Asian country of Kyrgyzstan. This former Soviet country ceded from Russia during the Soviet Union collapse in 1991. At that time, the people in Kyrgyzstan decided their government should not be a communist dictatorship, but rather a republic type government. Thus, the Kyrgyz Republic, as they refer to themselves, today is a sovereign country in Central Asia and have now elected their 4th president in the country's 27 year history. Kyrgyzstan is a land-locked country with mountainous terrain. It shares borders with Kazakhstan, Uzbekistan, Tajikistan, and China. Due to the mountains that occupy much of the northern part of the country, most of the agriculture occurs in wide, rich river valleys in the southern areas and is irrigated. Bread is a staple in this country and the Fergana Valley (the southern part of the country where I was assigned) should be a "bread basket" for Central Asia, but the region lacks agricultural technology. As a result, Kyrgyzstan is forced to import nearly 30% of its wheat needs, making it food dependent on other countries. Part of the issue is that their agricultural training centers are few and are not producing highly technically trained agriculturalists. A land grant university system does not exist there. I was invited to assist with agricultural technology transfer.

Crops grown in the Fergana Valley are cotton, corn, wheat, alfalfa, and sunflower. Thanks to the Soviet built infrastructure, a massive river-fed irrigation system is present and utilized. The result is that irrigation water is available upon demand during the growing season. The climate is continental with hot summers and cold winters. Daytime temperatures in July were 95 degrees F. with humidity levels near 10%. As a result of a long growing season, corn varieties planted are 120 days in length. However, only traditional varieties are grown with little production technology and as a result, irrigated corn yields of only 140 bushels per acre are common. Equipment is small and 40 years old and an average farm is approximately 1 acre. This system is forcing farmers to get innovative and they are now forming co-ops to purchase equipment together, sharing planting and harvest activities. Farmers there do not have access to crop insurance, marketing tools, or government support.

Old World Cotton Bollworm infestations were found attacking corn fields (I was able to identify this pest via keying with a 3 G internet connection). This pest is in the same order as European Corn Borer, an insect that is not an issue in the United States due to GMO technology. Unfortunately, this technology has not reached this region. Farmers in the Fergana Valley are battling the insect with hand applied insecticides without protective clothing. I introduced transgenic technology to these producers hoping to enable them to battle a pest without insecticide applications.

Other production practices discussed included testing new varieties. Currently, no one is doing side by side variety trials. As a result, current varieties are old and yield limiting. The current wheat variety is a winter type that has been grown there for a long time. No wheat breeding program exists. Improved fertility and irrigation management techniques were also discussed.

During one of the field days we held for local farmers the Kyrgyz national media was present and featured an in-depth interview. Following airing, I was contacted by the American Embassy in Bishkek and invited to update their staff on innovative agricultural production techniques.

Kyrgyz farmers are extremely hard working, doing many tasks by hand. However, they fully understand the value of hard work rewarding them in future years. Finally, this valley has the potential to become food independent in the future with the adoption of just a few improved agricultural production practices.

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