Recommendations
First Joint Animal Science Research Council

MADHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR
Recommendations
of
First Joint
Animal Science Research Council
Maharashtra Animal and Fishery
Sciences University,
Nagpur

held on 15-16 June 2002
at
Bombay Veterinary College Parel,
Mumbai, 400 012.
It gives me an immense pleasure to release the First Set of research Recommendations of Joint Animal Science Research Council (ASRC) of Maharashtra Animal & Fishery Sciences University, Nagpur, since its inception in Nov’2000.

I hope the valuable recommendations put forth by the sincere hard work of our Scientists will go a long way to serve as markers for the future research vis a vis will prove quite useful to the farmers & livestock owners to treat their ailing animals for sound health & optimum production.

I take this opportunity to Congratulate to Dr. R. J. Kukde Dean, Faculty of Veterinary Science & Animal Husbandry, MAFSU, Dr. R. B. Sarode, Dean, Dairy Technology., Dr. Mrs. B. Talvelkar, Co-ordinator Jt. ASRC & Prof. of Physiology, BVC, Mumbai, DR. R. S. Dalvi, Scientific Officer, MAFSU, Dr. S. V. Upadhye, Technical Officer to Dean(Vety), all Deans & Associate Deans of constituent colleges of the University and the entire Scientist Community dedicated to research for bringing up this issue for the cause of animals.
Dr. R. J. Kukde
Dean, Faculty of Veterinary Science,
Nagpur

It gives me great pleasure to share my feelings at the time of release of research recommendations of first Animal Science Research Council (ASRC) of MAFSU. We are aware of the fact that livestock development is the single largest sector related to rural economy, as it is a source of livelihood for millions of small and marginal farmers and landless agricultural labourer.

With diverse genetic tool of well-defined indigenous breeds of cattle, buffalo, goat, poultry and fish, Maharashtra State richly contributes to the livestock wealth. The recent upsurge of livestock industries speaks of the tremendous pace on this front. The demand of the livestock products will increase speedily in the next two decades and the University has therefore a great responsibility and an opportunity to help the farmers of the state to improve their production and productivity by providing input services like breeding, feeding and health at farmer’s doorstep.

The vast resources and infrastructure available through various institutes, farms and livestock industries need to be harnessed to the fullest extent to achieve the desired targets.
The primal challenge before us is to set the priorities and initiate programmes and research projects, which are problem oriented. This should induce all segments and disciplines to join hands and be vigilant of the forthcoming challenges and to achieve the goals at institute, region and state level; this should help us in combating problems related to agro climatic and ecological variations in all the trotsiers of research.

I would therefore call upon my distinguished, colleagues, scientists and faculty members to rise to the expectations of the concerned and provide research and technologies support to the needy, which is our common mission. This alone can usher an era of growth and prosperity in rural Maharashtra. Hope our strides towards this common goal will enable us to face the common challenges lying ahead of us through this August forum.

The sincere efforts made by the scientists and faculty members in release of the valuable recommendations are greatly appreciated. Last but not least Dr.(Mrs) B.A. Talvelkar, coordinator, Joint ASRC and Professor of Physiology, Dr. R. S. Dalvi, & Dr. S. V. Upadhye’s sincere contribution are greatly acknowledge.

I am extremely thankful to Hon’ble Vice-Chancellor for his inspiratio to publish such a valuable document.

Recommendations approved in the First Joint Animal Science Research Council Meeting of Maharashtra Animal and Fishery Sciences University, Nagpur, held on 15-16 June 2002 at Bombay Veterinary College Parel, Mumbai, 400 012.

1) PROJECT NO. : BVC / Net Work / Nutr- 01 / 2002
TITLE : Performance of growing calves on complete feeds containing different levels of proteins.

RECOMMENDATION:
The Jowar straw based complete feed containing 12% crude protein can be formulated by using various agro-industrial by-products. These feeds can be successfully and economically used for growing calves.

शिफारस:
विविध कृषि-आयुर्विज्ञानीय उत्पादन वापरुने ज्यांच्या कड्यावरक संतुलित खाद्याचा (२२% तेलक्रिया प्रमितीने असलेल्या खाद्याचा) वापरला वास्तवाद्यत याच्योरुळ्या आणि कित्याने वापर करावा.

2) PROJECT NO. : BVC / PG-I / Nutr- 02 / 2002
TITLE : Effect of replacement of Soyabean meal protein with silkworm pupae meal on the performance of broilers.

RECOMMENDATION:
De-oiled silkworm pupae meal can be used in broiler diets to replace 20% of soyabean meal protein for improved and effective performance.

शिफारस:
विविध कृषि-आयुर्विज्ञानीय उत्पादन वापरला वापरलা
3) PROJECT NO. : BVC / PG-I / Poultry Sci-01 / 2002
TITLE : To study the effect of live yeast culture on the performance of broiler chicken.

RECOMMENDATION :
It is recommended to use live yeast culture containing Candida rugosa, Kluyveromyces marxianus and Saccharomyces cervisiae having a strength of about 100 billion live cells per 100 gms @ 1 kg/T of feed in broiler diets for improving performance of broilers.

शिफारस :
मांसात प्रभाव उत्पादन क्षमतेत वाढ होणाऱ्यासाठी कॅंडीडा रुगोसा, क्लूयवर्योमीस मार्क्सियानस अणी साक्चरोमीक्स सर्वक्षेत्रीय वाढ (१०० दशाला १०००००००० टेबी आढळते) किथावा काळ्यांच्या सधारण १ कि. /टन खाण्यासाठी उत्तम वाढावी.

4) PROJECT NO. : BVC / PG-I / Poultry Sci-02 / 2002

RECOMMENDATION :
It is recommended to use preparation containing Vitamin E (100 mg/ml) and Selenium (0.5 mg/ml) as Immuno-stimulant in broilers. Liquid preparation could be used @ 2 mg/50 birds.

शिफारस :
मांसात प्रभाव उत्पादन रोगप्रतिकारक शक्ती वाढवियासारी जीवनसाठी ई (०.५ मिलीग्राम / मीली) आढळते उत्पादनाचा वापर करावा. इथे वर्कवाण २ हंडा आढळते हे उत्पादन ५० प्रतिशती २ मीली. ह्यांच्यासाठी उत्तम वाढावी.

5) PROJECT NO. : BVC / PG-I / Poultry Sci-03 / 2002
TITLE : Effect of phytase on performance of broilers fed low phosphorus diets.

RECOMMENDATION :
It is recommended to use enzyme phytase having the concentration of 437.5 FTV/gm @ 1kg/T of feed in order to replace 10 kg of DCP in broiler diets to achieve savings in feed cost without affecting the performance of broilers.

शिफारस :
मांसात प्रभाव उत्पादन क्षमतेत विपरीत विभाग न होणा साडीची गहन करण्यासाठी खाण्यासाठी ते २० कि. पत्तीच्या घटक प्रतिनिधित्व करण्यासाठी १ कि. /टन खाण्यासाठी प्रभावाचे 'फास्ट एंड एंड' (२००० फीट/लब्ब) हे एड्झाइम (विकल) वापरावे.

6) PROJECT NO. : BVC / PG-II / Poultry Sci-04 / 2002
TITLE : Effect of enzyme supplementation on performance of layers and broilers.

RECOMMENDATION :
It is recommended that use of suitable enzyme combinations can facilitate reduction in the nutrient density of the diet without affecting the production performance of the birds, hence may be used to reduce the feed cost and increase the profitability of layer and broiler farming.

शिफारस :
युक्त व्यापारीला जन पत्तीकट प्रयोगा व विभागित प्रभाववाढ करणे कसा करणे प्रभाव उत्पादन क्षमतेत विपरीत विभाग बनवान्यासाठी घोषणा करते हे सांस्कृतिक घोषणा करण्यासाठी प्रभाववाढ व्यापारी कसा करणे व्यापारीला घोषणा करण्यासाठी घोषणा करण्यासाठी प्रभाववाढ करण्यासाठी शासनमुक्त युक्त व्यापारीला शिकार ठरावावी.
7) PROJECT NO. : PVC / PG-I / Med-01 / 2002
TITLE : Studies on indigestion with special reference to lactic acidosis in goats.

RECOMMENDATION:
In caprine lactic acidosis the recommended therapeutic approach is to first administer 5% Sodium-bi-carbonate, followed by 1.33% (isotonic) Sodium-bi-carbonate. The hydration therapy (Dextrose saline) be initiated to correct haemoconcentration.

8) PROJECT NO. : UVC / PG-II / Med-02 / 2002
TITLE : Incidence, Clinicopathology & treatment of osteomalacia in buffaloes.

RECOMMENDATION:
The survey in Udgir and Latur blocks revealed that soil is deficient in phosphorus due to which prevalence of osteomalacia in animals is high. In order to prevent this, supplementation of phosphorus (Sodium acid phosphate or DAMPP) is advisable.

TITLE : Pharmacokinetic studies of ceftriaxone and its disposition in various body fluids in buffaloes.

RECOMMENDATION:
Ceftriaxone should be administered in buffaloes initially @ 11 mg/kg by I/V and subsequently @ 3 to 4 mg/kg by i/m or s/c routes at 12 hr intervals as maintenance doses.

TITLE : Pharmacokinetic studies of diminazine in buffalo calves.

RECOMMENDATION:
The dose rates of 2.3 and 1.3 mg/kg of diminazine alone or in combination with phenazine respectively by i/v injection at 5 days intervals are recommended in buffaloes.

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TITLE : Studies on disposition kinetics of oxytetracycline in calves by i/m and i/v routes and its interaction with i/v calcium.

RECOMMENDATION:
OTC as OTC-DS is recommended @ 10 mg/kg i/m; 4 mg/kg by i/v route and 5 mg/kg in combination with calcium by i/v route respectively and subsequently at 48, 24 and 24 hrs intervals respectively for maintenance of therapeutic levels in buffaloes.

शिफारस :
पशुशिवाय देहावसाधारणे (दनपट शासी) याची अनुकूलनात गाड र १० मी.कृत/किलो मास देव्यात, ४ म.कृत/किलो सिरेपद्वारे व ५ म.कृत/किलो जेल्हियाच्या संशोधन सरोकर अनुसार ४८, २४ व २४ साध्या फीको शासी.

TITLE : Clinical evaluation of diazepam-detomidine ketamine anaesthesia in bovine.

RECOMMENDATION:
1) For performing minor surgery in bovine following anaesthetic combination is recommended. Diazepam @ 0.25mg/kg i/v or 0.5mg/kg i/m followed by detomidine @ 20 µg/kg i/v and ketamine 1 mg/kg i/v.
2) For performing major surgery in bovine following anaesthetic combination is recommended. Diazepam @ 0.5 mg/kg i/v or 1 mg/kg i/m followed by Detomidine @ 20 µg/kg i/v and ketamine 1 mg/kg i/v.

शिफारस :
१) इंजेक्शन वामोपाय ०.२५ मी.कृत/किलो सिरेपद्वारे निषेध ०.५ मी.कृत/किलो अंतर्नायक आणि देहावसाधने इंजेक्शन @ २० मी.कृत/किलो व कडेच्या निषेध १ मी.कृत/किलो निषेध व देहावसाधने गायवादिनी प्राणांगणा त्यानं व कडेच्या देहावसाधने शास्त्रजाही व कडेच्या देहावसाधने अवधाने लाखी शिफारस करण्यात येईल आहे.
२) इंजेक्शन वामोपाय ०.५ मी.कृत/किलो निषेध १ मी.कृत/किलो अंतर्नायक व व्यायाम देहावसाधने इंजेक्शन @ २० मी.कृत/किलो आणि देहावसाधने गायवादिनी इंजेक्शन १ मी.कृत/किलो निषेध निषेध व देहावसाधने गायवादिनी इंजेक्शन १ मी.कृत/किलो निषेध निषेध व देहावसाधने गायवादिनी प्राणांगणा त्यानं व जात व लाभ स्थिती शास्त्रजाही अवधाने लाखी शिफारस करण्यात येईल आहे.

TITLE : Neuroleptanalgesia with xylazine and pentazocine in bovine (A clinical case).

RECOMMENDATION:
For achieving Neuroleptanalgesia in clinical cases in bovine, the combination of Xylazine @ 0.1 mg/kg and Pentazocine @ 0.5 mg/kg i/v is recommended. The anesthetic combination produced excellent sedation and muscle relaxation with smooth and uneventful recovery.

शिफारस :
गायवादी प्राणांगणे एवढीकरणसवी इंजेक्शन प्राणांगणे ०.१ मी.कृत/किलो व पेंटजोक्सिन ०.५ मी.कृत/किलो अवधाने निषेध प्राणांगणा व जात व लाभ स्थिती अवधाने लाखी शिफारस करण्यात येईल आहे.

TITLE : Clinical evaluation of Propofol as an intravenous general anaesthetic in dogs.

RECOMMENDATION:
Propofol injection @ 5.0 mg/kg i/v is recommended for development and maintenance of general anaesthesia in dogs of all age groups, sexes and breeds with and without pre anaesthetic medication. It is also recommended as a safe general anaesthetic in pregnant bitches.

शिफारस :
प्रोपोफोल वामोपाय व जातीयता तर्क पण व्यायाम स्थिती येत येत येत येत येत येत येत येत येत येत येत येत येत येत येत येत येत येत येत येत येत येत येत येत करण्यात येईल आहे.

MAHARASHTRA ANIMAL AND FISHERY 12 SCILENCES UNIVERSITY, NAGPUR

MAHARASHTRA ANIMAL AND FISHERY 13 SCILENCES UNIVERSITY, NAGPUR
TITLE: Comparative study on lipid & lipid free propofol for the induction and maintenance of anaesthesia in canines.

RECOMMENDATIONS:
1) Lipid free propofol is an excellent anaesthetic and it is recommended for induction and maintenance of anaesthesia in dogs.
2) A pre anaesthetic administration of Xylazine 0.5 mg/kg and acepromazine 0.125 mg/kg reduces the dose of Propofol required for induction and maintenance of anaesthesia. Hence i/v administration of Xylazine 0.5 mg/kg and acepromazine 0.125 mg/kg is recommended before injection of propofol 2.5 mg/kg for smooth induction of anaesthesia.
3) Lipid free Propofol is safe and hence recommended for maintenance of longer duration anaesthesia required for major surgery. It is recommended at the dose rate of 0.4mg/kg per minute as a continuous infusion alone or with dextrose saline.
4) Recovery from Propofol anaesthesia is rapid, smooth and free from complications. Hence this anaesthetic is recommended for day surgery where the post operative monitoring of the patient is not essential.

TITLE: Evaluation of Acepromazine as pre-anaesthetic prior to local anaesthesia in Equine castration.

RECOMMENDATIONS:
1) Bupivacaine hydrochloride is recommended for local anaesthesia for gelding.
2) Combination of Acepromazine maleate and Bupivacaine hydrochloride (0.5%) as local anaesthesia appeared as best technique in equine gelding. Hence this technique of anaesthesia is recommended for gelding under the field conditions.

TITLE: Studies on lipid propofol anesthesia in cat.

RECOMMENDATIONS:
1) Lipid free propofol @ 7 mg/kg i/v is recommended for induction of anesthesia for undertaking minor surgeries in cats.
2) Xylazine @ 1 mg/kg 5 minutes prior to i/v injection of propofol is recommended for smooth induction and better maintenance of anaesthesia in cats.
3) Intravenous administration of acepromazine @ 0.2 mg/kg is recommended as pre-anaesthetic sedative prior to induction of propofol @ 7 mg/kg anaesthesia for major surgery in cats.
TITLE : Evaluation of Xylazine and Pentazocine as anaesthesia neuroleptanalgesia in goat.

RECOMMENDATION :
For achieving safe surgical anaesthesia in goat, a combination of xylazine @ 0.15 mg/kg and Pentazocine @ 1.5 mg/kg mixed in the same syringe and administered i/v is recommended.

TITLE : A clinical study on Xylazine-Ketamine anaesthesia and its reversal in tigers.

RECOMMENDATION :
A combination of Xylazine 1mg/kg and Ketamine 3.0 mg/kg for immobilization and yohimbine hydrochloride 0.08 mg/kg alone or in combination with 4-aminoypyridine 0.13 mg/kg for reversal of anaesthesia is recommended in free ranging and captive tigers.

TITLE : Comparative study of surgical excision and chemotherapeutic agents in the treatment of mammary tumors in canine.

RECOMMENDATION :
For effective treatment of mammary tumors in dogs, surgical excision and chemotherapy with Doxorubicin hydrochloride @ 30 mg/M² i/v with a gap of 21 days is recommended.

21) PROJECT NO. : BVC / PG-I/ Gene & Breed-03 / 2002
TITLE : Studies on genetic and phenotypic performance of Some important economic traits and the relationship with breeding efficiency in crossbred cows.

RECOMMENDATION:
Maximum breeding efficiency in cattle is obtained by considering age at 1" Calving as 1040 days and 50% Jersey crossbred cows with Gir had given better results than 50% HF X Gir cows. Therefore farmer should go for 50% Jersey crosses.
22) PROJECT NO.: AVC / PG-1 / Gene & Breed-04 / 2002
TITLE: Comparative study of F1 & F2 crossbred cows with reference to productive and reproductive traits.

RECOMMENDATION:
F1 and F2 Jersey X Sahiwal crosses proved better than HF X Haryana F1 X F2. Farmers should go in for Jersey X Sahiwal crosses.

शिफारस:
जर्सी X साहिवाल संक्रमित जाति होलस्टेन X हरियाणा थोला अधिक सत्र असल्याच्या शोत्रांची जर्सी X साहिवाल संक्रमित प्रजा जोपालायी.

23) PROJECT NO.: BVC / ICAR / Gynac-01 / 2002
TITLE: Comparison of conventional instant and Programmable slow methods of freezing for canine semen with special reference to acrosomal integrity.

RECOMMENDATION:
Considering the cost factor, liquid nitrogen requirement and time consumed, one can resort to the conventional instant method under field conditions for freezing of dog semen.

शिफारस:
एयूएन लायणाचा दान नाही, एयूएन लायणा केला तर एकेकी केंद्रीय किंमतीच्या विवाह करता, तांत्रिक कवी गौनिवाची घानी (Instant Freezing method) करालेच निर्माण केंद्रीय कगाराची नाही.

24) PROJECT NO.: BVC / ICAR / Gynac-02 / 2002
TITLE: Ultrasonic studies pregnancy in bitches.

RECOMMENDATION:
To diagnose early pregnancy in bitches accurately, ultrasound should be performed between day 23 to 25. It is advisable to repeat second scan after day 40 to eliminate the cases of foetal resorption.

शिफारस:
कुत्रीची प्रथमिक गर्भावस्था ओळखण्यासाठी अल्ट्रासूर्ण विवरण करण सर्वात नवाच्यां २३ ते २५ दिवसांची खात्री दिनाने नियाम करता येते. ४० व्या दिवशी पुन्हा अल्ट्रासूर्ण विवरण काढून गर्भाचे नियाम केल्यास गर्भावस्था गंभीर जीवन संसाधक बाजूला असे असले.

25) PROJECT NO.: BVC / ICAR / Gynac-03 / 2002
TITLE: Studies on infertility in bitches.

RECOMMENDATION:
It is recommended that infertile bitches mating should be advised when CCI reaches above 80% and serum progesterone levels by ELISA are more than 3 ng/ml. Infectious infertility can be treated with ciprofloxacin at the dose rate of 20 mg/dl/kg body weight orally, starting 12 hours before mating and continuing for 7 days.

शिफारस:
अम्हरे शिफारस करणाला येईले कि, कुत्रीची तापातुमयी स्वायत्त केंद्रण असाध्य स्वायत्त कर्त्यावृत्तीं खेलेड ७० टक्के आणि शीर्ष प्रोजेक्टेशन ३ नंदनाचे मी. आ. एल. से. असाध्य व्युत्पन्न तत्कालीन गर्भाब्याची प्रमाण बाजूला. कुत्राची रजस्तानात जीवनाचे असाध्य स्वायत्त स्वीकारीच्या आवश्यक ३० वर्षे/कॉमिट्टेब्यूने. वननामुखी कुत्रेत रूपनुसार १२ तास आयचे व स्वायत्त दर एका जुने ७ दिवस चार घण्यातून गर्भाब्याची प्रमाण बाजूला.
26) PROJECT NO. : BVC / ICAR / Gynac-04 / 2002
TITLE : In-vitro fertilization of buffalo follicular oocytes using various techniques for sperm Capacitation and oocytes maturation.

RECOMMENDATIONS :
1) Ham's F-10% OBS (oestrus buffalo serum) was proved to be a good medium for oocyte maturation.
2) Percoll gradient method is proved to be good for separation of motile sperm. Sperm TL was proved to be good media for capacitation of sperm.

27) PROJECT NO. : AVC / PG-1 / Gynac-05 / 2002
TITLE : Fertility response after synchronization of oestrus in goat with PGF2 Alfa under field condition.

RECOMMENDATION :
It is recommended that Inj. Lutalyse (PGF2 Alfa 10 mg of Dinoprostone tromethamine) in two equal divided doses (5mg at each time at 11 days apart) is definitely effective to cause synchronization of oestrus in non descript goats and thus helps the goat keepers to undertake the controlled breeding at desired time and with desired breed of goat.

28) PROJECT NO. : AVC / ICAR / Gynac-06 / 2002
TITLE : Studies on Estrus Synchronization, superovulation & embryo transfer technology in Nagpuri buffaloes. (ICAR PROJECT)

RECOMMENDATIONS :
1) It is recommended that the dose of 560 mg Follitropin hormone may be used for superovulation in Elichpuri buffalo.
2) It is recommended that for effective result of estrus synchronization in Elichpuri buffalo, it should be done in winter season.

29) PROJECT NO. : AVC / ICAR / Gynac-07 / 2002
TITLE : Studies on Estrus Synchronization of estrus, superovulation and embryo transfer in Cross bred cows. (ICAR PROJECT)

RECOMMENDATIONS :
1) It is recommended that the dose of 400 mg follitropin-V hormone may be used for superovulation in crossbred cows.
2) It is recommended that for effective estrus synchronization in crossbred cows, it should be done in winter season.

शिकारः
1) अशी शिकार करण्यात येते कि, बहुविकल्पकत्वाची साडी ऐलिध्पुरी गाडी मध्ये ५६० मिळ. फोल्ट्रोपिन-२ व्या संदर्भात वापर करावा.
2) ऐलिध्पुरी गाडी मध्ये जटुपुकारे निमित्त प्रामाण्यप्रद मोठ्यासाठी ते हिबाबार्यात करण्यात यावे अशी शिकार करण्यात येते.
30) PROJECT NO. : BVC / NATP/Public Health-01 / 2002
TITLE : Detection of antibiotic residues in foods of Livestock origin and poultry.

RECOMMENDATIONS:
1) Bioassay using B. stearothermophilus can be recommended for screening of antimicrobial residues from foods of animal origin.
2) HPTLC techniques employing RP₅₀ TLC plate and methanol: acetonitrile : 0.5mg/kg oxalic acid (1:1:4), pH 2 as mobile phase is recommended for detection and semi-quantitation of tetracycline residues from food of livestock origin.
3) Silica gel G F₂₅₄ TLC plate and chloroform: tert-butanol (60:40) as a mobile phase is recommended for detection and semi-quantitation of sulfonamide group of residues.
4) For quantitation of drug residue by HPLC, RP₅₀ column is recommended for detection of tetracycline and sulfonamide group of residues. Methanol: acetonitrile : 0.01 mg/kg oxalic acid (5:15:80) for tetracycline and 0.05 mg/kg sodium dihydrogen phosphate: acetonitrile (9:1), pH 4.5 for sulfonamide group of residues are recommended.

31) PROJECT NO. : BVC / NATP/Public Health-02 / 2002
TITLE : Detection, identification and quantitation of hormonal residues in meat, milk, and organs.

RECOMMENDATIONS:
1) Competitive ELISA method employing antiserum against testosterone-3-oxime BSA and antiserum against 31-11 alpha hydroxy progesterone tetanus toxoid is recommended for detection of testosterone and progesterone residues, respectively for detection of hormonal residues from animal tissues well below the specified safe level / MRL.
2) HPTLC techniques employing silica gel 60 F₂₅₄ and diethyl ether:toluene: 1-butanol (8.5:1:0.5) as a mobile phase is recommended for detection and differentiation of testosterone and progesterone residues.
3) For quantitation of hormonal residue by HPLC, C₄ Inertisil ODS-30 column is recommended for detection of testosterone and progesterone residues. The mobile phase containing acetonitrile: methanol: water (28:28:44) for testosterone and acetonitrile: methanol: water (34:34:32) for progesterone is recommended.

शिकारसः
1) घातक प्राणी प्रयोग मध्ये वापर गरी व्यापारकीय अन्वयानांमध्ये कोणते भेदभावाचे संबंध आहेत. प्राणी-प्रयोगको माध्यममध्ये कोणती विधाने आहेत? प्राणी प्रयोगको माध्यममध्ये कोणती विधाने आहेत? प्राणी प्रयोगको माध्यममध्ये कोणती विधाने आहेत?
2) व्यापारकीय अन्वयानांमध्ये टेस्टोसेंस विद्यमान आहे. व्यापारकीय अन्वयानांमध्ये कोणती विधाने आहेत? प्राणी प्रयोगको माध्यममध्ये कोणती विधाने आहेत? प्राणी प्रयोगको माध्यममध्ये कोणती विधाने आहेत?
3) व्यापारकीय अन्वयानांमध्ये भेदभावाचे संबंध आहेत. व्यापारकीय अन्वयानांमध्ये कोणती विधाने आहेत? प्राणी प्रयोगको माध्यममध्ये कोणती विधाने आहेत? प्राणी प्रयोगको माध्यममध्ये कोणती विधाने आहेत?
4) व्यापारकीय अन्वयानांमध्ये कोणती विधाने आहेत? प्राणी प्रयोगको माध्यममध्ये कोणती विधाने आहेत? प्राणी प्रयोगको माध्यममध्ये कोणती विधाने आहेत?
5) व्यापारकीय अन्वयानांमध्ये कोणती विधाने आहेत? प्राणी प्रयोगको माध्यममध्ये कोणती विधाने आहेत?
32) PROJECT NO. : BVC / Dept. Pro / Para-01 / 2002
TITLE : Studies on gastrointestinal parasites of wild carnivores at zoological gardens in Mumbai & Pune regions.

RECOMMENDATION:
It is recommended that to minimize the incidence of gastrointestinal helminthes from Mumbai region, the wild carnivores should be dewormed during February-March and June-July and those from Pune region should be dewormed in March-April in addition to routine deworming schedule.

शिफारस:
अशी शिफारस करण्यात येत आहे की, मुंबई विभागातील उद्यानातील जंगली जनवरींच्या आतंत्यातील परजीवी नियंत्रण करण्यासाठी फेब्रुवारी ते मार्च व जून ते जुनेचे या महिन्यांमध्ये परजीवी प्रतिवंधक आंधक पाजी आणि पुणे विभागातील जंगली जनवरींच्या आतंत्यातील परजीवी नियंत्रणासाठी नेहमीच्या परजीवी प्रतिवंधक आंधक देण्याच्या हेक्टर्सवर जास्तीत दुर्लक्षित प्रतिवंधक आंधक पाजी डोस मार्च ते एप्रिल या महिन्यांत घावा.
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