



Stage 1. Staying traits include the closed shoulder joint, angled shoulder blade & leggy appearance.

# GROWTH SPURTS CLOUD

Conformation expert **ROSS BRUNT** of Racehorse Conformation Scientific Research explains how growth spurts cloud yearling selection.

**G**rowth traits of the yearling may give the false appearance of potential sprinting or staying types.

Successfully selecting quality racehorses is a key factor for any leading trainer. As a majority of high-class thoroughbreds are purchased from the leading sales as yearlings, understanding how growth spurts affect the conformation of these youngsters is essential. This knowledge can be employed as a tool to project how the yearling's conformation may develop as a mature racehorse. The relevance of the growing yearling takes on an even greater emphasis when it is considered that these growth spurts are directly associated with pivotal points of a racehorse's bone structure.

The typical growing thoroughbred yearling will pass through unusual and inconsistent growth patterns. We have assessed this initially by analyzing the basic overall body measurements including height, length, limbs, and a number of skeletal bone lengths. In addition we also assessed each of the seven key joints for angular variation. These measurements have been assessed continually throughout the thoroughbred's growth. This has enabled a detailed assessment, that explains how particular bone lengths and angles are affected by growth spurts, and importantly further highlights how these individual lengths and joint angles collate to form and determine the overall shape of the maturing thoroughbred. This applies in particular to the youngster's critical forequarters. With this data we have identified a number of important characteristics that may be utilized when assessing a yearling's racetrack potential, and/or maturity via its conformation traits.

The foal is born with elongated limbs. In nature this provides it with the necessary speed which enables it to evade predators, and

keep pace with both its protective dam and herd. In particular, the foal's pasterns and cannons will possess good initial length, which will later further develop to the upper legs. From this stage the later weanling now basically grows from its rear to the fore. This is initiated from its hind-quarters, through the barrel and back, and then eventually all the way to its upper forequarters as a 2YO or later

A typical growing thoroughbred is likely to follow this standard growth pattern:

1. Legs.
2. Hindquarter height.
3. Hindquarters horizontal depth
4. Girth and barrel depth.
5. Upper forequarters.

As a consequence, the result of these growth patterns are three distinct shapes, or growth stages of the growing thoroughbred. The maturity level of each particular horse is likely to govern the age at which they pass through each stage. Let's look at each stage in turn.

**First stage – Weanling:** Forequarters that have little depth through the girth. The humerus and scapula both at this stage have good proportional length, which may result in closed shoulder & elbow joints, allowing this bone formation to fit with the vertically restricted girth. This may give the appearance of long cannon and/or forearm bone lengths, in relation to the upper forequarters, and certainly to the girth. It may also give the appearance of a sloping shoulder. The indication of a shorter back, and longer pasterns, are also likely.

Height typically grows before length in the growing thoroughbred. The hindquarters initially first extend vertically upwards, but

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