

Determining the age of wild pigs

USING TOOTH ERUPTION AND ESTIMATED WEAR



INTRODUCTION

The age of pigs can be estimated by the eruption sequence of the molar teeth up to 42 months, with a good degree of accuracy. This is fortunate because, in most situations, between 60-80 per cent of the wild pig harvest will be less than 48 months of age. For older pigs age can be determined by wear estimations, while these are less accurate, they can still provide good survey information.

The tooth eruption sequence in New Zealand's wild pigs is described in a Landcare Research paper published in 1992, *A Comparison of Tooth Eruption and Wear and Dental Cementum Techniques in Age Determination of New Zealand Feral Pigs*. Some 2000 pig jaws were examined in this comprehensive study.

Elements of this paper and the authors' field experience are presented here in a photographic chart form to assist field workers to age pig jaws for wildlife survey work.

SUMMARY OF TOOTH ERUPTION

Shortly after birth, a pig has three premolars [P1, P2, and P3]. These are small chisel-like deciduous, or baby, teeth. Distinctively, the third tooth has three cusps. These are replaced by permanent teeth at 14 to 18 months of age.

The most important teeth, for ageing, are the main molars [M1, M2 and M3] located in the rear of the jaw. These teeth erupt in a known sequence as the pig matures.

- **M1:** Birth tooth, erupts at 4 to 6 months
- **M2:** Erupts at 12 months
- **M3:** First cusp at 24 months
- **M3:** Third cusp up at 42 months.

After 42 months, age is estimated by wear.

The following example jawbone photos are of clean jaws which makes viewing the teeth easy. The field worker will be generally dealing with fleshy jaws and high gumlines with mud, blood and occasional bullet holes. This makes this job difficult and it takes some patience and persistence to acquire the skills to make accurate age assessments.

AGE OF JAW: 6/7 MONTHS

The first permanent molar has erupted; there is no sign of the M2. Note the triple cusps on the deciduous P3.



AGE OF JAW: 10 MONTHS

The M2 is beginning to erupt, but is still below the gumline. On a fresh jaw, the space can be seen and the tooth felt, and if the flesh is scraped away, the tooth can be seen. The deciduous premolars are still present showing considerable wear. There is also visible wear on the M1.



AGE OF JAW: 18/20 MONTHS

All three premolars have been replaced with adult teeth. This takes place by 18 months of age. Both the M1 and M2 are present and there is room for the first cusp of the M3 [24 month cusp] but it is not yet visible.



AGE OF JAW: 26/29 MONTHS

The first cusp of the M3 has erupted, making this jaw 24 months or over. The second cusp has just emerged and is still below the gumline. This jaw is approximately 26/29 months. Note the wear on the M1 and M2.



AGE OF JAW: 40/42 MONTHS

The third cusp of the M3 has erupted and has just emerged from the gumline. There is no apparent wear on the 24 month cusp of the M3.



AGE OF JAW: 48/52 MONTHS

There is little apparent wear on the third cusp of the M3. This tooth has erupted over a 22 month-period. Note the wear on the first cusp of the M3. Compare that with the heavy wear on the 12 month older M2. (Unfortunately the M1 is missing from this jaw.)



AGE OF JAW: 60 MONTHS

All the cusps on the M3 are well worn but the cusps are still defined. Note the heavy wear on the M1.



AGE OF JAW: APPROXIMATELY 72 TO 84 MONTHS

This is a good example of an aged pig jaw. All teeth are well-worn. The M1 is almost worn in half. The M3 has all three cusps worn flat and it is becoming difficult to distinguish between the cusps. Pigs of this age make up less than 10 per cent of the harvest, in most situations.



FERAL PIG TOOTH ERUPTION

AGE (MONTHS)	PREMOLAR			MOLAR			COMMENTS
	1	2	3	1	2	3	
1							
2							P2 generally erupts
3							
4							First cusp M1 visible
5							
6							M1 all visible
7							
8							
9							
10							First cusp M2 visible
11							
12							
13							M2 has erupted
14							
15							
16							Triple cusped P3 replaced
17							
18							Last deciduous tooth replaced
19							
20							
21							
22							M3 visible
23							
24							First cusp M3
25							
26							
27 / 29							Second cusp M3 erupted
30 / 32							Third cusp M3 visible
33 / 35							
36 / 41							
42							Third cusp M3 fully-erupted

-  Deciduous teeth
-  Erupting teeth
-  Permanent Teeth

TOOTH WEAR AS A GUIDE TO JAW AGE

Months	TOOTH WEAR AS A GUIDE TO JAW AGE
48 / 54	First cusp M3 shows some wear. Little wear visible on other two cusps.
54 / 60	All three cusps show wear. Tooth not yet worn flat.
60 / 70	First cusp is worn flat. Other two cusps worn almost flat.
72 ++	All three cusps worn flat together.

WHAT SHOULD I DO IF I SUSPECT BOVINE TUBERCULOSIS (TB) INFECTION IN WILD PIGS?



- Take a sample of the suspect lesion, put it in a plastic container, seal in a plastic bag and keep it cool.
- Refrigerate or freeze the sample separately, away from food.
- Record the location where the pig or suspect animal was found.
- Call the TB information line on **0800 482 4636** and ask to have the sample collected. It will then be forwarded to an animal health laboratory for testing.
- Please be aware that submitting a positive TB sample does not mean that the TBfree New Zealand programme will automatically undertake possum control in that area. The sample will simply add to the local disease information.

For further information on the TBfree New Zealand programme, please phone **0800 482 4636** or visit **www.tbfree.org.nz**

We can make arrangements to collect any suspicious samples.

