horse science

4-H HORSE PROGRAM

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HORSE SCIENCE

This educational material has been prepared for 4-H use by the Cooperative Extension Services of the U.S. Department of Agriculture and State Land-Grant Universities in cooperation with the National 4-H Council and the American Quarter Horse Association.

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"How old is your horse, mister?" To such a 4-H question, the owner might answer full mouthed, smooth mouthed, he still has corner cups or I don't know as he isn't registered. Such answers tend to confuse the youngster of the motor age, nor can he readily find these answers too easily until he questions the grandfather age group.

General features of horses which indicate advanced ages are grey hairs around the eyes and muzzle, deep depressions above the eyes, slender and hardened muzzles and loose heavy lips with a longer "grin" than younger horses. But, these features are not accurate enough to estimate ages on younger horses. Since the horse is most useful to us from 3 to 15 years of age, we need more accurate methods for age determination during this period.

The teeth of horses under 12 years old can be most closely identified with their approximate age. In general, we must examine the incisor teeth for most accurate results. Of course, the registered horse has a recorded birth date, but many horses are not so fortunate. However, this technique is not foolproof as prolonged droughts, short grazing on sandy soils, cribbers, parrot mouths etc. all tend to make the horse appear different than his actual age. For instance, a horse at 7 years of age grazing in sandy country over a prolonged period might appear to be 8 or 9 by his teeth.

The technique of horse age determination is not new nor especially scientific as it has been passed down for many generations. The basics for determining the age of horses by their teeth are rather simple and is not an art only to be guarded by the horse trader or veterinarian. Age can best be estimated by examining the wear and slant of the incisor teeth.

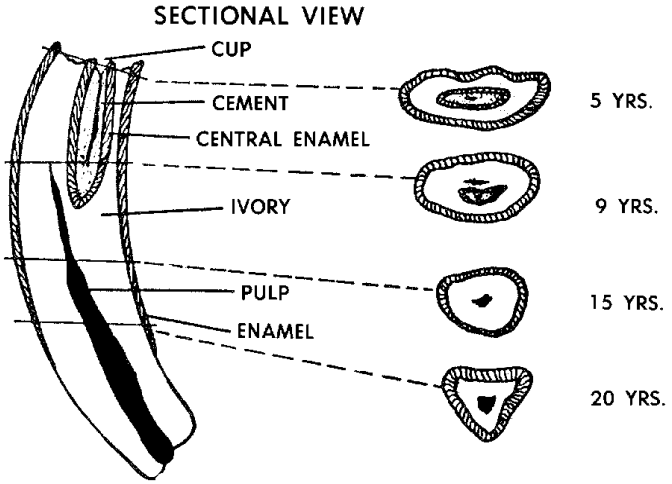
1) Number and anatomy of teeth.

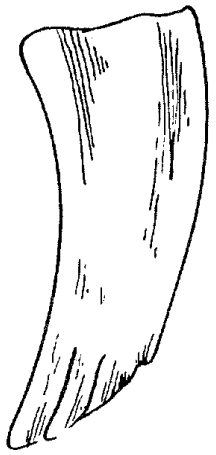
a) The foal of either sex has 12 molars or grinders and 12 incisors or front teeth for a total of 24 teeth.
b) The mature male horse has 24 molars or grinders and 12 incisors or biters plus 4 canine teeth or tushes for a total of 40 teeth.
c) However, the 4 canine teeth located in the interdental space between the incisors and molars erupt only in the gelding or stallion. These canine teeth in the mare are underdeveloped and seldom erupt above the surface of the gums thus giving the mare a tooth count of 36.
d) There are 6 incisors in each upper and lower jaw. There are 2 central incisors at the midline, 2 lateral incisors and 2 corner incisors in each jaw. The corners being closest to the interdental space.
e) Anatomy of teeth. By studying the longitudinal section of incisor teeth we can see how the tooth wears as age progresses.

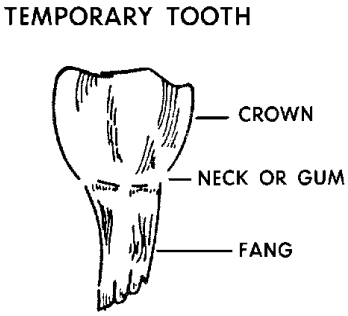
2) Examining teeth.

Approach the horse gently from the left side and examine the teeth by parting the lips with the thumb and forefinger leaving the jaws closed. In examining groups of horses of mixed ownership ask the holder to part the lips. The angle of bit and size and color of teeth are noted first.

For the next examination grab the tongue with the right hand and grab the lower lip with the left hand and the mouth will open for clear examination of the cups, wear etc.



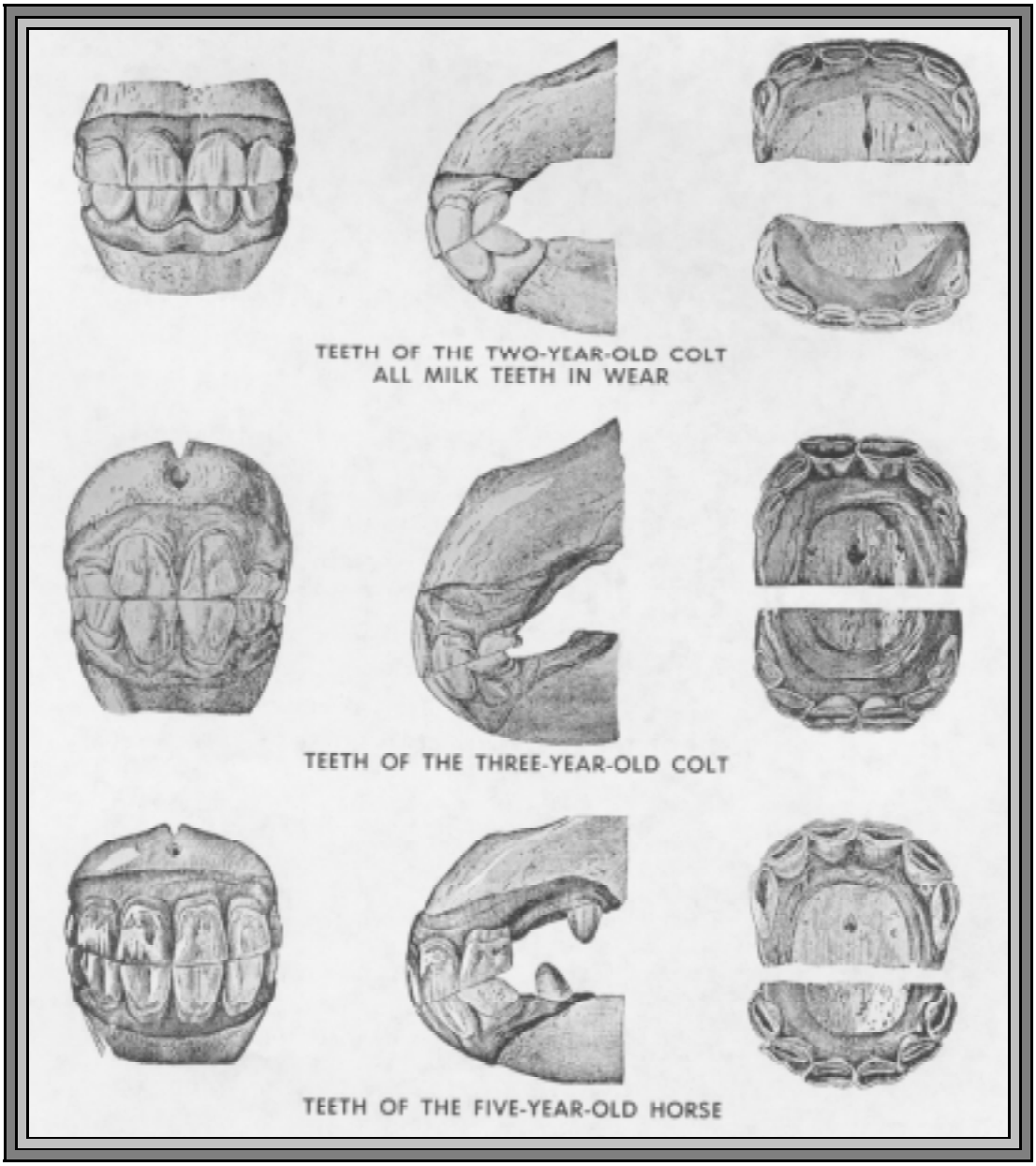




3) General tooth eruption and development by ages. The temporary or milk teeth of the young horse are smallish and white with a distinct neck. The permanent teeth are much larger, stronger and have a darker color with distinct cups on the younger horse. *Inserts from “The Sound Horse”, Mich. Ext. Bull 330.

a) First period (birth to 2½ years).
   1) 10 months. All milk teeth have erupted and in wear at 16-18 months.
   2) 2-year-old. All milk teeth in wear.

b) Second period (2½ to 5 years).
   1) 2½ years. Temporary centrals loosen and permanent centrals erupt. Age determination is most accurate from 2-5 years. Shedding of milk teeth and eruption of permanents may not occur simultaneously and may overlap one another
   2) 3½ to 4 years. Permanent laterals erupt.
   3) 4½ to 5 years. Permanent corners erupt.



c) Third period (6 to 9 years)

1) 6 years. Age from here on is estimated mainly by the size, shape and disappearance of cups until 10-12 years of age. Cups disappear at rather regular intervals beginning with the lower centrals at 6 years.

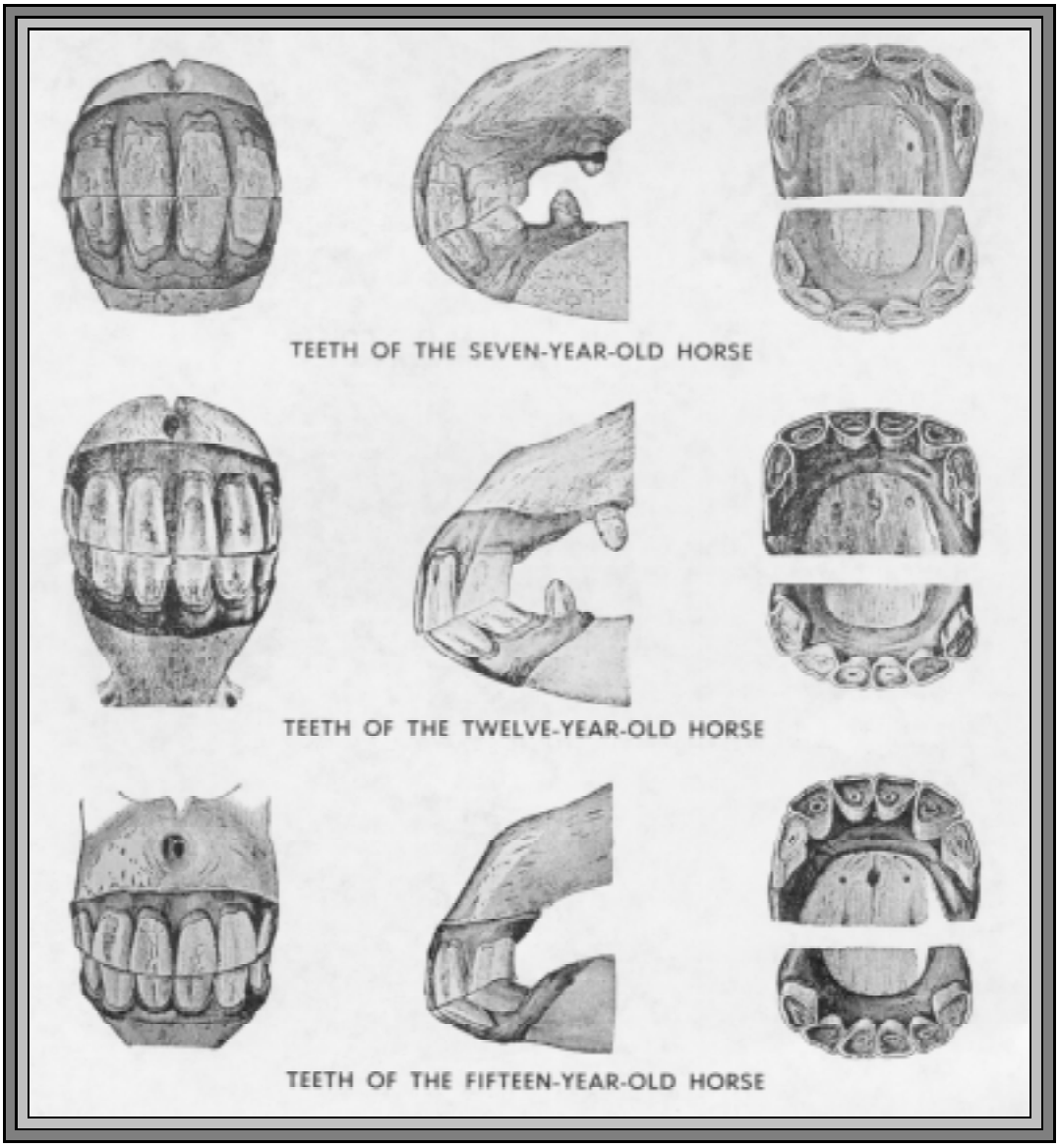
2) 8 years. Cups have disappeared in the lower centrals and laterals.

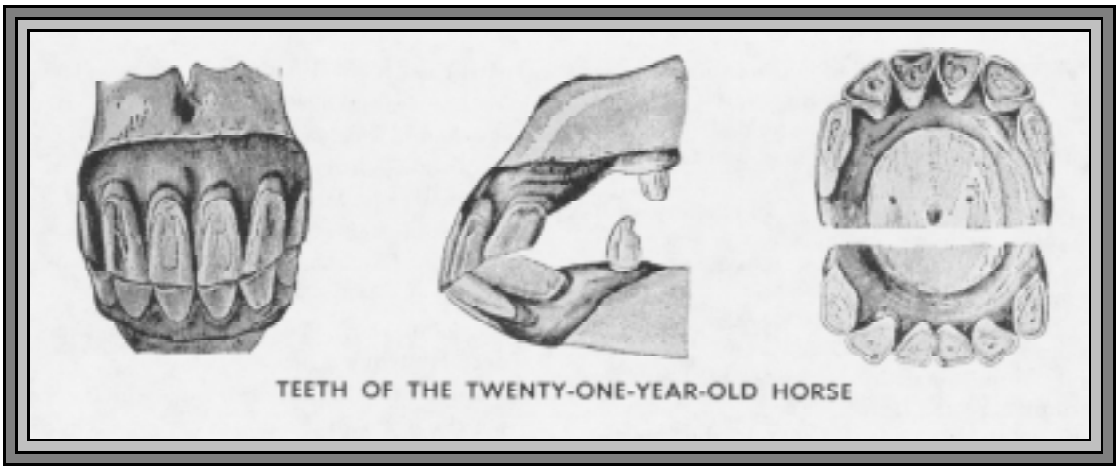
d) Fourth period (aged).

1) 10-12 years. After 9 years the accuracy of age determination becomes more difficult. At this age the angle of the bite slants more outward than the perpendicular bite noticed in younger horses. By 12 years, the cups have disappeared in the upper incisors and the horse has a “smooth mouth”.

2) 15 years. The dental stars are smaller but more distinct and more centrally located.

3) 20-21 years. At this age teeth may become shorter, more triangular in shape on the wearing surface, have a noticeable spacing between adjacent incisors and the dental stars may become larger and occupy a central position on the wearing surface. Also, at this age, the bite is very slanting. It is well to note that horses in this age group may appear to have much younger mouths if they have had excellent care with regard to lush grazing and grain feeding with accompanying good health throughout their life.





GLOSSARY

Anatomy - The science of the structure of the animal body and the relation of its parts.
Angle of bite - The outer angle at which the upper and lower incisors meet.
Canine teeth - Teeth that appear in the interdental space on the male horse at 5 years of age. Sometimes referred to as tushes.
Centrals - The first centrally located upper and lower incisors.
Corners - The corner incisors or those located back and adjacent to the forward edge of the interdental space (third set of incisors).
Cribbers - A bad habit of some horses in which the animal grasps the manger or other object with the incisor teeth, arches the neck, makes peculiar movements with the head, and swallows quantities of air. Called also cribbiting and wind-sucking.
Crown of tooth - The top of a tooth protruding above the gum.
Cups - The hollow space on the wearing surface of the incisor.
Dental star - A star shaped or circle like structure near the center of the wearing surface of the permanent incisors.
Full mouth - When the horse has a complete set of permanent incisors.
Incisor - Slender teeth in front used for biting grass, feed, etc.
Interdental space - The gum space between the incisor teeth and molar teeth.
Laterals - The second set of incisors located between the central and corner incisors.
Longitudinal - Lengthwise. Parallel to the long part of the tooth.
Molars - Rear teeth or grinding teeth of the horse generally not used to determine age.
Neck of tooth - The part of the tooth between the crown and root located at the surface of the gums.
Parrot mouth - The upper incisors overhang the lower incisors and do not properly meet and therefore cause uneven wear.
Smooth mouth - Refers to the smooth biting surface of the upper and lower incisors after the cups have disappeared at 12 years of age or older.
Wear - Refers to the amount of use or wear observed on the biting surface of the incisors.

NOTES

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1. This document is section 4 of 14 of 4HHSG01, which supersedes CO 201, one of a series of the 4-H Youth Development Program, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Date first printed August 1965. Date revised June 1989. Please visit the FAIRS Website at **http://hammock.ifas.ufl.edu**.

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