

IMPERIAL WHITETAIL CLOVER:

WHAT SETS IT APART





This clover variety has long been the standard by which all other food plot forages are measured. That's no accident, and the variety's success lies in its origins and continued development.

■ by Joyce Allison Tredaway, Ph.D.

Thirty years ago, when I sat in Forage Production class at Auburn University, I never dreamed I would be writing an article about my professor and the clover variety he was discussing. As I sat in class, he discussed a new venture he had been working on, in which he had searched for the ideal clover traits for white-tailed deer and started breeding those traits with other clover varieties to find the ideal whitetail clover. If you have read *Whitetail News*, you've seen articles about my professor, Dr. Wiley C. Johnson, the clover breeder who searched for the ideal clover characteristics for white-tailed deer and bred the first Imperial Whitetail Clover.

To understand the impact Imperial Whitetail Clover has had on deer hunting, it's important to know the differences between the types of white clover. White

clovers are distinct clover species and feature several types, including ladino and intermediates. Ladino white clovers have larger leaves, bloom later and grow more upright than intermediate clover types. When fertility and pH levels are optimized and managed well, ladino clovers are also more productive. Intermediate-type white clovers possess many stolons (above-ground stems), therefore producing more stems than leaves.

Dr. Johnson started with the established public variety Regal, a ladino-type white clover he released in the 1960s, and then began individual plant selections looking for growth characteristics desirable for food plots. He also collected seeds from various clover breeding programs (germplasm collections) across the United States and included those lines as sources of desirable traits, which also added genetic

diversity to the breeding program. Using traditional plant breeding methods, characteristics desirable for food plots were systematically added into established ladino clover varieties, which led to the first generation of Imperial Whitetail Clover.

The book *Quality Food Plots: Your Guide to Better Deer and Better Deer Hunting*, by the Quality Deer Management Association, includes this statement in the introduction: "The birth of the nationwide commercial food plot industry unquestionably began in 1988 with the launch of Imperial Whitetail Clover by the Whitetail Institute." Imperial Whitetail Clover is consistently rated at the top in customer reviews for one reason: It's the standard by which all other clovers are measured.

Whitetail Institute uses the phrase Research = Results, which can be shown in the products the company offers. Dr. John-

son continued to improve Imperial White-tail clover throughout the years. However, the story doesn't end with him. Just like consumer products that are continually improved, Imperial Whitetail Clover has been improved. To see the difference between Imperial Whitetail Clover and the competition, you must look at the breeding program — where it began and where it has evolved since.

After Dr. Johnson died in 2006, Dr. Wayne Hanna was hired and took the breeding program to new heights by scouring the eastern and central parts of the country for individual ladino clover plants of documented longevity that also had additional desired growth attributes to further improve Imperial Whitetail Clover. Hanna, professor emeritus of the University of Georgia, is a retired research geneticist and breeder with the U.S. Department of Agriculture. He is also in the Agricultural Research Service Hall of Fame and Georgia Agricultural Hall of Fame for his impact on agriculture as a plant breeder.

Hanna's breeding program sought to increase pest resistance, drought resistance, deer matter yield and seed yield. In addition,

ideal varieties would be able to thrive in extreme cold climates as well as mild, warmer climates. The result was a clover bred for white-tailed deer that promotes antler, muscle and bone growth. White clover germplasm was collected from 16 states and more than 150 locations. Selections of the clover varieties were made based on vigor (height and width), plant quality, pest resistance, drought tolerance and seed head production. Larger-leaf ladino-type white clovers were intentionally selected rather than intermediate-type white clovers, which have smaller leaflets. In 2009, large populations of nine varieties were planted, and the first of the new Imperial White Clover cultivars were derived.

Selections continued based on various criteria, and in 2014, four Imperial White Clover cultivar populations were developed for seed increase. The criteria to increase the population was based on improved seed yields and improved varieties. Researchers sought qualities such as root development, drought resistance, deer preference and larger leaves to continue to improve the variety. This is the current Imperial Whitetail Clover.

Imperial White Clover works for deer hunters for many reasons. First, it was specifically bred for the characteristics that would attract deer. It has a high protein content for antler growth, muscle mass and bone growth. It thrives in extreme cold and warm climates. It features large leaves, which deer prefer to consume — a trait that differs from forage-type white clovers. Also, it can be reseeded to ensure a good stand, which lets it withstand weeds, grazing and mowing.

Whitetail Institute's clover breeding program did not stop with the first generation of Imperial Whitetail Clover. Its plant breeders continued improving the product by seeking new sources of genetic material that improved the variety and broadened its genetic diversity. Whitetail Institute's clover breeding program and its professionally trained plant breeders allowed Imperial Whitetail Clover to remain the gold standard of food plot forages.



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