



hgc: Hoof Growth Cycle

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Article Summary:

Calculation of hoof capsule growth rate (hgc) and its significance to natural hoof care practitioners.

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INTRODUCTION

A longstanding presumption of the professional (and lay) hoof care community is that a given hoof requires 9 months to one year to replace or reproduce its capsule; said another way, this is the time it takes for the horse to grow a new hoof. This is based on the genetically driven growth rate of approximately 1 cm of new (or replacement) growth per month.

Natural hoof care practitioners in recent years have looked closer at capsule growth rate with an eye to predicting specific timeframes for capsule replacement, harmonization of Divergent Toe Angles (DTAs), and healing of traumatized hooves with capsule deformity. This paper provides a simple mathematical criteria for standardizing the calculations of these timeframes.

The working assumption in this article is that the genetically driven rate of capsule replacement is *1 cm per month*. The actual growth rate may vary slightly from horse to horse, season to season, or in response to some other criteria. Adjustments in the growth rate are recommended accordingly, as long as the practitioner is consistent and specific as to the growth rate criteria.

The *hoof capsule* includes all epidermal structures below the hairline, in-

cluding the hoof wall (stratum externum, stratum medium, and stratum internum), sole, frog, and heel bulbs. The hoof capsule is produced by the localized coria comprising the Supercorium [See Bulletin #110].

HOOF GROWTH CYCLE (*hgc*)

The actual time it takes for the Supercorium to replace the capsule, measured from the coronary band to the ground, and at the genetically driven growth rate of 1 cm per month, is defined as a *hoof growth cycle*, or *hgc*.

hgc naturally varies according to capsule length. For example, the longer the hoof's TL (Toe Length), the greater the capsule replacement timeframe, or *hgc*. We can calculate specific examples of this variation using typical equine populations:

Among wild, free-roaming horses, N°TL commonly measures less than 3 inches or 7.2 cm [See Bulletin #101 for definitions of capsule measurement terminology]. For example, where N°TL equals 2.5 in (6.35 cm), *hgc* is calculated as follows:

$$1 \text{ hgc} = 2.5 \text{ in} \times 2.54 \text{ cm/in} \div 1 \text{ cm/mo} \\ = 6.35 \text{ mo}$$

Thus, it takes a wild hoof with a TL of

¹Founder: *Prevention and Cure the Natural Way*, available from Star Ridge Publishing (www.star-ridge.com) or other retail book outlets nationwide.