

Suggested Health Monitoring Protocol for Zoos

Following are the overall suggestions and recommendations which can be implemented to zoos having the large felids:

1. Maintaining detailed information pertaining to a breeding/ studbook in a uniform manner helps proper selection of breeding population. It prevents inbreeding and gives chance for the expression of most of the founder gene.
2. Systemic and comprehensive recording of husbandry, medical and pathological data is essential in a uniform manner. The use of standardized computer programme (such as ARKS and MEDARKS from ISIS) is advisable.
3. The use of standard prescribed proforma for postmortem report, biological sample collection and dispatch is important.
4. Use of skin tattoos and/ or implanted transponders for proper identification of individual animal is recommended.
5. Properly designed housing facilities that cater the physical and psychological needs of the large felids should be used. The housing facilities should meet the standards prescribed by the Central Zoo Authority.
6. Since the feed given to large felids is meat, it is recommended to add 5 g calcium carbonate, 10 gm Di-calcium phosphate with every 2 kg, muscle meat. Whereas the addition of good quality 1.2 gm multi-vitamin-mineral powder is also advisable to meet the requirement of vitamins and minerals.
7. Feed should be thoroughly checked for quality and occasionally for laboratory examination to know the load of pathogenic micro-organism, Gross observations for presence of cyst and other contaminants should be done to prevent diseases.
8. The food preparation area should be clean and free from flies, insect pests as well as pathogenic microorganisms.

9. Transmission of pathogen should be minimized with proper hygiene and sanitation.
10. Regular disinfection of feed preparation area, feeding cubicles and utensils should be carried out. Use of ultra violet lights and fly/ insects repellents is highly recommended.
11. To control the spread of zoonotic diseases staff should be periodically screened for variety of condition. In case of cat keepers, annual tests should at least be carried out lot. Tuberculosis, toxoplasmosis and other communicable diseases.
12. Individual animal should be carefully observed every day for its physical state, food and water consumption, urination, defecation, alertness and activity. Similarly careful examination of an animal's den and enclosure can also be rewarding.
13. The observations made by the keeper/staff should be documented daily and presented to the veterinarian and supervisory staff for evaluation and for necessary actions.
14. Some animals are very shy or hyper excited, like mother with cub and pair during mating. During such occasions consideration should be given for the use of phones or even video cameras with which cats may be monitored remotely.
15. Whenever an opportunity arises, cats should be undergo a thorough physical examination. During such times, biological materials like blood, urine, faces and other body fluids may be collected for detailed laboratory examination (bacterial and parasitic isolation serological examination).
16. Periodic screening of all the animals for parasitic, bacterial and viral infections is essential part of health management. The faecal screening should be carried out every three month. There is a need of sero epidemiological survey of major viral diseases in large felids.
17. The collection and examination of blood samples for nutrients, parasites and body status is recommended every year. Whereas, bacteriological screening of animals for important bacterial pathogens should be carried out every six months.

18. On the basis of the report of parasitic study, the deworming should be carried out using suitable drugs. Even if no parasite are detected in the periodic screening it is recommended giving anthelmintics to all the animals every six months. At the same time alternative use of deworming drugs is essential to avoid drug resistance.
19. To control the entry of feral dogs, cats and mongoose, zoo and cage boundary should be made in such a way that it prevents entry of such animals.
20. The vaccination against Panleukopenia (Feline Distemper). Rhinotrachitis and Calici virus is recommended using Fel-O-Vax (Fort Dodge Alb inc.), The juveniles should be vaccinated at 8, 12 and 16 weeks of age, and should be repeated at six months and then given annual booster.
21. A period of 30 days or more for quarantine is recommended for every animal entering the collection.

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* Issued to the Chief Wildlife Wardens of all states and Director/ Curators/ Zoo-Incharge of all Large, Medium and Small Zoos having large Carnivores species vide letter No. 25-1/2002-CZA(M), dated 18.11.2004.

