Criollo cattle: Heritage Genetics for Arid Landscapes
By Dean M. Anderson, Rick E. Estell, Alfredo L. Gonzalez, Andres F. Cibils, and L. Allen Torell

On the Ground
- Precipitation variability within and across years remains a major challenge for livestock producers in arid and semiarid ecosystems.
- Cattle adapted to harsh desert ecosystems may offer exciting genetic opportunities for optimizing beef production from arid ecosystems.
- A type of Criollo cattle, introduced from the Chinipas region of Chihuahua, Mexico, may provide opportunities to use cattle adapted to arid and semiarid environments that require minimal management yet provide quality beef.

Keywords: livestock, dry lands, foraging, Mexican cattle.

In this article we assemble published information about Criollo cattle and their present genetic contribution to the US beef industry. It is not known when the term Criollo (a noun) was first used (Encarta Dictionary—13th century; Merriam-Webster—1604; Oxford Dictionary—late 19th century) and although its origin appears to be Spanish, there are possible French and Portuguese derivations. Since colonial times, Criollo has been used in Latin America to describe people and animals born in a newly discovered land from imported parents.1 Criollo cattle refer to bovines introduced to the New World from the Andalusia region of southern Spain2 by Christopher Columbus during his second voyage (1493–1496). These cattle have had a significant influence on present-day North American cattle.3 The first cattle specifically used for breeding purposes are reported to have been brought to Mexico by Gregorio Villalobos and Hernán Cortés,4 yet Criollo cattle have largely been ignored by historians and scientists due to the lack of detail in their history.5 In 1572, Mexican Criollo cattle were introduced to the state of Chihuahua at Santa Barbara and Valle de Allende, and in 1627, Jesuit missionaries introduced them to the Sierra Tarahumara Indians.6 Today, many Tarahumara remain in isolated family units influenced by a mix of traditional and 21st-century trappings with the cow as their most valuable possession.7

Lowery Woodbury, as quoted in Bowling,3 wrote that cattle from Mexico were moved into the present boundaries of the United States as early as 1539. Rouse5 indicates that Coronado had about 500 head of cattle with him when he traveled through New Mexico between 1540 and 1542; however, the actual fate of these animals is not known. The best estimate of when Criollo genetics were introduced into New Mexico is 1598, when Don Juan de Oñate introduced between 2,500 and 7,000 head.8 DNA markers are being used to fill in missing pieces of the Criollo story with recent research showing the possibility of some African influence on the development of the Iberian breeds.8

Although research on Criollo is limited, certain Mexican cattle have remained isolated in specific areas without the influence of crossbreeding.9 Because of the unique genetics of various isolated groups, it is not accurate to refer to Criollo cattle as a breed.10 Reference to Criollo cattle as a type (Briggs11) or biotype12 is more appropriate. It is important that the genetics of these cattle be studied and preserved for maintaining or improving the quality of current domestic breeds for future generations.

Criollo cattle can be found throughout the Western Hemisphere (see Rouse5) and some Criollo have been developed into unique breeds, e.g., the tropically adapted Romosinuano of Colombia, one of the few polled Criollo cattle (see Rouse7). Other Criollo cattle were responsible for the genetics that led to the Longhorn.13 The resurgence of sport rodeo rekindled interest in Mexican cattle frequently referred to as Corriente or Corriente (a less preferred spelling). Although Corriente has been used interchangeably with Criollo,14 this terminology is incorrect. Corriente cattle have been selected and raised primarily as sports cattle, primarily for team roping and bulldogging according to the North American Corriente Association headquartered in Monument, Colorado, whereas Criollo cattle are more frequently associated with beef production.

Although crossbreeding may be the goal for owners of Criollo cattle, the US Department of Agriculture-Agricultural