

Animal Health Worker

(Job Role)

Qualification Pack: Ref. Id. AGR/Q4804

Sector: Agriculture

Textbook for Class IX



17903

विद्यया ऽ मृतमश्नुते



एन सी ई आर टी
NCERT

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

ISBN 978-93-5292-074-7

First Edition

June 2018 Jyestha 1940

PD 5T SU

© **National Council of Educational
Research and Training, 2018**

₹ 90.00

*Printed on 80 GSM paper with NCERT
watermark*

Published at the Publication Division
by the Secretary, National Council
of Educational Research and
Training, Sri Aurobindo Marg, New
Delhi 110 016 and printed at Chaar
Dishayen Printers (P.) Ltd., G-39-40,
Sector-3, Noida- 201 301 (U.P.)

ALL RIGHTS RESERVED

- ❑ No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the publisher.
- ❑ This book is sold subject to the condition that it shall not, by way of trade, be lent, re-sold, hired out or otherwise disposed of without the publisher's consent, in any form of binding or cover other than that in which it is published.
- ❑ The correct price of this publication is the price printed on this page. Any revised price indicated by a rubber stamp or by a sticker or by any other means is incorrect and should be unacceptable.

OFFICES OF THE PUBLICATION

DIVISION, NCERT

NCERT Campus
Sri Aurobindo Marg
New Delhi 110 016

Phone : 011-26562708

108, 100 Feet Road
Hosdakere Halli Extension
Banashankari III Stage
Bengaluru 560 085

Phone : 080-26725740

Navjivan Trust Building
P.O.Navjivan
Ahmedabad 380 014

Phone : 079-27541446

CWC Campus
Opp. Dhankal Bus Stop
Panihati
Kolkata 700 114

Phone : 033-25530454

CWC Complex
Maligaon
Guwahati 781 021

Phone : 0361-2674869

Publication Team

Head, Publication Division : *M. Siraj Anwar*

Chief Editor : *Shveta Uppal*

Chief Business Manager : *Gautam Ganguly*

Chief Production Officer : *Arun Chitkara*

Production Officer : *Abdul Naim*

Cover and Layout

DTP Cell, Publication Division

FOREWORD

The National Curriculum Framework–2005 (NCF–2005) recommends bringing work and education into the domain of the curricular, infusing it in all areas of learning while giving it an identity of its own at relevant stages. It explains that work transforms knowledge into experience and generates important personal and social values such as self-reliance, creativity and cooperation. Through work one learns to find one's place in the society. It is an educational activity with an inherent potential for inclusion. Therefore, an experience of involvement in productive work in an educational setting will make one appreciate the worth of social life and what is valued and appreciated in society. Work involves interaction with material or other people (mostly both), thus creating a deeper comprehension and increased practical knowledge of natural substances and social relationships.

Through work and education, school knowledge can be easily linked to learners' life outside the school. This also makes a departure from the legacy of bookish learning and bridges the gap between the school, home, community and the workplace. The NCF–2005 also emphasises on Vocational Education and Training (VET) for all those children who wish to acquire additional skills and/or seek livelihood through vocational education after either discontinuing or completing their school education. VET is expected to provide a 'preferred and dignified' choice rather than a terminal or 'last-resort' option.

As a follow-up of this, NCERT has attempted to infuse work across the subject areas and also contributed in the development of the National Skill Qualification Framework (NSQF) for the country, which was notified on 27 December 2013. It is a quality assurance framework that organises all qualifications according to levels of knowledge, skills and attitude. These levels, graded from one to ten, are defined in terms of learning outcomes, which the learner must possess regardless of whether they are obtained through formal, non-formal or informal learning. The NSQF sets

common principles and guidelines for a nationally recognised qualification system covering Schools, Vocational Education and Training Institutions, Technical Education Institutions, Colleges and Universities.

It is under this backdrop that Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE), Bhopal, a constituent of NCERT has developed learning outcomes based modular curricula for the vocational subjects from Classes IX to XII. This has been developed under the Centrally Sponsored Scheme of Vocationalisation of Secondary and Higher Secondary Education of the Ministry of Human Resource Development.

This textbook has been developed as per the learning outcomes based curriculum, keeping in view the National Occupational Standards (NOS) for the job role and to promote experiential learning related to the vocation. This will enable the students to acquire necessary skills, knowledge and attitude.

I acknowledge the contribution of the development team, reviewers and all the institutions and organisations, which have supported in the development of this textbook.

NCERT would welcome suggestions from students, teachers and parents, which would help us to further improve the quality of the material in subsequent editions.

New Delhi
June 2018

HRUSHIKESH SENAPATY
Director
National Council of Educational
Research and Training

ABOUT THE TEXTBOOK

An Animal Health Worker under the legal provisions of Veterinary Council of India Act delivers services that are defined under Minor Veterinary Practices notifications of respective state governments. It is mandatory for all state governments to identify minor veterinary services like Animal Health Workers and to notify the same in the respective government gazettes. The need for partnership between practising veterinarians and animal health workers to ensure delivery of service to a large number of farmers in remote areas, needs no emphasis. The Animal Health Worker can offer services only under the supervision of veterinarians. For career progression under NSQF framework, the Animal Health Worker can study further to become a Dairy farmer/Entrepreneur (covered in Classes XI and XII). S/he can work anywhere in India or even seek employment outside the country.

Students of this course in Animal Health Worker have bright chances of seeking admission in Bachelor of Veterinary Science Course if they choose to go for higher education. In the B.V.Sc. degree course of Tamil Nadu Veterinary and Animal Sciences University five percent of the seats are reserved for the candidates of vocational stream. (Source: www.tanuvas.tn.nic.in)

To achieve these objectives, the textbook has been developed with the contribution of many experts. It is hoped that the textbook will be useful for students aspiring a career in veterinary field. Adequate care has been taken to align the contents of the textbook with the National Occupational Standards (NOS) for the job role of Animal Health Worker. This will enable the students to acquire necessary knowledge and skills as per the performance criteria mentioned in the Qualification Pack by Agriculture Skill Council of India.

The textbook has been reviewed by experts so as to make sure the content is not only aligned with the National Occupational Standards, but is also of high quality. The NOS for the job role of

Animal Health Worker covered through this textbook are as follows:

1. AGR/N4801—Restraining Farm Animals
2. AGR/N4802—Implementation of Preventive Animal Health Care
3. AGR/N4805—Veterinary First Aid
4. AGR/N4807—Prevention and Control of Infectious and Contagious Diseases

The textbook has been divided into four units. Unit 1 is about handling and restraining farm animals keeping the behaviour of various farm animals into consideration. Unit 2 discusses the implementation of preventive health care programmes, vaccination and deworming in farm animals. Preventive first aid measures in infectious diseases are covered in Unit 3. The prevention and control of infectious and contagious diseases along with the 'One Health' approach and bio-security are covered in Unit 4.

It is hoped that this textbook will prove to be useful for students and teachers who opt for this job role. Any further suggestions for improving this textbook are always welcome.

Kuldeep Singh
Associate Professor
Department of Agriculture
and Animal Husbandry
PSSCIVE, Bhopal

TEXTBOOK DEVELOPMENT TEAM

MEMBERS

Amita Dubey, *Assistant Professor*, Department of Veterinary Pathology, Nanaji Deshmukh Veterinary Science University (NDVSU), Jabalpur, Madhya Pradesh, India

Amita Tiwari, *Assistant Professor*, Department of Veterinary Medicine, NDVSU, Jabalpur, Madhya Pradesh, India

Anand Jain, *Assistant Professor*, Department of Veterinary Physiology and Biochemistry, NDVSU, Jabalpur, Madhya Pradesh, India

Biswajit Roy, *Associate Professor*, Department of Livestock Production Management, NDVSU, Jabalpur, Madhya Pradesh, India

Manish Shukla, *Assistant Professor*, Department of Veterinary Gynaecology and Obstetrics, NDVSU, Jabalpur, Madhya Pradesh, India

R.P.S. Baghel, *Professor and Dean*, College of Veterinary Sciences and Animal Husbandry, NDVSU, Jabalpur, Madhya Pradesh, India

MEMBER-COORDINATOR

Kuldeep Singh, *Associate Professor*, Department of Agriculture and Animal Husbandry, PSSCIVE, Bhopal, Madhya Pradesh, India

ACKNOWLEDGEMENT

The National Council of Educational Research and Training expresses its gratitude to all members of the Project Approval Board (PAB) and officials of the Ministry of Human Resource Development (MHRD), Government of India, for their cooperation in the development of this textbook. The Council also extends gratitude to all the contributors for sharing expertise and valuable time by positively responding to the request for the development of this textbook. The Council also acknowledges the contribution of the Review Committee members—Saroj Yadav, *Professor and Dean (Academic)*, NCERT, Ranjana Arora, *Professor and Head*, DCS, NCERT, Arum Khan, *Assistant Professor* (Contractual), CIET, Pushplata, *Assistant Professor*, DESM, NCERT, Anita Nuna, *Professor*, DCS, NCERT for carefully evaluating and giving suggestions for the improvement of this book. The Council would also like to thank Rajesh Khambayat, *Joint Director*, PSS Central Institute of Vocational Education (PSSCIVE), Bhopal for providing support and guidance in the development of this textbook.

Special thanks are due to P.D. Juyal, *Vice Chancellor*, Nanaji Deshmukh Veterinary Science University (NDVSU), Jabalpur for constant encouragement and support during preparation of the textbook, and to Biswajit Roy, *Associate Professor*, Department of Livestock Production Management, NDVSU, Jabalpur for photographs of the animals and for preparing other visuals included in the textbook. The box item on Pg. 33, Fig. 3.8 (Pg. 56), images on Pg. 75 and Fig. 4.7 (Pg. 77) have been sourced from the Creative Commons license. They have been selected with care and diligence for clearer understanding of learners. Care has been taken to not violate any copyright. The images are meant for educational purpose and are being provided for the personal use of students and teachers.

The meticulous copyediting and valuable inputs by Madhavi Ratnaparkhi, *Assistant Editor* (Contractual) of the Publication Division are duly acknowledged. The efforts of Pawan Kumar Barriar, *DTP Operator*, Publication Division, NCERT and Sadiq Saeed, *DTP Operator* (Contractual) of Publication Division for flawless layout design are also acknowledged.

CONTENTS

<i>Foreword</i>	<i>iii</i>
<i>About the Textbook</i>	<i>v</i>
Unit 1: Restraining Farm Animals	1
Session 1: Body Parts of Cattle and Basics of Animal Handling	1
Session 2: Behavioural Considerations in Animal Handling	5
Session 3: Approaching and Handling farm Animals	11
Unit 2: Implementation of Preventive Animal Health Care	22
Session 1: Occurrence and Reporting of Endemic Diseases	22
Session 2: Vaccination in Farm Animals	27
Session 3: Deworming and Control of Ectoparasites	37
Unit 3: Veterinary First Aid	47
Session 1: Preventive First Aid Measures for Infectious Diseases	47
Session 2: First Aid Measures for Non-infectious Conditions	56
Session 3: First Aid Measures in Special Cases	60
Unit 4: Prevention and Control of Infectious and Contagious Diseases	68
Session 1: Factors Responsible for the Spread of Diseases in Farm Animals	68
Session 2: Diseases due to Movement of Animals	74
Session 3: 'One Health' Approach and Livestock Value Chain	79
Session 4: Bio-security and Disposal of Farm Animals	84
<i>Answers</i>	<i>89</i>



.....Ahimsa is the very definition of woman and there is no place for untruth in her heart. If she is true to herself she is no longer Abala – the weak, but she is Sabala – the strong.....