

AHL regulations, individual identification and tuberculosis test in Spain

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Abstract: The report is presenting two important issues and methods of solving them in Spain. One is identification of European bison required by Animal Health Legislation. Small rounded ear tags with both visible number and microchip are proposed as an alternative to standard ear tags. The second issue is testing against tuberculosis, also compulsory according to AHL. The Spanish Veterinarian authorities will check a minimum of 25% of animals in every herd using two methods. In case of positive results and need to eliminate such animals, breeders will obtain compensation.

Key words: ear tags, AHL, tuberculosis, identification

On April 2021 the new regulation for Animal Health Legislation (AHL) 2016/429 started to be on force in whole European Union after a moratorium period of 4 years.

This new regulation included European bison and any other species from genus *Bison* specifically into the cattle box, considering the same regulations. Therefore *Bison bonasus* should be treated as ordinary cattle regarding transportation rules and treatment of infectious diseases not considering the particularities of this wild and still endangered species.

In Spain, for the European bison conservation projects the same model is being developed as Germany has for many years. European bison was not accepted by authorities to included in National Endangered Wild List so is considered as cattle, they are inscribed in the cattle registration regular official system and each animal has an individual ID document, a code number and a couple of yellow ear tags supposed to be fixed in each ear, however in fact those tags are not placed on the animal but kept in a storage.

Instead, we proposed to the Health Veterinarian Authorities a different identification system, on one hand to fit the Regulations but considering the particularities of European bison species, and allowing to identify particular individuals from a distance of over 50 meters as well as in captivity from the short distance.

Up to now, each European bison was individually identified with a microchip either implanted on the left side of the neck or in a mini 2 cm ear tag at any of the ears. The official Id number from cattle registration system (yellow tags) will be linked to the microchip id number. Yellow official ear tags will remain in a storage at the project place's office. In theory, each wisent has triple individual identification, i.e. a unique name, a pedigree book number assigned by the International European Bison Pedigree Book and an individual picture identification. However in reality, directly connected with an animal, is the microchip only which cannot be seen from distance.

We solved the discussion with the Veterinary Authorities about the visual individual identification from a distance of over 50 meters with the use of ear tag microchips **including a number on the back** of the ear tag that can be seen from distance with binoculars or with a powerful zoom camera. The use of those new ear tags unraveled all our concerns about using the official large yellow tags.

In first place, and as the main reason, yellow official ear tags are simply not working for this species. They are too big and too weak. European bison move inside the thick vegetation of scrubland or the forest and very often horn tree branches, so big yellow ear tags are quickly damaged or lost in a month in best case. There are other alternatives to identify animals without necessity to fit them with big yellow plastic ear tags.

Also, despite their legal status as cattle, they are wild animals which capturing is far from easy. If they lose the ear tags, they become non – identified animals without the legal status which is risky for the owner and for the project.

Secondly, capturing of European bison is not an easy task usually very stressful for the individuals, leading frequently to injuries sometimes dysfunctionality or even death. Therefore imposing an identification system in fact not effective requiring frequent capturing may be in accordance with EU identification regulations, but completely wrong considering the EU animal welfare regulation. Since the aspect of animal welfare is not respected so far, we suggest the issue of animal welfare to be mandatory to take into consideration regarding the individual official identification. This species is still endangered, its future is now again threatened since over 50% of its European population live around the war zone of Ukraine. Third consideration is, that the European bison is a wild species. Therefore, from the species conservation, but also from the logic, nature and evolution point of view, this species should remain as wild and the society should be able to see it as wild. Animals carrying huge yellow plastic ear tags, do not appear as a wild species. The small round ear tag with the microchip transponder though, can hardly be spotted among the ears long hair.

Last consideration is about the small round ear tag with the transponder versus the microchip transponder implanted in a capsule under the skin on the left side of the neck. Implanted capsules can migrate and get lost within the area between the neck and the bottom of the leg. Also, there is a clear regulation when an animal has a capsule, it is no more allowed to serve its meat as food so if there is any need to select the animal, its meat cannot be used for human consumption. In small round ear tags with transponder, a number can be placed on the back of the ear tag to make long distance individual identification possible what could be on under skin devices, so small round ear tags with microchip are, for the moment and as far as we experienced, the best choice for individual identification.

Also we tested the long distance transponder reading devices. Those are microchips that send a signal so you can receive it from a distance up to 100 meters. It was promising, but two facts disqualify this technology. The transponders need energy, so they have a battery lasting less than 6 months in the best case, so after 6 months we will have no signal. Moreover, European bison are living in social groups, so being close to a herd you will receive all signals together but without possibility to distinguish particular individuals, so you could only know which animals are not with the herd. It would only work when you meet a solitary wisent, and with a gregarious species like European bison, this is not a frequent case.

So now in Spain, if any wisent is captured for any reason, it gets a new microchip (even if already had one on the neck or in a small non numbered back ear tag with a microchip inside, we remove the old one if is in the ear, and of course leave that implanted on the neck, but provide with a new small round one with a number on the back). These microchips can be numbered from 1 to 400, so since we have for our disposal 2 ears and 2 different sex groups, we can identify up to 1600 wisents (Fig. 1)

Apart from new identification rules, in April 2020 also collection of samples for tuberculosis monitoring got a new regulation, and now the tuberculosis test on blood sample and IFN (gamma interferon IFN) is as valid as intradermal tuberculin testing.

This is a very important change for the European bison, because for performing the blood test you have to immobilize the individual just once for the time needed to extract the blood and not a second time to check the results, in case the animal is individually clearly identified.

On December 2021, 11 European bison were sedated and translocated between different breeding centers in Spain. It is important to remind that Spain is among the countries regarded as not free from tuberculosis, so cattle is regularly checked on behalf national eradication campaign every year, and



Fig. 1. Blue (top) and red (left) are ear tag test to see if number could be spotted from distance and about the size of the ear tag. The orange one is the typical ear tag with microchip with the transponder number on the back, not possible to read from distance.

several times in farms in case of identification of positive individuals. For the first time and as a try, National Veterinarian Authorities checked the 11 individuals both with IFN (detection on gamma interferon – IFN gamma) and using 2 different kits (commercial brands are named Bovigam and Idvet) to check sensitivity and compared results.

There is always the discussion that those tests are prepared for ruminants in general and especially for the cattle, but definitely not specifically for European bison. Anyway, out of 11 tested animals, 10 were negative to intradermal



Figure 2. Transponders to be used. Different options for number on the back of the ear tag, and the microchip number for electronic short distance identification.

and both IFN tests and 1 was negative to intradermal, negative to Idvet but “nearly positive” in Bovigam just in the limit below positive. It was agreed the checking on force was intradermal but a big advance was that we could crosscheck with the IFN for similar results and also perform test blood-test sensitivity and compare accuracy with intradermal test.

The only problem with the IFN it require 10 blood tubes, samples must be kept cold and must get to the lab within 8 hours. However there are several suitable labs in the country, so this is feasible to reach any in less than 8 hours after the extraction.

So, this is the line Spain is going to follow for the future about the tuberculosis (and brucellosis, but brucellosis detection is already done on blood sample test). To be able to capture a large number of bison without chemical immobilization, one of the European bison conservation projects imported and purchased a bison chute from the United States. This chute will be used this winter to capture European bison for checking and identification. We expect this chute to be transported from project to project or maybe copied by some projects to serve as capture device if necessary.

Finally, regarding regular checking for diseases, Veterinarian Official Authorities offered also to do a longer screening on the animals sampled to check the health status of the herds and include other infectious diseases, not only zoonosis. They are willing to capture at least 25% of the animals each winter in each herd.

Since the official tuberculosis eradication campaign regarding cattle is on force in Spain, any positive tested European bison must be culled. We have set some conditions with the Spanish Health Authorities for this to be done in the best way for the animals, and the selection will be done in the field.

The selection includes a compensation payment for the breeder. As the herds will be checked, receive a sanitary status and traceability, meat from positive and selected individuals will be allowed to go to the meat market so there will be also some revenue from this to use in the sustainability of the species conservation projects.

Prawo o zdrowiu zwierząt – identyfikacja osobników i testowanie gruźlicy w Hiszpanii

Streszczenie: W raporcie poruszono dwie ważne kwestie oraz omówiono metody ich rozwiązania w Hiszpanii. Pierwszą z nich jest identyfikacja osobników żubra zgodnie z unijnym Prawem o zdrowiu zwierząt (AHL). Proponowane są niewielkie okrągłe kolczyki z numerem oraz mikroczip jako alternatywa dla standardowych kolczyków bydłęcych. Drugą kwestią jest badanie gruźlicy, do którego zobowiązuje również AHL. Weterynarze Urzędowi będą sprawdzać minimum 25% zwierząt rocznie z każdego stada przy użyciu dwóch metod. W przypadku pozytywnego wyniku i konieczności eliminacji zwierząt, hodowca uzyska rekompensatę.
