

RADIO FREQUENCY IDENTIFICATION IN HORSES: AN INDEPENDENT ANALYSIS

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The importance of identifying a horse is proportional to its value. Despite the most widespread way to identify a horse is by transponder implantation, few scientific papers about its efficacy are carried out by independent organizations. To evaluate this way of identification, 12 official veterinarians working for UNIRE in Italian racetracks, filled a provided form, with a picture showing the layout of the microchip detection sites. In Italy the implant usually lies in the intermediate-dorsal zone of the neck's left side. Each veterinarian used 2 readers: "ISO Max 3", Bayer (I) and "MPR- HS 5900 LF", Electronic ID, Inc.(H). Data from 700 horses were collected, concerning 560 microchips of 10 digits (80,0 %) and 136 microchips of 15 digits (19,4 %). Four microchips were illegible (0.6%), probably because 3 horses were wet or sweating; but one was perfectly dry.

Only the (I) reader recorded 15 digit microchips (19.4 %), of which 94 % was detected within 5 seconds, 4 % in 5 to 15 seconds and the last 2 % within a time over 15 seconds (one microchip was on the right side).

As for the 10 digit microchips (560 horses), (I) reader could not read 160 of them (20 %) and (H) reader was quicker (see graph). Follow the microchips detected in each neck's placement:

- 514, intermediate-dorsal – left side;
- 65, cranial-dorsal – left side;
- 51, caudal-dorsal – left side;
- 43, intermediate-intermediate – left side;
- 9, caudal-intermediate – left side;
- 6, cranial-intermediate – left side;
- 3, intermediate-dorsal – right side;
- 2, caudal-ventral – left side;
- 2, intermediate-ventral – left side;
- 1, intermediate-intermediate – right side;
- 0, cranial-ventral – left side.

Most of the transponders were detected in standard position (90% on the neck's dorsal line, 10% in other sites). Reader (I) could not detect about 20 % of 10 digit transponder, despite according the advertisement it records all microchips implanted in the last 10 years. However, its lost of skill could be correlated to the gradual lost of energy. This method of identification is convenient and quick, even if it is advisable that companies improve the reading skill of the instruments and racing authorities carry on with continuing education for veterinarians charged of the implants, to avoid non-standard implantation sites. Further studies are needed to explain rare cases of failed reading, which force the authorities to still use the outline diagram, not because of their statistic significance but for the advisability correlated to the single horse importance.

