

## **Where the Mares Fit Into the History of the Polish Arabian**

Every pedigree has two directions. When people discuss the history of Polish Arabian horses, the conversation often begins with the famous sire lines — the desert stallions whose male descendants shaped the breed.

These stallions matter enormously. Through the Y-chromosome they define the direct male line, and historically only a handful of those lines survived the upheavals of wars, economic collapses, and shifting breeding priorities in Europe.

But focusing on stallions alone tells only half the story - because breeding is never stallions alone.

Every Arabian horse receives half of its nuclear DNA from its sire and half from its dam. And like all mammals, mitochondrial DNA (mtDNA)—the DNA associated with *cellular energy production*—*is passed only through the maternal line.*

That maternal inheritance makes mares essential to understanding the deeper structure of the breed.

### **The Polish Mare Families**

Long before modern genetics confirmed their importance, Polish breeders already understood the value of maternal inheritance. Beginning in the 19th century, the great Polish state studs organized their breeding programs around mare families.

These families, tracing back to desert mares imported from the Middle East, were carefully preserved across generations. Over time, some became known for producing endurance, racing ability, exceptional conformation – and reproductive abilities. The ability to conceive easily, carry foals to full terms, foal with ease, be great milkers – and to be good, kind mothers to their offspring.

## **Selection Through Performance**

The Arabian horse in Poland was not bred to be a show horse. That came later. Horses were expected to race, work, endure long distances and hardships, and remain sound over many years. Only mares that could produce durable and athletic offspring remained in the breeding population. This process functioned as a powerful filter, shaping the breed over generations.

## **The Survival of a Rare Sire Line**

One way to understand how rare sire lines survive is to follow a direct male chain of descent.

A good example appears in the pedigree behind Bastion BF, a young stallion with proven success in today's show ring. Through his paternal ancestry the line traces directly through: Amurath Sahib > Gwarny > Falat > Safari CAHR > Bastion BF.

This is a pure sire-line sequence, meaning each horse in the chain is the son of the previous stallion. Such chains represent the transmission of the Y-chromosome, which passes only from father to son.

## **Mare Families Are a Different Structure**

Mare families work differently. Instead of following fathers and sons, they follow an unbroken chain of mothers and daughters. Through that line the horse inherits mitochondrial DNA, which is passed only through the maternal side.

So while sire lines track the survival of a particular male lineage, mare families track the continuity of a maternal genetic foundation.

## **Why This Matters**

Understanding the difference is important for conservation breeding. A rare sire line can disappear if a stallion fails to produce sons.

A mare family can disappear if daughters are not retained for breeding.

The long-term survival of historic Polish Arabian bloodlines therefore depends on preserving both the few surviving sire lines and the deeper network of mare families. Together they form the genetic architecture of the breed.

The stallions may have carried the headlines, but the mares built the foundations

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