



DEVELOPMENT OF FARMER FRIENDLY LITERATURE RELATED TO ANIMAL HUSBANDARY

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About Editors



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DEVELOPMENT OF FARMER-FRIENDLY LITERATURE RELATED TO ANIMAL HUSBANDRY

Editors: Siddalingaswamy Hiremath, Shivakumar Radder, Manjunatha L, Shahaji Phand and Sushrirekha Das

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This e-book is a compilation of resource text obtained from various subject experts for the Karnataka Veterinary Animal and Fisheries Sciences University, Bidar, Karnataka, Veterinary College (KVAFSU) Gadag, Karnataka & MANAGE, Hyderabad, Telangana on “Development of Farmer-friendly Literature related to Animal Husbandry”. This e-book is designed to educate extension workers, students, research scholars, and academicians related to veterinary science and animal husbandry about principles of farm journalism and journalistic skills for creating farmer friendly literature. Neither the publisher nor the contributors, authors and editors assume any liability for any damage or injury to persons or property from any use of methods, instructions, or ideas contained in the e-book. No part of this publication may be reproduced or transmitted without prior permission of the publisher/editor/authors. Publisher and editor do not give warranty for any error or omissions regarding the materials in this e-book.

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MESSAGE

I am pleased to present this e-book, *Development of Farmer-Friendly Literature related to Animal Husbandry*, a compilation of insightful articles contributed by esteemed resource persons following the successful completion of a specialized training program. This publication is a significant step towards enhancing the effectiveness of knowledge dissemination in the livestock sector.

The role of agriculture and animal husbandry in ensuring food security and rural development cannot be overstated. However, the true impact of scientific advancements in these fields depends on how effectively they are communicated to the farming community. Traditional extension methods often face challenges in bridging the knowledge gap between experts and farmers. This e-book addresses this critical need by offering practical methods and strategies for developing farmer-friendly literature that is clear, accessible, and directly beneficial to those working in the field. I commend the efforts of the resource persons, editors, and organizers who have contributed to this valuable initiative. Their dedication to bridging the knowledge gap between research institutions and farmers will undoubtedly lead to improved livestock management practices and better livelihoods for rural communities.

A special note of thanks is due to MANAGE, Hyderabad for their collaboration, generous support and sponsorship of this initiative. This partnership has been instrumental in making this training program and the subsequent e-book possible. I encourage all extension professionals, researchers, and policymakers to make use of this compilation and apply its insights to strengthen extension services. Together, we can ensure that knowledge reaches those who need it most, fostering a more informed and progressive, prosperous farming community.

K. C. Veeranna
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MESSAGE

KVAFSU, Bidar is one of the leading Veterinary University of the country with a logo containing the slogan “Farmers Friendly and Rural Oriented” which emphasizes the importance given to betterment of farming community. This training is one of several initiatives being held by Veterinary College, Gadag that align with the university's motto.

The dynamic field of animal husbandry plays a crucial role in supporting rural livelihoods and enhancing agricultural productivity. However, communicating scientific knowledge in an accessible, farmer-centric manner remains a key challenge. This e-book entitled “Development of Farmer-Friendly Literature related to Animal Husbandry” is a valuable step towards bridging that gap, offering practical strategies and innovative methods for creating impactful literature tailored to the needs of farmers.

The articles contained in this e-book aim to provide insightful perspectives on effectively designing and delivering practical, accessible, and farmer-oriented literature in the domain of animal husbandry. Our objective is to bridge the gap between scientific knowledge and on-ground farming practices, empowering livestock farmers to adopt better management techniques for enhanced productivity and sustainability.

I extend my heartfelt gratitude to all the esteemed contributors, editors for their dedication and commitment to this effort. Their knowledge and experience have enriched the content, making this e-book a valuable resource for trainers, extension workers, and stakeholders in the agricultural and animal husbandry sector. I am confident that this publication will serve as an inspiring guide in developing impactful farmer-centric materials and will contribute to the continued growth of the animal husbandry sector.

The collaboration and support of MANAGE, Hyderabad and cooperation from all the authors in making this endeavor a success is duly acknowledged.

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ಕರ್ನಾಟಕ ಪಶುವೈದ್ಯಕೀಯ, ಪಶು ಹಾಗೂ ಮೀನುಗಾರಿಕೆ ವಿಜ್ಞಾನಗಳ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೀದರ.

ಡೀನ್ ಕಛೇರಿ

ಪಶುವೈದ್ಯಕೀಯ ಮಹಾವಿದ್ಯಾಲಯ, ಗದಗ



**OFFICE OF THE DEAN
VETERINARY COLLEGE, GADAG**

FOREWORD



Effective communication of animal husbandry practices is key to improving livestock productivity, ensuring animal welfare, and enhancing rural livelihoods. Veterinary College, Gadag, a constituent of KVAFS University, Bidar has been continuously putting forth various efforts in this regard. This training marks an important step toward strengthening the process of information dissemination by equipping participants with the skills necessary to develop clear, accessible, and impactful educational materials for farmers.

It is with great satisfaction that I extend my heartfelt congratulations to all participants of the training program and contributors to this e-book, *Development of Farmer-Friendly Literature on Animal Husbandry*. This publication an outcome of Veterinary College, Gadag and MANAGE Hyderabad collaborative effort, is a testament to the collective efforts of dedicated professionals striving to bridge the gap between scientific knowledge and its practical application in the farming community. This book serves as a valuable guide in achieving these objectives.

I commend the authors, trainers, and participants for their commitment to advancing farmer education through innovative and farmer-friendly approaches. I am confident that the knowledge gained from this training and the insights presented in this book will contribute significantly to the improvement of livestock farming practices.

I thank MANAGE, Hyderabad for materializing the training programme and E-book. May this initiative, organized in collaboration with MANAGE, Hyderabad, represents a significant step toward enhancing the effectiveness of knowledge dissemination in the livestock sector and serve as a lasting resource for extension professionals, researchers, and policymakers dedicated to empowering farmers through effective knowledge dissemination. I encourage all stakeholders to utilize this resource to strengthen their extension efforts and improve the reach of scientific knowledge in animal husbandry.

Place: Gadag

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*Chapter-1***FARMER FRIENDLY LITERATURE:
ITS NEED & IMPORTANCE IN ANIMAL HUSBANDRY****Siddalingswamy Hiremath¹, Shahaji S Phand² and Sushrirekha Das³**¹Assoc Professor, Dept of AGB, Veterinary College (KVAFSU), Gadag, Karnataka.²Deputy Director, ³Fellow, MANAGE, Hyderabad.**Introduction**

Animal husbandry plays an important role in society, especially for small and subsistence farmers who depend on animal kept for income, food, and livelihood sustenance. The growth for this sector is greatly intertwined with the skills and practices of farmers with regards to the management of their livestock. Still, limited access to needy information on modern animal husbandry methods remains a perennial challenge for many farmers. In this context, farm literature that is friendly to farmers to access and use will be of great help.

Farmer-friendly Literature

The term "farmer-friendly literature" refers to written materials, manuals, instructions, or publications that are specifically designed to be intelligible, easily understood and practically useful for farmers. In these the main emphasis usually will be on simplified language, giving practical tips that can be applied right away in farming operations, visual aids that can be especially helpful for individuals with low reading levels, and other elements to make these materials accessible to people of all literacy levels. Promoting sustainable and environmentally friendly farming practices that benefit both the environment and farmers is the goal of the region's localized content, which is typically provided in regional languages and distributed through channels that engage with rural communities. Thus, the goal is to provide and empower farmers with easily understandable information to enhance agricultural/animal husbandry practices, increase productivity, and enhance their standard of living.

The Need for Farmer-Friendly Literature

There is need for pertinent information to farmers on various scientific animal husbandry practices. Now a days, there is heap of information available. But, real utility of such farmers remains limited to their complexity or difficulty to farmers to sort out more relevance from the junk ones.

The lack of literacy among a sizable section of the rural populace prevents contemporary farming methods from being widely adopted. Even though farmers' traditional knowledge is vital, it frequently does not adequately address the problems that face animal husbandry in the current world. Access to current and trustworthy information on nutrition, illness prevention, and animal care is limited for many farmers. Additionally, scientific publications or technical manuals frequently contain information on animal welfare, breeding, feeding, and disease management procedures. Farmer-friendly literature compiles this information in an understandable manner. The illustrations, diagrams, and photos in the literature make the content more understandable for illiterate or semi-literate farmers. Printed materials, posters, and booklets developed in a farmer-friendly manner can reach many farmers even in remote places, offering essential details on animal husbandry practices. In addition, limited financial resources limits farmers from acquiring professional guidance and training.

Key Benefits of Farmer-Friendly Literature for farmers

Farmer-friendly literature benefits farmers in many of areas, like risk management, sustainable livestock production, revenue generation, improvement of skills, and animal welfare. Below is a list of some ways that the farmers can gain from literature which is written in a "farmer friendly" manner.

- Farmers are better able to make decisions about animal care, breeding, and management when they have access to clear and concise information from farmer-friendly literature.
- Knowledge of appropriate diet, immunization regimens, and illness preventive techniques results in animals that are healthier and produce more.
- Adopting better procedures and managing livestock effectively can greatly increase farm profitability.

Development of Farmer friendly Literature related to Animal Husbandry

- Farmer-friendly literature can encourage ecofriendly practices, such as resource conservation and waste management.
- Women equipped with useful and practical information on livestock rearing, can play a more active role in agricultural production and contribute to household income.
- Bridges the gap between scientific research and practical farming, ensuring that farmers have access to the latest information on various aspects of animal husbandry.
- It equips farmers with the necessary information to make informed decisions regarding breeding, feeding, and disease prevention.
- By promoting efficient production practices and market linkages, farmer-friendly literature contributes to increased farm income.
- Emphasizes the importance of animal welfare and provides guidelines for humane treatment.
- Helps farmers prepare for and respond to challenges such as diseases, climate change, and market fluctuations.

Key Benefits of Farmer-Friendly Literature for Veterinarians

By writing farmer-friendly literature, veterinarians play a crucial role in educating and empowering farmers, ultimately leading to healthier animals, more successful farming operations, and a stronger agricultural sector in general and Animal Husbandry sector in particular. For this, veterinarians need to convey complex medical and scientific information in a way that farmers can easily understand and apply. By providing accessible information on animal health, disease prevention, and treatment, veterinarians can help farmers implement best practices. This leads to healthier livestock and reduces the incidence of disease outbreaks. Educating farmers about preventative measures, such as vaccination schedules, proper nutrition, and biosecurity practices through literatures, can significantly reduce the need for emergency veterinary interventions. By educating farmers on topics such as responsible antibiotic use, waste management, and environmental conservation, veterinarians contribute to the long-term sustainability of farming operations. When veterinarians provide information that is easy for farmers to understand and use, it builds trust and strengthens the veterinarian-client relationship. Farmers are more likely to follow recommendations and seek veterinary advice when they trust their veterinarian. Veterinarians who

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produce high-quality, farmer-friendly literature demonstrate their expertise and commitment to the farming community. This can enhance their professional reputation and lead to increased demand for their services.

Characteristics of Effective Farmer-Friendly Literature

First, the literature should follow ABCs of farm journalism, i.e. accuracy, brevity, and clarity. By understanding the characteristics of effective farmer-friendly literature and leveraging existing resources, it is possible to develop more targeted and impactful materials to support India's farming communities.

- Simple language: Information should be presented in clear, concise, and easily understandable terms.
- Visual aids: The use of images, diagrams, and charts enhances comprehension and better understanding.
- Practical relevance: Content should address the specific needs and challenges faced by farmers.
- Cultural sensitivity: Materials should be aligned with local customs, traditions and beliefs.
- Multi-sensory approach: Incorporating audio and video content along with text, images can improve impact.

Types of Farmer-Friendly Literature

Farmer-friendly literature in India encompasses a diverse range of materials tailored to the specific needs and literacy levels of rural farmers. These materials serve as a crucial bridge between scientific knowledge and practical agricultural practices.

Sl. No	Type of media	Examples
01	Print Media	Booklets and Pamphlets Newspapers and Magazines Posters
	Audio-Visual Media	Radio and Television Programs. Video Demonstrations, Documentaries

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02	(can demonstrate techniques, share success stories, and provide valuable information in a dynamic and engaging way).	Audio Recordings
03	Digital Media	<p>Mobile Apps: These offer a platform for delivering real-time information on weather, market prices, and agricultural advisories.</p> <p>SMS-Based Services: Text messages can be used to disseminate short, urgent messages.</p> <p>Websites, Blogs, and Online Portals: Provide comprehensive information on various animal husbandry topics.</p>
04	Folk Literature	<p>Proverbs, Riddles, and Songs: Traditional forms of knowledge transmission often contain agricultural wisdom.</p> <p>Storytelling and Folk Tales: Narratives about agriculture/animal husbandry and its significance in rural life.</p>

Limitations of farm literature:

- May not suit for illiterate audience.
- Frequent revision may be necessary.
- Information prepared for general distribution may not fit local conditions.
- There are chances of distortion of message, if the literature is one way communication of information to farmers by extension agents.

Skills required for veterinarians for developing Farmer friendly literature

Basic skills required for developing Farmer friendly literature for any veterinarian can be listed as follows:

1. Keep the farmers and their perspectives as central focus while writing.

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2. Follow the principles and general guidelines of farm journalism.
3. Have empathetic approach.
4. Be clear about objective or purpose of writing.

Journalism, specifically farm (Agricultural) journalism is the task of gathering, writing, editing, and publishing or disseminating agricultural information, scientific facts, agricultural technology, events or agricultural news through newspapers, magazines, radio, and television or by any media of communication. Animal Husbandry is becoming increasingly information intensive. Information and communication technology, on the other hand, offers a variety of advanced techniques for improving contact with farmers. The current era is referred to as the "information age." Farmers are also referring various kinds of farm literature. But, writing for farmers is a very challenging job, not just putting down thoughts or making plain statements on paper. The purpose of writing for farmers should be to communicate in such a manner that you attract the attention of readers, interest them in what you are going to say, making them understand and remember and finally help them to take decision to act. So, the content written must serve all these purposes.

Veterinarians possessing the following skills can contribute their expertise to informing and educating the public about animal husbandry.

- Strong writing and communication skills: This is the foundation of journalism. Veterinarians need to be able to translate complex scientific and medical information into clear, concise, and engaging language for a general audience. They should be able to write news articles, features, blog posts, and social media content.
- Knowledge of agriculture and animal husbandry: A deep understanding of farming practices, animal welfare, and the agricultural industry is crucial. Veterinarians already possess a strong foundation in animal health and disease, but they may need to broaden their knowledge to include other aspects of agriculture.
- Journalistic skills: This includes interviewing, research, fact-checking, and storytelling. Veterinarians need to be able to gather information from various sources, conduct interviews with farmers and other experts, and present information in a compelling and accurate way.

Development of Farmer friendly Literature related to Animal Husbandry

- **Multimedia Proficiency and Digital media skills:** In today's digital age, it's important to be comfortable with various digital media platforms, including social media, content management systems, video editing software and Skills in photography,
- **Networking and relationship-building skills:** Building relationships with farmers, industry experts, policy makers and other journalists is essential for gathering information and finding story ideas.
- **Adaptability and willingness to learn:** The agricultural industry is constantly evolving, so it is important to be adaptable and willing to learn about new technologies, trends, and issues.

Thus, veterinarians who are aware of the fundamentals of good writing, i.e., Accuracy, Brevity and Clarity, they can develop farmer-friendly literature.

Potential areas for further exploration and Future of Farmer-Friendly Literature

The potential areas for further exploration in the field of farmer friendly literature development can be enlisted as: The role of gender in accessing and utilizing farmer-friendly literature, Integration of digital technologies to enhance the delivery and accessibility of information and Importance of partnerships between government, NGOs, and the private sector in developing and disseminating farmer-friendly materials and many more.

The future of farmer-friendly literature looks promising, with a focus on several key trends like *Increased digitalization* (Interactive apps, online platforms, and virtual reality simulations), *Personalized content* (Tailored information based on specific livestock breeds, farm sizes, and location), *Multilingual content* (to cater to diverse farming communities), *Data driven insights* (Integration of sensors, analytics, and AI will provide farmers with real-time insights and recommendations), *Community-Based Approach* (Farmer-to-farmer knowledge sharing), *Use of social media* to disseminate information and connect with farmers. By embracing the new trends and exploring these areas, it is possible to ensure that farmer-friendly literature continues to empower farmers with the knowledge and tools they need to thrive in the modern agricultural landscape and succeed in a rapidly changing world.

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References & Further readings:

Adebayo, K. (1997) Communication in Agriculture. Abeokuta: Greenlinks International. ISBN 978-34337-2-5, Pp 60-76.

Agbamu, J.U. (2006) Essentials of Agricultural Communication in Nigeria. Lagos: Malthouse Press Limited. ISBN 978 023 197 8 Pp155-169.

Bhatt, S.C. (1993) Broadcast Journalism. Basic Principles Har Anand Publications, Delhi 3. Bhatnagar, R. (2001). Print Media and Broadcast Journalism. Indian Publisher Distributors, Delhi

Bhaskaran, C. (2008). Farm Journalism and Media Management. Agrotech Publishing Academy, ISBN-10: 8183211100, ISBN-13: 978-8183211109.

Day, R.A. (1998). How to Write and Publish a Scientific Paper, 5th Edition. Phoenix: Oryx Press.

D'Souza YK. (1998). Principles and Ethics of Journalism and Mass Communication. Commonwealth Publ.

Fischer, B.A., Zigmond, M.J. (2004) Components of a Research Article. www.survival.pitt.edu .

Halakatti S V, Attaluri S and Nityashree D. A. (2023). Training Manual on “Agriculture Journalism for Effective Transfer of Technology” For the Officers of Department of Agriculture & Allied Sectors/ATMA/ ToT Centres Date: 08.11.2023 to 10.11.2023, Published by-National Institute of Agricultural Extension Management, Rajendranagar, Hyderabad- 500 030, India.

Jaico Publ. Malhan PN. 2004. Communication Media: Yesterday, Today and Tomorrow. Directorate of Publication Division, New Delhi.

Katyal, V.P (2007). Fundamentals of Media Ethics. Cyber Tech Publishers, New Delhi.

Development of Farmer friendly Literature related to Animal Husbandry

Mohan, S. (2011). Handbook of Farm Journalism. <http://www.slideshare.net/subinkmohan/hand-book-of-farm-journalism>

Naik, P. (2022). Science Journalism in India: Strengths, Weaknesses, Opportunities, and Threats. Science Communication, 44(5), 656–664. <https://doi.org/10.1177/10755470221134253>.

Nwachukwu, I. (2003) Agricultural Communication: Principles and Practice. Umuahia: Lamb House Publishers. ISBN 978-33278-3-6. Pp 79-104.

Pawlic, T. (2001). The invisible farm: the worldwide decline of farm news and agricultural journalism training. Chicago: Burnham

Sawant & Deshmukh, TEACHING NOTES ON COURSE NO.: ELE. EXTN 244 CREDITS: 3 (2+1), College of Agriculture, Latur.

Williams,E. (2016). What are the basics of writing in print media. Retrieved from <https://penandthepad.com/info-7971557-basics-writing-print-media.html>.

Woodford, F.P. (1999) How to Teach Scientific Communication. Reston, VA: Council of Biology Editors.

Yadava, J.S and Mathur, P. (1998). Issues in Mass Communication: the basic concepts. Volumes 1 and 2. Indian Institute of Mass Communication, New Delhi.

Youdeowei, A., Stapleton, P. and Obubo, R., (eds.) 2012. Scientific Writing for Agricultural Research Scientists – A Training Resource Manual, Wageningen, The Netherlands: CTA. ISBN 978-92-9081-506-8.

Farm Journalism and Mass Media Production in Agricultural Extension, Manual published by EEI (NE Region), AAU, Jorhat.

Council of Biology Editors, Committee on Graduate Training in Scientific Writing (1968) Scientific Writing for Graduate Students: A Manual on the Teaching of Scientific Writing. New York: Rockefeller University Press. (This was subsequently revised, see Woodford below.)

Institute for Scientific Information. www.isinet.com Sides, C. (1991) How to Write and Present Technical Information. USA: Oryx Press.

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FARM JOURNALISM EXT 610 (1+1) (For Post Graduate students) LECTURE NOTES 2023
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<https://graduate.unl.edu/connections/twenty-steps-writing-research-article>

<https://www.oneeducation.org.uk/importance-of-listening-skills-in-communication/>

<http://www.unaab.edu.ng>.

Chapter-2**WRITING SKILLS IN ANIMAL HUSBANDRY RELATED
NEW STORY, FEATURE STORY & SUCCESS STORY****Ganesh Hegde Neelesara**

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Feature stories and articles related to animal husbandry activities are written to communicate information about dairy farming among the farmers. It is largely evident that the knowledge about scientific and profitable dairy farming is lacking among the farmers. Hence it is necessary to write and publish information about various aspects of animal husbandry which would greatly help the readers to improve their skills.

Writing is an art. Writing articles should not be a problem for the veterinarians about their own field of specialization. However, lot many points need to be considered for effective transfer of the information among the target audience-the dairy farmers.

There is an English saying- 'Think before you ink'. One should be reading a lot before getting in to serious writing. Writing skill is more of an innate quality and one can improvise on it. Writing articles or feature stories is not a very difficult job. It is not about the size of the length of the articles but it is about what you have written, what is the content, the utility, and the information you give in the article. Before getting in to actual writing, you should read about the subject that you want to write. For being veterinarians, especially for those who are working in the field, having contact with the farmers on a day-to-day basis, writing feature stories should not be a problem. Some of the points which need to be considered before getting to actual writing are discussed in this write-up.

Types of articles

Basically, there are two types of articles.

1. Scientific article
2. Popular article

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A scientific article deals with the new inventions- the results of a scientific experiment and is essentially written by a scientist and is published in scientific journals. Or it might be a review article covering all possible aspects of a particular topic. It has a specific format of writing.

On the other hand, a popular article is written either by a subject specialist-like a veterinarian writing on animal husbandry practices or by a farmer himself. This might be in the form of package of practices or experiences of a farmer who has adopted a unique method in his farming practices or observations of some successful farming practices. A popular article is written in a simple language in such a way that it is easily understandable by the readers. It does not use too many technical words or data or statistics or scientific analysis. There is no specific format for writing a popular article. However, a scientific article needs very specific format to be followed for its publication.

A popular article is directly useful to the farmer, read by a lot of people interested in the particular subject and published quite quickly.

Basics of writing a good article on animal husbandry

- Search for new topics.
- It is always better to write on the experience of the farmer rather than relying on the standard text books.
- Do a field visit.
- The article should be in the farmer's perspective.
- Look into different angles of the same subject.
- The author should be sensible enough to record the things which are not visible directly to the naked eye.
- Writer should also focus on the defeats of the farmer rather than going only behind the success stories.
- The things what you write in the article should be practicable.
- Do not exaggerate.
- The write up should not look like an advertisement.

Characters of a good writer

- The writer within you should always be awake.
- Gather all the resources that you have –like paper cuttings, library, internet, personal contacts etc and improve the article on this information.
- Always give preference to social impact from the write up.
- Your writing needs to be responsible. Pen is mightier than sword. But it should not be a sword.
- Writing should always be keeping the past and the future in mind.
- Continuous reading is essential.
- Information that you have gathered in the article should hold good even after decade.

Skillful writing

- The first hindrance for a beginner is selection of a topic. You may think that much has been already written on the topic and nothing is left in it to write. However, you can still write on it by looking for different angles of the same subject. In such case, the theme should be like -it may be a follow up work of those previous articles. Look into the previous article where in there are many issues that are not been covered. Look the subject from a different angle or check if there any new development has occurred on that subject. At the same time the writer should not to be misled by the previous writings.
- Many aspiring writers think that only success stories will make good article. But we should focus on failures too.
- If the topic you select for the article is new or has a unique topic, your job is half done. You may get the topic at any time- while travelling or while speaking to a farmer friend or a client or a trader or a milk vendor or while reading a newspaper, magazine or watching a TV etc. The writer should keep his inner eye open to get an idea about the topic. He should always keep a small sized notebook in his pocket and note down the ideas immediately as and when you get it. Otherwise, it will be lost forever.
- The writer should not generalize a particular practice which is being followed at the farm. In such case it may look more of an advertisement rather than a true type article.

- Stories behind the scene rather than what you look from the front might be more interesting. The article succeeds if you cover such behind the scene events.
- Your article wins if you critically analyze the subject and try to find solutions for the problems if possible. To achieve this, you may have to do some ground work like travelling to some other farmers doing similar kind of work or contacting experts in the subject.
- Sometimes you may get source of information about the topic from a remote and unexpected corner. Your skill lies in finding it and extracting the right information. This source may be a person, organization, or a book. The farmer himself may mislead you too!
- The writer should be very careful in criticizing a particular person or a practice. It should not indicate negativity. Even if you criticize, it should be constructive. Do not use vague opinion.
- On the other hand, you may be very much impressed about a farmer or his good practice during the field visit. But the article wins only if you can transmit the feel of the subject to the reader through your writing skills.
- It is always better if you dig deep into the topic to get additional and supportive information. However, you need not incorporate all those additional things that you have discovered in to the article. They may find their place only as some additional inputs in the main body of the article or in the form of a box item.
- To come up with an unbiased story always keep a distance from the subject. Sometimes the author gets carried away by the success of the farmer and start defending and praising him or his practices unknowingly throughout the article. This is not the character of a balanced article. You should be the third person in the article. You should not involve yourself in it. Do not talk about yourself or do not be a character in the story unless necessary.
- Do not pretend that you are doing some favor to the farmer by writing about him. Same thing holds true while you criticize a methodology or a practice adopted by the farmer.
- You should not criticize it by looking at a single angle. Even if you want to criticize, details of the subject to substantiate your criticism need to be mentioned. If possible, we should try to indicate the solution to a problem faced by the farmer by studying deep in to the subject. Mere criticism reduces the credibility of the write up. Good criticism shows the way to solve the problem.

WRITING NEWS STORY

A news story is a written or recorded article or interview that informs the public about current events, concerns, or ideas. A news story can be long or short, depending on its newsworthiness or interest to people who watch TV, listen to the radio, or read the paper. Written, recorded, live, or taped, depending on the medium you use and the timeliness of the story. Hard - full of important facts and news items, or soft - focusing on the personal, more human side of a news event or situation.

How to Write a News Story

A typical news story is between 250-500 words, and includes a concise headline, a lead paragraph, the body, and a conclusion or end quote, as well as a high-quality image. Longer pieces also should include subheadings. Links to related articles or additional information are always welcome.

- Before You Begin – Gather Information
- Your news story must answer the following: 5w's and 1H-Who, what, when, where, why and How
- Getting Started – The Lead (1-2 sentences, and about 40 words.)

Types of Leads

There are three main types of leads:

- **Summary**, in which you summarize many of the facts listed above in a concise manner.
- **Anecdotal**, in which you tell a quick story or describe a scenario that is directly related to the story.
- **Question**, in which you draw the reader in by asking a question that relates to the content. Never begin a piece with a quote, though you may include a quote as early as your second paragraph.

- **Body**
- Flow nicely
- Use concise sentences
- Use active voice

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- Avoid unnecessary words (such as “very unique” or “afternoons from 3-5 p.m.”)
- Include strong transitional sentences.
- Include quotes when you can, and insert them on their own lines
- Follow your own Style Guide

WRITING FEATURE STORY

While writing a feature story of a farmer, you need to visit him in his farm. Prior to the visit, you must do some homework. You need to have some basic information about the subject of focus during the visit. Prepare a questionnaire to ask the farmer and try to find answers to those questions during your conversation with him on field. This is how an article starts getting shape. Sometimes to consolidate the right up you may have to do a field visit more than once to cover some left out information or to get some additional information or to clear some doubts that arise when you start the write-up. You can ask some other person about the subject to gather additional information.

Points to be remembered at the field visit to write a feature story

- Be sure about the topic of focus
- Gathering prior information
- Meet farmer at his own place
- Fix the timings and obtain permission from the farmer
- Keep up time
- Have a questionnaire
- Things to be carried along with you-writing pad, a voice recorder, a good camera.
- Your outfit
- Your behavior
- Style of gathering the information
- Gain the confidence of the farmer
- Do not indulge in argument

- Do not show your knowledge
- Do not compare with others
- The topic should not be derailed
- Focus on the subject
- Don't be contended by the information gathered by a single person
- Keep your inner eye open
- Taking photos should look natural
- Voice recording
- Stick on your topic do not be attracted by other unrelated events in the farm
- Don't forget to thank him at the end
- Get his contact number
- Obtain permission and convenient time to talk to him over the phone

Start writing after the field visit

- Your final write up should be in such a way that the farmer should be happy after reading the feature article. It should have some new things for him to learn too.
- Arrange all the information you have gathered in a systematic manner- be it the recordings, scribbling on the note pad or the photos. Use what all the input methods that you have taken while writing.
- Start writing the story before you forget.
- It is not necessary to start the article only after giving the headline/title.
- Decide what the point of focus is in the write up. The content should revolve around it. It should be interesting, new, and written in a simple way so that every reader understands it.
- Do not use monotonous sentences and jargons. It would be boring to the reader.
- You can get into the subject quite easily if you think yourself as a reader rather than a writer.
- Do not use too much of statistics and tables.
- Same unit of measurement should be followed throughout.

- Do not frame long sentences. Let it be short and convey only one point. Do not mix up different information in a single sentence. Similarly, one paragraph should contain the information about one single topic. Do not make very big paragraph also.

Use of Quotations

If you use quotations, your article becomes more effective. It should be in the exact lines as told by the farmer in his colloquial language. At the same time there should not be too many quotations in the article. Voice recording comes handy because you should not write the quotation different from what the farmer has told. You can also write the moods of the farmer in your story.

Use of Box items

A box item contains the information that you want to convey related to the theme of the main article but do not directly go well within the body of the article. It should be brief and it can be a paragraph or a table. There can be more than one box items.

Ending the article

There is no hard and fast rule that you should end the article with the sentences like ‘Everybody can make good profits if the above said methods are followed.’ This is very common sentence well understood. You need not write it again.

At the end of the story, you can give the address of the farmer with his consent. If you are giving his telephone number you should indicate the preferable time to contact him. Select representative photos and label them appropriately. One photo speaks thousand words.

Feature article is an in depth and factual write up on a typical issue which seeks to give comprehensive information in a more captivating and relaxed style than straight news.

We can find them in Lifestyle, Sports, Business, Health etc...

Formatting and writing structure

- **Masthead**-The logo or identifying emblem located at the top of page of the company you are writing article for.
- **Headline**-The title of the article. Should be punctual and compelling to grab the reader's

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attention

- **Sub heading**-Smaller compared to heading. It is typically a short word, phrase or sentence
- **By-line**-Author of the article
- **Hook**-The first sentence of your introduction
 - **Images**
 - Use a strong hook to draw the reader in.
 - The general message and subject of your article should be established here.
 - The introduction should also set the tone of the article.
 - The introduction should not be too long or too detailed.
- ▶ **Introduction/ lead paragraph**- sets the mood and grab attention
- ▶ **Body**-details of the story, should have 5-7 paragraphs/500 words
 - Lead off your introduction and begin explaining your main points one at a time in detail.
 - Establish what you are trying to convey with each point and provide an explanation as to why it is important or relevant.
 - Include quotes, anecdotes, and general information surrounding your points to create meaning for the audience.
 - Include images that can aid in any messages being conveyed or as a means to provide context to an explanation.
 - Provide evidence to the reader as to why they should be invested in what you are saying and give them something to ponder.
 - Link each point back to the main message or theme you are enforcing.
- ▶ **Conclusion** –hook the reader, connect the introduction
 - The conclusion should leave a lasting impression on the reader and should sufficiently summarize and wrap up the rest of the article.
 - Remember not to introduce new information in the article here.

The conclusion should encourage the reader to be inspired, make a change, or take action.

Types of feature stories

Informative- educates and informs the reader of a certain topic. It certainly answers one of the 5ws and 1 H. It does not express writers' opinion but inform readers to learn more about the subject.

Informative feature

This type does not use many of the fiction writer's devices, since its purpose is to inform more than to entertain. It might be very closely related to the new journalism. Facts are obtained from interviews, library research, and personal observation. To create interest writers, include human interest elements. Success depends on the accuracy, facts, style and form in which its presented.

Personal experience

It is in the form of an interview. It must deal with an unusual experience or a wonderful accomplishment. Writer must be careful not to the subject but rather allow the facts to tell the story by themselves.

Personality sketch

It is very popular among the readers as everybody wants to know about other people. These features are written about those men and women whose stories are worth telling because they are historical characters in whom interest survives for long.

News feature

This has story has its basis upon timely news happening with a human-interest angle. Often news happening can be made much more interesting or news worthy by writing it in a semi feature sort of thing. A news feature is generally timelier than a straight human interest or a long feature story.

Difference between a feature article and a news story

Feature stories are usually more long-form than news stories, with differences in style employed in both. Forinstance, news writing often employs the inverted pyramid, where the most important information is at the start. Feature writing has a tendency to tease out the information throughout the article.

Ending of a news story usually happens when all the relevant and available details are

shared. On the other hand, a feature story usually ends with the writer tying up the loose-ends that exist with an overall conclusion.

Timing

A news article is time-sensitive and of immediate interest.

A feature article can be published at any point. Its content is often evergreen or at least long-lasting.

Content

News story usually covers recent or breaking news. News story general is from a single source or angle.

A feature article is a human-interest story about a person, event, or place. A feature article highlights one aspect or significance of the story. Its less formal style may take an odd twist or heartwarming angle. Can be a issue specific that might not be recent. A feature contains several angles and sources

Structure

A news story is structured in the inverted pyramid format with key facts. A news story summarizes the story A feature story allows the subject matter to determine its format, whether in a standard outline form (such as a list, sequence, or comparison) or one of the story formats. As for subject matter, features cover endless topics from profiles to narratives, interviews, essays, exposes, how-to's, columns, and reviews. Feature focuses on anecdotal references

Length

News articles are short, averaging 100-400 words depending upon the type of news and where it is placed in the publication. They are meant to be digested quickly.

Feature articles are longer and dig more deeply into the topic. Length varies for each publication, but atypical feature word count runs between 1,000 – 2,000 words.

WRITING SUCCESS STORIES

Farm Journalism is one of the important extension tools for effective transfer of technology. Success stories can become the good examples for others to achieve something special in their fields. Then how to write effective success stories?

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Why we write success stories?

- The need to show the value of the program to those who give us money and other resources.
- We must be accountable to government/donors.
- We need to communicate how we have made difference to all kinds of stake holders to ensure their continuing support and participation.
- By telling our success stories, others carrying out similar programs can learn from experience.

A success story usually consists of the sections the challenges, solutions, themes, implementation, and results. And they run almost in the same order. Its structure has got 4 components as follows.

- ❖ Situation / Background
- ❖ Response / Program activities
- ❖ Results / Impact
- ❖ Evaluation / Evidence

How to write a Success Story

- Short preamble
- Be realistic
- Facts & figures; tables
- Permission from competent authority
- Never ever question Government policies
- Colloquial/vernacular language
- Keep searching clues
- Sources – krushi pandits / awardees /beneficiaries
- Indigenous skills
- Photographs, diagrams, schemes
- Spot Verification
- Burning issues
- Allied activities – value addition
- Extension

- Try to motivate
- Active voice, small sentences, brief paragraphs, punctuations.

Remember while writing an article

- You need not use prefix for the names like shri, Mr/Mrs, Mahoday etc. If you are using prefixes like Prof. or Dr., make sure of their credentials. Use right prefixes.
- When you are using a particular unit of measurement, use the same unit throughout the article.
- Don't use question mark or exclamatory marks within the sentence.
- Be cautious and careful about the statistics. It should be accurate.
- When you are referring to a particular plant, always use its botanical name along with the colloquial name because name of a plant may differ from place to place.
- Do not unnecessarily extend the article. The explanations should be brief and to the point. No need to repeat the content or information more than once in the article.
- Give importance to the grammar and avoid spelling mistakes.
- After completing the article keep it aside for some time. Again, go through it after a couple of days or a week. This technique greatly helps to improvise it.

Points to be considered while sending the article for publication

- Decide to which magazine you are sending the article.
- Decide that your article suits to which magazine/ which magazine publishes the kind of article you have written.
- Check what size of the article the magazine requires.
- Check whether the subject of your article suits to the kind of articles a particular magazine publishes.
- Earlier magazines entertained handwritten copies or typed hard copies but nowadays there is no need to post hard copies. You can mail it. Attach the photos with good resolution separately in jpeg format. Do not fix the photos within the body of the article in MS word.

Judge your article yourself : After completing the writing, ask some questions about the topic by yourself pretending to be a reader. If your article has answers to them, it wins.

- Is your article written about a new subject or throws some new insights into an already-famous subject?
- Have you done enough study and field visit?
- Are you satisfied with the style of writing and made necessary corrections and improvised on it?
- Is the title of article attractive?
- Does the introduction to the subject elicit interest among the readers?
- Does the article give justice to the topic covered?
- Does your article benefit the farmers?
- Construction of the sentences and usage of proper words and grammar are correct?
- Have you written the article by different angles of the subject?
- Have you indicated the possible solutions to the problems or doubts or practical difficulties in the field expressed by the farmer?
- Can the farmers/readers adopt techniques or methods explained in your article?
- Does your article improve the knowledge of the farmer?
- Is there any constructive message for the farmers in your article?
- Will the reader feel that your article be preserved for future reference?
- Are the attached photos relevant to the article?

If you say yes to many of these questions, your article wins

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PRINCIPLES AND LITERATURE FOR VISUAL EXTENSION AIDS

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Introduction

Audio-visual aids are the tools or aids or vehicle for transfer of ideas, technology or message. The success of any programme depends upon the selection of right type of audio-visual aids in the right way. There is no inherent magic in the visuals. They have to be used in support of a talk for highlighting the most salient feature in the talk to make the audience to understand and remember. While planning for the use of audio-visual aids, the extension agent needs to be selective in using the aids taking into consideration different factors like the audience (age, sex, level of literacy, previous experience etc.), availability and cost of equipment, familiarity of extension agent with the equipment, facilities required for use of the aids, subject matter etc. Above all, it also depends upon the objective or purpose of the communication.

Each type of audio-visual aids has certain advantages as well as limitations. All are needed at one time or the other to induce audience in the adoption process. Audio-visuals in combinations are always better than any one type of aid used alone. With the advancements in printing technology and electronics some of the aids are becoming obsolete.

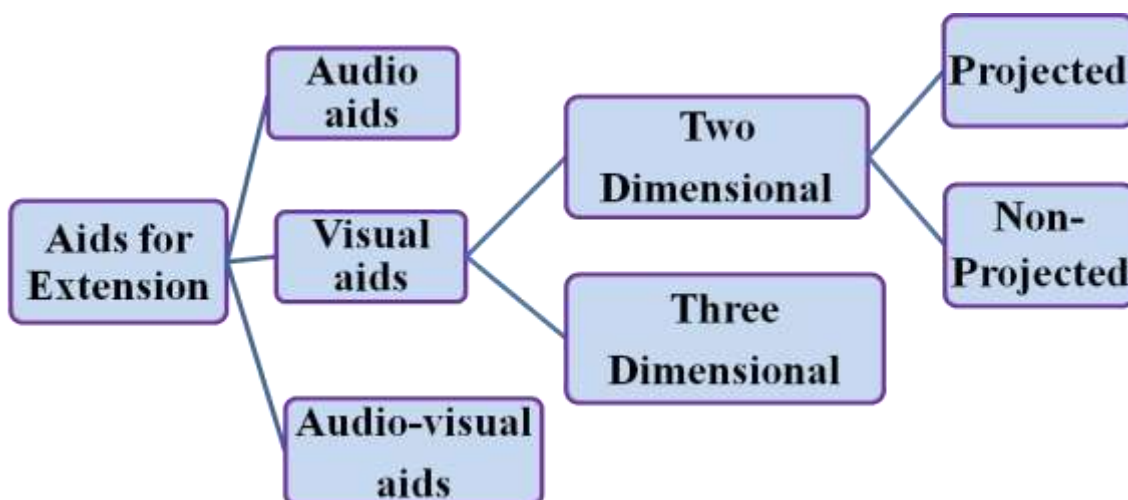


Fig 1. Classification of Aids for Extension Teaching

Visual Aids for Extension Activities

In extension teaching, literature plays an important role in the message dissemination process. Some of the common literature which forms the part of extension teaching learning process are leaflets, folders, pamphlets, bulletins, circulars, newspapers, magazines, journals and newsletters. The literature serves the purpose of communicating precise and reliable scientific information in a simple and easily understandable language to a common man. A class of publications generally prepared by extension agency in printed form, containing the information relating to the improvement of farm and home. It may be used singly or in combination with other extension methods.

Guidelines for Preparation of Visual Aids

1. Readers: Consider the target group, their level of understanding, their knowledge and education. Most of the farmers have primary level of education, so prepare the material accordingly.
2. Content: Information is for educating the farmers. Complete/ detailed necessary information should be given to accomplish the purpose. Information given should be correct, it should contain no miss statement of facts, no ambiguity.
3. Writing: Words should be simple, brief and clear. Follow ABC principles. Use simple words and sentences. It should also be grammatically correct. Then tone should be appropriate for the audience.
4. Neat and Readable: It should be readable, short sentences, simple construction, clear in meaning, popular words, personal words and preferably most commonly used words by the target group should be included. It should be neat, well-arranged and free from erosions and uneven typing.
5. Illustrations: Each information material must have an illustration
6. Title: It should be simple, without much technical terms, easy to understand
7. Paragraph: Divide all information into paragraphs. Each one should have sub idea of main theme. Each paragraph should have different side heading.
8. Colours: Not more than three

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9. Order: Write the points based on importance i.e best one is first one
10. Division: Divide complete information into 3 parts i) Introduction ii) Body iii) Summary
11. Pre testing: Pre-test before final distribution. Provide few leaflets and distribute to farmers, call for feedback and then modify and finally print the matter in large quantities.

Leaflets (Flyer)

Leaflet is a single sheet of paper of small size, which gives specific and accurate information about a particular topic in a concise manner. It can be printed on one or both sides containing preliminary information relating to a topic. It is made as and when needed. Generally, it is distributed free-of-cost.

Folder

Folder is a single sheet of printed paper having few folds. When opened the content is presented in sequence. The content includes specific information on a particular topic. Folders are printed on a wide range of size and papers. Though they are printed on different papers, a width to length ratio of 1: 1.5 is more suitable. It is printed as and when required. Generally, it is distributed free-of-cost.

Preparation and Use of Poster

Poster is a non-projected visual aid. It is a combination of bold design, colour and messages with usually a few simple words designed to catch the attention of the passerby so as to emphasize a fact or an idea, stimulating the person to support an idea, to obtain more information or take some required action. A poster is designed to make a public announcement of a special idea.

Principle:

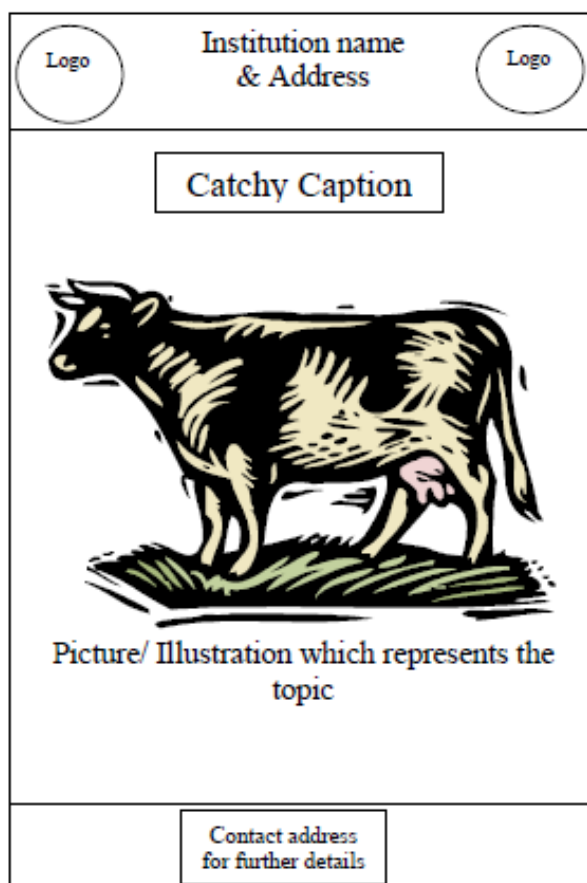
1. Posters are simple graphic representations. They arrest the eye and the mind; remind the public of a message. Posters generally contain three main features namely –
 - They announce a purpose,
 - They set conditions and
 - They recommend action
2. A good poster arouses interest. It is not expected to educate or provide detail information about idea on posters, but only to stimulate people about a specific idea/subject. It can't be used alone. It must be always be a part of a teaching programme or campaign.

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- Any poster may get a single glance, so the message must be simple and clear. Posters should be attractive, brief, and clear and this is the 'ABC' principle of poster.
- Poster should be simple with minimum words. Details and lengthy sentences should be avoided.
- A hand drawn poster may be used in training programmes, group meetings, farmers' day etc. Printed posters may be used in larger numbers in campaigns, exhibitions etc.

Guidelines to Prepare a Poster:

- Understand who the audience are. Decide exactly what the poster must tell the audience and what they should do?
- Caption:** It should be as small as possible. Do not write it vertically or do not break it. It should be striking and catchy, likely to be in slogan form, printed in plain and bold letters.



- Illustration or Picture:** It should be bold and give message clearly. Avoid unnecessary details in the illustration. It should be based on the audience's experience and objects should

be familiar to them. Dramatic illustrations would stop people and make them to look. Remember that words and pictures must be seen at a glance and must stimulate a response among the viewers. They must express the message simply and clearly.

4. **Colour:** Effective posters are usually pleasing to the eye. Use bright attractive colours, prominent message with a more prominent colour. Do not use more than three colours and its odd combinations.
5. **Space:** Do not crowd letters, words or illustrations. Sufficient space between letters, words, lines and illustrations.
6. **Layout:** It should be well balanced so that viewer's eye can smoothly travel. It should hold the attention and clearly bring out the message to the viewer.
7. **Size:** Must be large enough to be easily seen from a distance.
8. **Lettering:** Use plain and bold lettering.
9. **Trial:** Prepare a rough sketch of the poster in small scale. If the services of an artist are available, an excellent finished poster from an original rough sketch can be produced.
10. **Display:** Place posters at the prominent places where people gather.

Advantages

1. Can be prepared in advance and seen from a distance
2. Create awareness among the people
3. Announcement of important events and covers large number of audiences
4. Reinforce messages that farmers receive through other media

Limitations

1. Difficulty in storage of large sized posters for future use without damage
2. Tendency to leave the posters up and leave them for ever
3. Corrections or changes are difficult to make
4. Poster designed for one area can't be used for other areas because of wide diversities
5. Poster is ineffective if it is not followed by some other teaching aid
6. Posters may not create any impact

Preparation and Use of Chart

Charts are pictures of relationships and changes. It is used in extension work to tabulate a large mass of information or show a progression. It is often referred to as symbolized visuals.

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Charts are visual symbols for summarizing, comparing, contrasting, or performing other services in explaining subject matter. Charts are visuals/visual aids where information is summarized and presented in a more or less abstract form. Since the information is provided in an abstract form a higher level of education and intelligence of the audience is required to understand and absorb the information. The rural audiences need more assistance to get the message.

Charts can usually be read more quickly than the raw data. They are used in a wide variety of fields, and can be created by hand (often on graph paper) or by computer using a charting application. Certain types of charts are more useful for presenting a given data set than others. Chart should be with bold and simple lettering, brief words, simple design, colourful (not more than 3 colours) and large enough to be seen from the distance. Diagram, map, chart and graph are used in bulletin board, method demonstration, group meeting, training programme, farm publication, campaign, exhibition, newspaper, television etc.

Advantages:

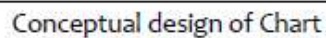
1. Helps to communicate difficult, often dull subject matter in interesting and effective way.
Helps in visualizing the broad concept.
1. Show or compare changes. Show proper sequence and relationships. Show size and placement of parts
2. Make facts and figures clear and interesting. Help in analyzing a problem or situation.

Effective use of Charts:

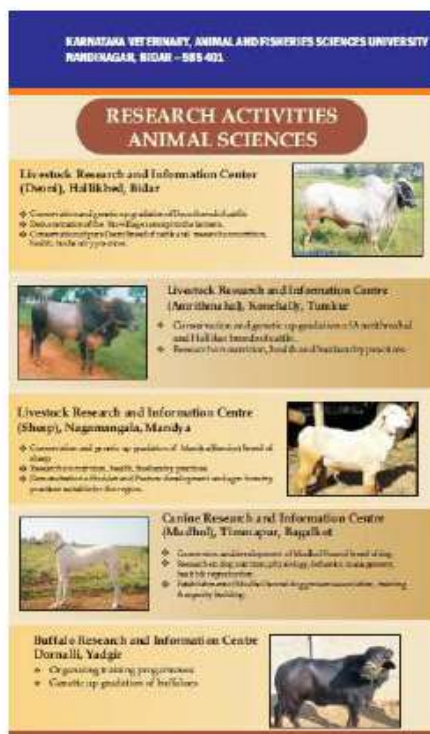
The visuals should be scientifically prepared on the basis of the data available for the purpose and should convey the message for which these are intended. These should be simple, clear, colourful, bold and devoid of unnecessary details.

Types of Charts:

1. **Tabular Chart:** Anything that is recorded or presented in a tabular form is a tabular chart. These are used to bring together in compact form a mass related data ex. Time Table.
2. **Flow Chart:** These are made by lines, arrows, rectangles etc. It shows the structure of an organization, institution, association etc. It also can be used to show the different processes involved in preparation of a product.



Tabular Chart



Tabular Chart



Maps



Flow Chart



5. **Bar Chart:** Bar chart / graph present categorical data with rectangular bars with heights or lengths proportional to the values that they represent. Bars can be plotted vertically or horizontally. These are made of a series of bars along a measured scale. They are used to compare quantities at different times or under different circumstances.
6. **Pie Chart:** It is very helpful where a breakdown or distribution of values is important. These are in the shape of circles and used to show how several parts make up the whole. Each part may show percentages, proportions etc.
7. **Line Chart:** These are useful in showing the trends and relationships. A single continuous line may represent growth or expansion, while multiple lines will show the relationship.
8. **Timeline Chart:** A timeline chart is a display of a list of events in chronological order. It uses time scale, depends on the subject and data. Most timelines use a linear scale, in which a unit of distance is equal to a set amount of time. It is often used in education to help learners with understanding the order or chronology of historical events and trends for a subject.
9. **Pictorial Chart:** It gives the viewer a vivid picture and create rapid association with the use of graphic messages like cartoons, illustrations etc. The number and size of picture conveys the proportionate amount. This type of chart is more useful for illiterate audience.
10. **Over-Lay Charts:** It consists of several sheets which can be placed on one over the other conveniently. On each individual sheet a part of the whole is drawn. This enables the viewer to see not only the different parts, but also how they appear when one is placed over the other. After the final over-lay is placed it shows the ultimate product. This type of presentation is dramatic and more effective.

Suggestions for making effective charts are:

- Planning
- Preparation
- Presentation
- Follow-Up

Limitations

1. Abstract and symbolic visuals may be difficult to understand.
2. Requires good amount of planning and preparation.

Preparation and Use of Flash Cards

Flash cards are series of uniform pictorial cards along with simple verbal explanations presented before a group of audience in a proper sequence to tell a complete story. Flash cards are 2-dimensional low cost non projected visual aids used in the presentation of illustrations, diagrams, and figures with a title / caption in a topic. They are a series of brief visual messages on a cardboard / poster paper, flashed before a group of audience to emphasize the important points in a presentation.

Communication Characteristics of a Flash Card

1. **Sequence:** Different steps in a topic can be shown in a sequence. This will avoid distraction. Attention can be attracted from one step to another
2. **Suspense:** When we show the first card with some idea in a sequence, suspense is created among the learners and eagerly waits to know what will happen next.
3. **Story Telling:** People like to hear stories. Using Flash cards is like telling a story which creates interest among learners.

Advantages

1. Helps the speaker to emphasise the essential points
2. Can be made quickly and carried easily
3. Can be made from inexpensive local material
4. Useful in explaining the topic which consists of illustrations etc
5. Can be used repeatedly to different groups
6. Information can be passed on to illiterates through Flash cards

Limitations

1. Cannot be used to all topics
2. Skill is required in its preparation and use

Flip charts:

Flip charts consist of a series of individual charts, stacked or bound together and hanged on a supporting stand. These individual charts carry a series of related messages in sequences. During teaching, this individual chart is flipped (turned) one by one in a sequence. This process creates a certain amount of suspense in viewers' mind and added attention.

Free Apps and Websites for Creating Posters and Charts Online

There are several free apps and websites available for creating posters and charts online. These tools are web-based, and hence, they can be used directly the browser without downloading. Most of them offer drag-and-drop interfaces, making them accessible even if you have no design experience. Some popular options are mentioned below:

1. Canva: Canva is a versatile design tool with a wide range of templates for posters, flyers, and other graphic designs. It's user-friendly and offers both free and premium features.
2. Crello (VistaCreate): Like, Canva, Crello provides a variety of templates and design elements that you can use to create posters. It also has free and paid options.
3. Adobe Spark: Adobe Spark (now Adobe Express) is another powerful tool for creating posters, with many free templates and design elements. It's part of the Adobe Creative Cloud, so it integrates well with other Adobe products.
4. PosterMyWall: This tool specializes in poster creation and offers a wide range of templates, especially for events, promotions, and social media. Some features are paid, but there are plenty of free options.
5. Piktochart: Known for infographics, Piktochart also offers templates for posters and charts. It's particularly useful if you need to include data visualizations in your poster or charts.
6. Snappa: Snappa is an easy-to-use graphic design tool with templates for posters and other social media graphics. It has a free plan with basic features.
7. Desygner: Desygner offers a range of free templates and design tools for creating posters, flyers, and other marketing materials.
8. Venngage: While primarily known for infographics, Venngage also provides templates for posters and charts. It's especially useful if your poster or charts needs to include a lot of data or statistics.
9. Adobe: Adobe Express online poster maker is available for free. It can be started with easy-to-use custom poster templates.
10. Google Sheets: Google Sheets is a powerful tool for creating a variety of charts and graphs. You can input your data and create charts directly in the spreadsheet, which can then be embedded or exported as images.
11. ChartGo: ChartGo is a simple and straightforward tool for creating charts. You can easily input data, customize your chart, and download it for use in presentations or reports.

12. ChartBuilder: Created by Quartz, ChartBuilder is a minimalist tool designed for quick and easy chart creation. It's great for making simple line, bar, and pie charts that are visually clean and easy to read.
13. ChartBlocks: ChartBlocks is a chart-building tool that allows you to create data-driven charts and embed them on websites or export them as images. The free version offers a decent range of options for basic chart creation.
14. Infogram: Infogram is another tool that specializes in creating data visualizations, including charts. It offers a variety of chart types and customization options, making it a good choice for more complex data.
15. Datawrapper: Datawrapper is widely used by journalists and researchers for creating clean and professional charts. It supports a wide range of chart types and allows for easy customization.
16. RAWGraphs: RAWGraphs is an open-source tool designed for advanced data visualization. It allows you to create unique and complex visualizations based on raw data, which can be exported in various formats.

ANALYTICAL SKILLS IN FARM JOURNALISM**Shivakumar K. Radder¹ and Vinay P. Tikare²**¹Professor & Head, Dept. of Vet. & A.H. Extension Education²Associate Professor & Head, Dept. of Vet. Pharmacology & Toxicology
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India has come a long way in development since independence, as we look forward to ‘Viksit Bharat’ (Developed India) by 2047. There are many spheres in animal husbandry and allied sectors that have showed tremendous improvement contributing to improvement in the standard of living of our farmers. From milk products importing country, today India has become top producer of milk in the world. Still, there is need for more improvement in farming. This requires flow of appropriate and pertinent information to farmers. Traditional extension communication channels have contributed significantly in this regard. However, still lot of gap exists between useful scientific information generated and the information that has reached the farmers. There is need to communicate such information to farmers effectively. In the present context of the increasing importance of mass media for communication of farm information, what is expected is that an appropriate content, process, structure, and system are pragmatically developed. Literature offers an effective medium to communicate farm information to farmers. Farm literature has become one of the important sources of information for farmers and there by plays an important role in technology transfer. Different literature is used for this purpose. Among them, farm magazines and newspapers play a prominent role in the dissemination of information and serve as a reliable platform for knowledge acquisition and sharing. But such literature should be easily read, understood, and adopted by the farmers. It is imperative to analyze whether the data or information covered in them meets the expectations of the farm community. To fulfill this demand, usefulness of such literature to farmers can be assessed with the help of certain tools. Hence, skills of the extension functionaries and other subject matter experts regarding such analytical skills of farm journalism may help creating more farmers’ friendly literature. Here is an attempt to familiarize the readers about such analytical skills in farm journalism.

Development of Farmer friendly Literature related to Animal Husbandry

Some terms related to analytical skills in farm journalism:

In analyzing various literature in farm journalism, following some concepts and terms are used commonly.

- No. of complex / hard words
- Total number of words
- Syllables
- Characters
- Total number of sentences
- Sentence length.
- Total space provided
- Space provided to different categories of animal husbandry information
- Measuring the column inches that newspaper devoted to subject matter
- Level and type of infographics
- Appropriateness, effectiveness, ease of reading, attractiveness.

Some analytical tools in farm journalism are as under.

1. Readers' survey
2. Readability
3. Content analysis.
4. Reliability
5. Readers' feedback.

1. Readers' survey: Readers' survey offers valuable information about effectiveness of farm literature. This can be conducted by using various tools of survey like interviewing, questionnaires, polls etc.

2. Readability: Readability is a very important dimension of any print material, which signifies the acceptability of any information in printed form. The application of a useful readability test protocol will give a rough indication of a work's readability measured usually by counting syllables, words, and sentences etc. Readability tests are often used as an alternative to conducting

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an actual statistical survey of human readers of the subject text. The tests generate a score based on characteristics such as statistical average wordlength and sentence length of the work (EEI, 2016). Readability can be measured by using different tests, readability formulas.

Some methods for measuring Readability:

- i. **Readability index measured by a software tool called ‘WebFX’:** Calculates ‘Flesch Kincaid reading ease,’ Flesch index (RE). It can be calculated by the formula:

$$RE = 206.835 - 1.015 \left(\frac{\text{Total words}}{\text{Total sentences}} \right) \times 84.6 \left(\frac{\text{Total Syllables}}{\text{Total words}} \right)$$

- ii. **Gunning-Fog Index :** The test was developed by Robert Gunning, an American businessman, in 1952. Higher Fog Index, less the readability of any print material. The index estimates the years of formal education needed to understand the text on a first reading. A fog index of 12 requires the reading level of a U.S. high school senior (around 18 years old). The fog index is commonly used to confirm that text can be read easily by the intended audience. Texts for a wide audience generally need a fog index less than 12. Texts requiring near- universal understanding generally need an index less than 8. (Wikipedia, 2024).

Steps for calculating Gunning fog index

- Select a passage (such as one or more full paragraphs) of around 100 words. Do not omit any sentences;
- Determine the average sentence length. (Divide the number of words by the number of sentences.);
- Count the "complex" words: those with three or more syllables. Do not include proper nouns, familiar jargon, or compound words. Do not include common suffixes (such as - es, -ed, or -ing) as a syllable;
- Add the average sentence length and the percentage of complex words; and
- Multiply the result by 0.4.
- The complete formula is:

$$\text{Grade level} = 0.4 \left(\left(\frac{\text{Total words}}{\text{Total sentences}} \right) + 100 \left(\frac{\text{Total complex words}}{\text{Total words}} \right) \right)$$

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While the fog index is a good sign of hard to read text, it has limits. Not all complex words are difficult. For example, "asparagus" is not generally thought to be a difficult word, though it has four syllables. A short word can be difficult if it is not used very often by most people. Fog Index can be calculated for each farm information published in different newspapers and then mean values have been calculated for every newspaper.

iii. Automated Readability Index: The Automated Readability Index (ARI) is a readability test designed to gauge the understandability of a text. Like other indices, it produces an approximate representation of the US grade level needed to comprehend the text (EEI, 2016).

$$ARI = 4.71 \times (\text{characters/words}) + 0.5 \times (\text{words/sentences}) - 21.43$$

As a rough guide, US grade level 1 corresponds to ages 6 to 8. Reading level grade 8 corresponds to the typical reading level of a 14-year-old US child. Grade 12, the highest US secondary school grade before college, corresponds to the reading level of a 17-year-old.

2. Content analysis:

Content analysis is a research tool to study the extent of information covered in farm literature like newspapers, farm magazines etc. It is a research technique for the objective, systematic, and quantitative description of the manifest content of communication. It is used for analyzing the characteristics, causes and effects of the content. It is less restrictive and can be both quantitative and qualitative.

Using content analysis, we can determine the extent to which changes should be made in the textual and visual presentation so that it could help in effective information dissemination. It can be used with a variety of data sources, including textual data, and visual and audio data. The methodology is highly flexible and hence can be analyzed both empirically and theoretically. Given the massive explosion in archived linguistic, photographic, video, and audio data arising from the proliferation of technology, the technique of content analysis appears to be on the verge of a renaissance (Stemler, 2015).

Quantitative content analysis (QCA) involves systematically categorizing texts or visuals, that are coded and analyzed. Researchers can then make inferences about the message within the texts. Key steps include a selection of the universe (sample to be studied, say newspapers, magazines, video content, audio clips, etc), dividing the contents into various subcategories, coding, reliability testing, analysis, and findings and discussions.

Different media provide differential importance towards publication of different categories and subcategories of farm information. Content analysis can be done for comparative study of relative importance given by different Bengali newspapers in publishing farm information. Swant and Shendre (1987) reported that, the newspapers provided space for agricultural information (2.32%) and agricultural advertisement (1.87%) was less than non-agricultural information (38.68%) and non-agricultural advertisement (57.16%), in their study of Marathi newspaper ‘Sakal’. Nanjappa and Ganapathy (1987) compared three selected Kannada dailies in terms of space provided to different categories of agricultural information, agricultural news category occupied the maximum space (31.17 percent of total agricultural information). All the information published on agriculture was categorized under different heads, such as (I) Agricultural news, (II) Market price, (III) Advertisement, (IV) Letter to the editor, (V) Feature articles, (VI) Editorial, (VII) Suggestions to farmers, (VIII) Weather, (IX) Questions and answers, and (X) success stories. Lahiri & Mukhopadhyay (2011) conducted content analyses and studied farm information published in all the four selected newspapers. The information was categorized into three major categories; News, Views and Advertisements. Different categories were again separately divided into different sub-categories, according to the type of information published, during the period of study. News and Views categories of farm information are divided into some categories. They were: Agricultural Pollution, Agricultural Policy, Agricultural Crisis and management, Agricultural Marketing, Natural Calamities, Rural Development, Social Conflict, Social Forestry, Success Story, Technology Transfer, and Weather Report. Similarly, different sub-categories considered for Advertisement categories of farm information were: Agricultural Machinery, Cooperative, Fertilizer, Plant Protection Materials, Rural Development, Seed, Fishery, and Social Forestry. Roy et. al. (2003), conducted a content analysis on five leading Bengali dailies, Ananda Bazar Patrika, Bartaman, Sambad Pratidin, Aajkal, and Ganashakti, for the period of two months, starting from 16th Oct’ 1999 to 15th Dec’ 1999. It was found from the study that all five newspapers were not

giving adequate coverage to farm news. The coverage of farm news was somewhat satisfactory in three dailies while it was altogether unsatisfactory in two dailies. Marketing aspects, natural hazards, agricultural policy, and social life received more importance in those newspapers. Manjula *et al* (2015) conducted content analysis of a Kannada Monthly Farm Magazine, i.e. Krishi Munnade. They analysed the contents with respect to importance given to various subjects – like agriculture, animal husbandry, horticulture etc., Year wise coverage, Monthwise coverage and sector wise coverage – like Informative, sustainable farming practices, success stories etc. They concluded that that majority of the articles published in the magazine belonged to agriculture, followed by allied activities and horticulture. All the articles published in the magazine equally distributed throughout the year irrespective of season, because of variety of information in the magazine. Subjects covered ranged from informative/educative articles followed by integrated pest and disease management, sustainable farming, and success stories.

3. Reliability: Reliability test for the process of categorization and subcategorization is essential in content analysis which helps in the extent of consistency under study. Krithika *et al* (2022) used Krippendorff's Alpha for establishing reliability. For this purpose, the researcher and two other observers were taken and the observed disagreements and expected disagreements were measured. The thumb rule is that if alpha is 0.8 and above the subject under study is considered reliable. The value of alpha was calculated as 0.823. Hence the process of categorization and subcategorization was found to be reliable. To analyze the coverage of infographics, a total of (n=145) infographics was identified using a consecutive sampling method. The selected infographics were categorized based on the level and type of infographics. The study modified the parameters into Level 1, which includes tables or bullet points, bar, pie or poll graph, line or fever-line, organizational or procedural flow chart; Level 2 included themes or graphics or drawings such as conceptual diagrams, maps, typography, and symbolic interpretations and Level 3, is a combination of level 1 and 2 coupled with illustrations, stylistic representation of information.

4. Reader's feedback: Feedback information from readers provides valuable input for evaluation of farm literature. Feedback with respect to timeliness, appropriateness, usefulness, effectiveness, ease of reading, attractiveness, suggestions for further improvement etc. can be obtained by the readers.

References:

1. EEI (NE Region), 2016. Readability and editing. In Handout on Farm Journalism and Mass Media Production in Agricultural Extension, 2016. Extension Education Institute (NE Region), AAU, Guwahati, Pg. 22-25. Weblink https://www.eei-ner.org/materials.https://sstemler.faculty.wesleyan.edu/files/2016/09/Stemler_Emerging_Trends_in_Content_Analysis_2015.pdf
2. Krithika, S., C. Karthikeyan, and M. Nirmala Devi. 2022. "A Content Analysis of Farm Information and Infographics in Pasumai Vikatan Tamil Magazine, India". Asian Journal of Agricultural Extension, Economics & Sociology 40 (9):33-39. <https://doi.org/10.9734/ajaees/2022/v40i930972>.
3. Lahiri, B. & Mukhopadhyay, SD (2011) ; Content Analysis of Farm Information Communicated through Selected Newspaper. Journal of Global Communication. 4. 33-43.
4. Manjula, N., Keerthi, S. and Ambana Gouda, D. (2015). Content analysis of Krishi Munnade Kannada farm magazine. Agric. Update, 10(3): 237-240.
5. Nanjappa, D. and Ganapathy, K.R. (1987) ; Contest analysis of agriculture as information in selected Kanada Dailies. Indian Journal of Extension Education, 23: 192, 20-23.
6. Roy, S., Verma, N. S.; Laharia, S. N. and Sarangi, A. (2003) ; Content and coverage of farm news in leading Bengali dailies. Indian Journal of Extension Education; 39:3 & 4.
7. Stemler, S. (2015). Content Analysis. In Book - Emerging Trends in the Social and Behavioral Sciences. (pp.1-14). Ed. - Robert A. Scott, Stephen M. Kosslyn. John Wiley & Sons, Inc. Web resource :
8. Swant, G.K. and Shendre, N.K. (1987) ; Coverage of agricultural information in a leading Marathi newspapers 'Sakal' from Maharashtra. Journal of Maharashtra Agricultural Universities. 12:2, 232-235.
9. Wikipdia, 2024. Gunning fog index

WHAT TO WRITE TO FULFIL THE INFORMATION NEEDS OF FARMERS?**Siddalingswamy Hiremath¹ and Manjunatha L²**¹Associate Professor, Veterinary College (KVAFSU), Gadag, Karnataka.²Professor & Head, Veterinary College, Hebbal (KVAFSU), Bengaluru, Karnataka.

Information needs of the farmers are diverse. Writing a one size all fit article to address all the farmers is a herculean task and sounds idealistic. The information needs of farmers vary with so many factors. Age, education, class, the stage of adoption in which the farmer is passing-awareness to adoption, innovativeness of the farmer, available resources, etc. Likewise, the topics could be on various dimensions. It could be about the new research, updates on the technology, about the various inputs, improved practices, production processes, marketing of the produce or institutions involved. The information needs of the customers of the livestock products too have to be addressed. The human element involved in livestock and animal husbandry which would satisfy and elevate the psyche of the readers could form the content. The scope for selection of the topic is vast and would rest on the creativity of the author. Careful bundling of the information and facts with tactful use of words would result in good article with good appeal and readership. Indicative areas are listed below. For easy comprehension the areas are divided into technology/ production, extension and farmers/entrepreneurs. Many more issues could be touched upon by carefully addressing the newness of the issue.

Technology/production:

- Individual/Organization involved in conservation of animal genetic resources.
- Individual/Organization involved in developing the equipment.
- Equipment which reduces work load.
- Maintenance of various machinery used in animal husbandry (AH).
- Pro-farmer organization/research institute.
- New happenings/developments/trends in animal husbandry.
- New discoveries / research in animal husbandry.

- Science behind various concepts in animal husbandry and veterinary sciences.
- Simple mistakes farmers make in various animal husbandry activities.
- Individual/Organization evolving various scientific practices, vaccines, and other procedures.

Extension:

- Success/Failures of various government AH schemes/programs.
- Unique attempts in AH extension
- Analysis of various AH activities.
- Scientifically validated traditional knowledge.
- Pro-farmer information in AH workshop/conference/mela/exhibition.
- New rules/programs on AH.
- Writing about new AH related book/App/Blog.
- Interesting/Funny incidents in daily routines of veterinarian.
- Inside story of a news which is more viral
- AH related educative cartoons/posters, etc.

Farmers/entrepreneurs:

- Success stories/failures of various farmers
- Entrepreneurial opportunities in AH.
- Marketing avenues/new experiments made by entrepreneurs.
- Farmer innovations.
- Traditions/Rituals involving livestock or related to AH.
- Experience of farmers on AH who visited foreign countries.
- Farmer attitudes about various AH activities now & then (20-25 yrs back)
- New trends in customer consumption of livestock products.
- Quality issues in various livestock products.
- Awareness of customers on various livestock products.

DIGITAL JOURNALISM: A CONVENIENT MODE OF LIVESTOCK FARM COMMUNICATION

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Digital journalism refers to the practice of reporting news and disseminating information through digital platforms, primarily the internet. With the rise of technology, traditional forms of journalism—such as print newspapers, television, and radio—have increasingly migrated to online platforms, where news can be accessed in real-time and by a global audience. The rapid evolution of digital media has transformed how news is gathered, produced, and consumed, leading to new opportunities and challenges in the field of journalism. It's also known as Online journalism or Web journalism or Netizen journalism. It combines traditional journalism principles with modern technology to create engaging stories that often include multimedia elements like photos, videos, audio, and interactive graphics.

The agricultural sector, particularly livestock farming, is undergoing a digital transformation. Digital journalism emerges as a potent tool in bridging the information gap between farmers and the rapidly evolving agricultural landscape. Internet Penetration & Mobile Connectivity, Social Media Influence, Changing Consumer Preferences, Young Demographic, Innovations in Content Delivery, and Language & Localization are some of the driving forces of Digital Journalism. At present, Livestock farming is facing several challenges like market volatility, disease outbreaks, weather extremes, limited access to information, infrastructure deficiencies, poor transportation, and communication networks. These challenges are hindering optimal productivity and profitability. Under these situations; by providing timely, relevant, and accessible information, digital journalism can significantly enhance the livelihoods of livestock farmers.

Key Roles of Digital Journalism in the Livestock Sector

a. Information Dissemination:

- ✓ Delivers timely updates on market prices, weather conditions, animal diseases, and best practices.
- ✓ Provides access to research findings and technological advancements.
- ✓ Educates farmers, consumers, and policymakers about the livestock industry.

b. Market Transparency:

- ✓ Exposes unfair practices and price fluctuations.
- ✓ Promotes fair trade and ethical sourcing.
- ✓ Helps consumers make informed choices.

c. Crisis Management:

- ✓ Rapidly communicates information during disease outbreaks, natural disasters, or food safety crises.
- ✓ Builds trust and confidence in the livestock industry.

d. Policy Advocacy:

- ✓ Raises awareness about issues affecting the livestock sector.
- ✓ Influences policy decisions through investigative reporting and public opinion.

e. Consumer Education:

- ✓ Promotes healthy eating habits and responsible consumption.
- ✓ Encourages support for sustainable livestock production practices.

Types of Digital Journalism

Type	Video Journalism	Social media Journalism	Data Journalism
Mode	Video	Social media	Numbers and Data

Content	Traditional news reports, documentaries, or user generated content on platforms	To report news, share opinions and disseminate photos and videos	Use data analysis and visualization tools to uncover trends, patterns and stories hidden in data
Tools	Eg: YouTube	Eg: Twitter, Facebook, and Instagram	Eg: Excel, Google Sheets, SPSS

NEWS GATHERING TOOLS: Email, social media, Search engine tools, Websites, and portals

Formats of Digital Journalism

A *listicle* is a type of article that presents information or content in a concise and structured format using numbered or bulleted lists.

Newsletter can be a valuable tool for dissemination information to the farmers regarding updates about farming, best practices, technologies, and innovations. Many organizations, universities will be releasing periodical newsletter.

Podcasts: Podcasts are like radio programs in form, but they exist as audio files that can be played at a listener's convenience, anytime and anywhere. Today, podcasts are an extremely popular form of audio entertainment and have progressed beyond being downloadable radio shows. Each podcast is a series created by a host and then published episode-by-episode online, where subscribers can then download and listen to each episode when it's released. Ex: CEAH podcast

Blogs: A blog (short for “weblog”) is an online journal or informational website run by an individual, group, or corporation that offers regularly updated content (blog post) about a topic. and it is written in an informal or conversational style.

Videos & Documentaries: A documentary is a television or radio programme, or a film, which shows real events or provides information about a particular subject.

Documentary films are a powerful medium that captures real-life events, stories, and experiences through a non-fiction storytelling lens. They offer a unique opportunity to explore and understand the complexities of our world, shedding light on social, political, and cultural issues that might otherwise go unnoticed.

Development of Farmer friendly Literature related to Animal Husbandry

E newspapers and magazines: An online newspaper (or electronic news or electronic news publication) is the online version of a newspaper, either as a stand-alone publication or as the online version of a printed periodical. E-newspapers and magazines have many advantages, like convenience, cost-effectiveness, eco-friendly, Wider distribution, Saving and sharing, Quick information exchange and attractive or creative ads.

Creating Engaging Livestock Farm Content

Effective digital journalism requires content that is:	Advantages
<ul style="list-style-type: none"> • Relevant: Address farmers' specific needs and concerns. • Accessible: Use simple language and avoid technical jargon. • Visual: Incorporate images, videos, and infographics to enhance understanding. • Interactive: Encourage audience participation through polls, quizzes, and comments. • Localized: Tailor content to specific regions and farming conditions. 	Accessibility and each
	Speed and timeliness
	Interactive & Engagement
	Cost effectiveness
	Data & Analytics
	Disadvantages
	Information Overload
	Quality and Depth
	Erosion of Trust

Digital Journalism and Animal Husbandry

Digital journalism has emerged as a highly effective and convenient medium for spreading innovations in various fields, including animal husbandry. With rapid technological advancements and the expansion of internet access, digital platforms now offer a means to bridge the knowledge gap between researchers, innovators, and farmers, who are the primary practitioners of animal husbandry.

By using multimedia formats, real-time updates, and interactive features, digital journalism can play a crucial role in delivering critical, up-to-date information about animal husbandry

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innovations to a broader audience. Here is an exploration of how digital journalism aids in disseminating these innovations:

- Digital journalism allows the instant dissemination of new research, discoveries, or innovations in animal husbandry, whether it's about new livestock breeds, disease management strategies, or feeding techniques.
- Experts can demonstrate new technologies or techniques in real-time, providing farmers with practical, step-by-step guidance. Eg: Live video streaming on platforms like YouTube, Facebook, or Twitter,
- Videos and tutorials help convey complex information about animal husbandry innovations in a simpler format. For example, a farmer could watch a video which easier to understand than reading text alone.
- Use of infographics and interactive diagrams to explain processes like animal breeding or vaccination protocols.
- Farmers can access digital content even in remote regions because of increased use of mobiles. New developments in animal husbandry can be easily shared to farmers even in remote areas.
- Innovations can be communicated effectively to a diverse farming audience in local languages through various digital journalism platforms.
- Innovations in animal husbandry can be discussed, questions can be raised, and experiences shared, enabling peer learning and wider dissemination of knowledge through social media platforms such as Facebook, WhatsApp, and Telegram.
- Citizen journalism can also play a role in highlighting local innovations that might otherwise go unnoticed. Farmers themselves can contribute by sharing videos, success stories, and practical insights, helping to spread innovation organically.
- Digital journalism platforms can host live Q&A sessions with experts, allowing farmers to ask questions directly about new practices or technologies. This interaction helps clarify doubts and encourages the adoption of new methods.
- Many digital platforms include comment sections, forums, or social media engagement options that allow farmers to provide feedback on the innovations or discuss their experiences, fostering a two-way communication loop.

Development of Farmer friendly Literature related to Animal Husbandry

- Digital journalism allows for the creation of personalized newsletters or email alerts focused specifically on animal husbandry. These can deliver innovation-related content directly to farmers' inboxes, ensuring that relevant information is delivered without the need to search for it actively.
- Based on a farmer's location, type of livestock, or specific interests, digital journalism platforms can curate content tailored to their needs, such as updates on dairy farming in a particular region or innovations in poultry disease management.
- Digital journalism platforms can quickly spread early warnings about livestock diseases or pest outbreaks, along with information on preventive measures or vaccines. Rapid reporting allows for timely intervention, potentially saving farmers from devastating losses.
- Journalists can collaborate with veterinarians and researchers to create in-depth reports on innovations like vaccines, disease-resistant breeds, or advanced diagnostic tools, making this information accessible to a broad audience.
- Many digital journalism platforms offer free access to news, reports, and educational materials, reducing the cost barrier for small-scale or marginal farmers who might not have the financial means to attend workshops or purchase expensive literature.
- Some platforms allow farmers to participate in surveys or share feedback that helps in refining innovations. This interactive approach can further refine animal husbandry techniques and make them more relevant to the farmers' needs.
- Digital journalism helps bridge the gap between researchers developing innovations in animal husbandry and the farmers who implement them. News articles, interviews, and expert columns can communicate the practical applications of research directly to those in the field.
- Highlighting case studies of farmers who have successfully adopted innovations can inspire others to follow suit. These success stories, shared digitally, can motivate wider adoption of new technologies.
- Through digital journalism, farmers in India can learn about innovations in animal husbandry from other parts of the world, and vice versa. This global exchange of knowledge can lead to the adoption of best practices that may not have been locally available before.

- Many digital platforms offer open access to research papers, training materials, and guidelines that can help farmers stay updated on international standards and innovations in animal husbandry.

Overcoming Challenges and Maximizing Impact

To fully realize the potential of digital journalism, several challenges must be addressed:

- **Digital Divide:** Bridge the gap by providing digital literacy training and affordable internet access. Efforts to improve internet connectivity and digital literacy are essential.
- **Data Privacy:** Protect farmers' personal information and data security.
- **Fact-Checking:** Ensure the accuracy and reliability of information. Credibility and transparency are crucial for effective communication.
- **Monetization:** Explore sustainable revenue models for digital journalism in agriculture.
- **Collaboration:** Foster partnerships between farmers, journalists, researchers, and policymakers.

By overcoming these challenges and leveraging the power of digital journalism, the livestock sector can achieve greater efficiency, profitability, and sustainability. By collaborating with governments, NGOs, private sector, and academia, stakeholders can work together to overcome these challenges and create an enabling environment for digital journalism to thrive.

Future of Digital Journalism

The future of digital journalism will likely be shaped by technological advancements, including the increasing use of artificial intelligence (AI), data journalism, virtual reality (VR), and augmented reality (AR) in storytelling. AI tools are already being used for tasks like automating news reporting (e.g., generating short reports on sports results or financial updates). Data journalism allows reporters to analyze and present complex datasets to tell compelling stories. VR and AR are offering new ways to create immersive experiences, making audiences feel more connected to the news.

In addition, digital journalism will continue to evolve with more personalized and interactive forms of news consumption, as well as experimentation with new business models such as crowd funding, micropayments, and blockchain-based journalism platforms.

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References and Further Readings:

Ambadas B (2024). Emerging Trends in Digital Journalism: A Comprehensive Review International Journal for Multidisciplinary Research (IJFMR), Volume 6, Issue 2, March-April 2024.

Chakravarti, A. (2021, February 25). Government reveals stats on social media users, and WhatsApp leads while YouTube beats Facebook, Instagram. India Today.

Halakatti S V, Attaluri S and Nityashree D. A. (2023). Training Manual on “Agriculture Journalism for Effective Transfer of Technology” For the Officers of Department of Agriculture & Allied Sectors/ATMA/ ToT Centres Date: 08.11.2023 to 10.11.2023, Published by - National Institute of Agricultural Extension Management, Rajendranagar, Hyderabad- 500 030, India.

Locke, Savannah; Hiltbrand, Karen; Corbitt, Katie; Richburg, Darcey; Shannon, David; Rodning, Soren P.; Sawyer, Jason T.; and Mulvaney, Don (2023) "Instagram as a Tool of Diffusion for the Livestock Industry," Journal of Applied Communications: Vol. 107: Iss. 3. <https://doi.org/10.4148/1051-0834.2460>.

Mishra A and Mourya A S. (2022). Social Media: A New Tool for Farmers’ Empowerment. Just Agriculture, Multidisciplinary Newsletter, Vol. 2 Issue-12, August 2022 (e-ISSN: 2582-8223),

Mishra, A., Singh, J., Maurya, A. S., & Malik, J. S. (2021). Effect of socio-personal traits of farmers on their perception towards social media. Indian Journal of Extension Education, 57(4), 71-74.

Murthy L, Srinivasacharyulu A, Sharath Kumar P. (2017). Harnessing Social Media for Agricultural Development. Extension Digest, Vol.1 No.1 | June 2017, published by the National

Development of Farmer friendly Literature related to Animal Husbandry

Institute of Agricultural Extension Management (MANAGE), Rajendranagar, Hyderabad – 500030, Telangana State, India.

Nair A. (2023). Stay Awake and Updated: The Changing Dynamics of Agri Journalism in India. Blog:199 (May 2023).

Narayanan, M.K. Shahaji Phand, Prejit, Jess Vergis, Asha K. and Vidya P. (2021). ICT Tools for Management and control of Emerging Zoonoses and Animal Health Threats [e-book]. Hyderabad: National Institute of Agricultural Extension Management (MANAGE) & Kerala Veterinary and Animal Sciences University.

Saravanan, R. and Bhattacharjee, S (2013): Mobile Phone and Social Media for Agricultural Extension: Getting Closer to Hype & Hope? International Conference on Extension Educational Strategies for Sustainable Agricultural Development: A Global Perspective: December 5-8, 2013, University of Agricultural Sciences, Bangalore, India.

Saravanan, R. and Suchiradipta, B. (2016). Social media policy guidelines for agricultural extension and advisory services. GRFRAS interest group on ICT4RAS: 9-11.

ICT enabled Agricultural Extension. (2015). ICT Tools and applications in Agricultural Extension. Published by-EEI (NE Region), AAU, Jorhat

Raj Saravanan and Bhattacharjee Suchiradipta (2015). mExtension–Mobile Phones for Agricultural Advisory Services, August 2015, <https://www.g-fras.org>.

Westlund, O. (2012). MOBILE NEWS: A review and model of journalism in an age of mobile media. *Digital Journalism*, 1(1), 6–26. <https://doi.org/10.1080/21670811.2012.740273>

<https://www.masterclass.com/articles/how-to-write-a-blog-post>

<https://datareportal.com/reports/digital-2020-global-digital-overview>.

Teaching Manual on Communication Methods and Agricultural Journalism Manjeet Singh Nain Principal Scientist (Agricultural Extension). Division of Agricultural Extension ICAR-Indian Agricultural Research Institute New Delhi -110012 ISBN: 978-93-83168-49-1.

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INTERNET BASED TOOLS FOR EASY DISSEMINATION OF ANIMAL HUSBANDRY RELATED INFORMATION

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Introduction

The rapid advancement of information and communication technologies (ICTs) has significantly transformed various sectors, including agriculture and animal husbandry. Internet-based tools have emerged as powerful platforms for the efficient transfer of information, enabling farmers, veterinarians, and livestock managers to access real-time data, expert advice, and innovative solutions. These tools facilitate improved decision-making, early disease detection, efficient breeding practices, and enhanced livestock management, ultimately contributing to increased productivity and profitability.

From mobile applications providing weather forecasts and market prices to online forums fostering knowledge exchange and e-learning platforms offering specialized training, internet-based tools are bridging the information gap between researchers, extension workers, and farmers. As internet penetration continues to grow, these tools offer the potential to revolutionize the way animal husbandry-related information is shared, ensuring sustainable livestock practices and improved animal welfare. This paper explores various internet-based tools available for information transfer in the animal husbandry sector, highlighting their applications, benefits, and prospects.

Some of the Internet-based tools for transferring Animal Husbandry information are:

- ✓ Discussion Forums and Online Communities
- ✓ Mobile Applications
- ✓ Video-Sharing Platforms (YouTube)
- ✓ Social Media Platforms (Facebook, Instagram, Twitter)

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- ✓ Knowledge Sharing Platforms (Wikis, Blogs, and Websites)
- ✓ Email Newsletters and Mailing Lists
- ✓ Podcasts and Audio-Sharing Platforms
- ✓ Voice over Internet Protocol (VoIP) Platforms (Zoom, Skype, Google Meet)
- ✓ Document Sharing and Collaboration Tools
- ✓ Photo sharing tools
- ✓ Crowdsourcing and Open Data Platforms
- ✓ Cloud-Based Farm Management Software

Discussion Forums and Online Communities

These provide a platform for farmers and experts to exchange ideas, share experiences, and seek advice on livestock management, disease control, and breeding practices, etc. They foster peer-to-peer learning and collaborative problem-solving. Farmers can get rapid responses to urgent queries about disease outbreaks, feed quality, and breeding issues. Best practices, innovations, and scientific knowledge are shared across communities.

Examples: KisanNet (Indian farmer-focused discussion platform), Agriculture Information Forum (Discusses animal husbandry practices), Quora – Animal Husbandry in India (Q&A platform with expert insights). IndiaDairy Forum, BAIF Development Research Foundation Forum, Vet Helpline India (VHL), TNAU Agritech Portal – Animal Husbandry Section, Poultry India Forum, Agropedia India – Livestock Section.

Mobile Applications

Mobile apps deliver real-time information, veterinary advice, and market updates to farmers, even in remote areas. Also, facilitate record-keeping, disease tracking, and breeding management. Instant notifications about disease alerts, vaccination schedules, and weather changes can be given to farmers. AI-based tools help in predicting heat cycles and calving dates. Example: e-Gopala App launched by the Government of India for breed improvement, AI services, and health management.

Video-Sharing Platforms

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YouTube is the most popular video sharing platform. The video tutorials demonstrate best practices, disease prevention techniques, and farm management visually. Farmers can learn complex procedures easily through step-by-step instructional videos. Farmers can visualize techniques such as artificial insemination, milking hygiene, and disease management, etc. Videos can also be made in regional languages which enhances inclusivity and comprehension. Examples: TNAU and Indian Dairy Association YouTube channels. By using a mix of tutorials, expert insights, success stories, and interactive content, you can effectively empower farmers to improve livestock management and productivity through these platforms.

Social Media Platforms

Facebook, Instagram, Twitter are most popular platforms. These facilitate real-time updates, knowledge sharing, and networking. Thus, support information exchange through groups, pages, and hashtag campaigns focused on animal husbandry. Live sessions and Q&A opportunities with veterinary experts and agri-consultants can be done through these platforms. Exhibitions, conferences, seminars, training programs and meetings related to animal husbandry can be advertised. Farmers stay informed about new policies, government schemes, and emergency disease outbreaks.

Instagram can be a dynamic platform to transfer information about animal husbandry to a global audience. By leveraging its features like posts, reels, stories, and live sessions, you can engage, educate, and empower farmers and stakeholders.

Twitter offers a dynamic, real-time platform to share valuable information and build strong networks within the animal husbandry community. With its 280-character limit, Twitter encourages concise and engaging content, making it ideal for sharing quick updates, insights, and links to more detailed information. Hashtags help categorize tweets and make your content easily discoverable by the right audience. Since Twitter limits post length, use it to link to in-depth blog posts, articles, or videos that offer comprehensive information.

Knowledge Sharing Platforms (Wikis, Blogs, and Websites)

These host scientific articles, guides, and research findings on animal husbandry. These platforms enable open access to updated information on various aspects of livestock like breeding,

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nutrition, diseases etc, and market trends. These create a centralized knowledge repository on animal husbandry practices and facilitate self-paced learning and continuous knowledge improvement. Thus, enhances access to research-backed best practices for animal husbandry, with which farmers and veterinarians can learn from global and regional case studies. Eg: MediaWiki, Confluence, Notion.

Blogs can serve as a repository for research findings, innovations, and success stories in animal husbandry. Also, guest contributors, veterinarians, and industry experts can be invited to share insights on specialized topics. Blogs can provide valuable downloadable resources that farmers can use in their daily operations. Visuals and videos can make complex animal husbandry concepts easier to understand through these platforms. WordPress, Blogger (Beginner-friendly and free) and Wix or Squarespace (Ideal for visually appealing designs) can be used.

Google Classroom, Microsoft Teams, Quora, Slack are other examples of Knowledge sharing platforms.

Email Newsletters and Mailing Lists

Here the main purpose is to provide weekly/monthly updates on various aspects of animal husbandry and concerned policy changes, if any. Customized information will be delivered directly to the inboxes of farmers and stakeholders. Newsletters summarize government initiatives, market trends, and disease control updates. This ensures that farmers receive timely and relevant information without searching for it.

Examples: ICAR-Indian Veterinary Research Institute (IVRI) newsletters, Updates of National Dairy Development Board (NDDB).

Podcasts and Audio-Sharing Platforms

Podcasts offer audio-based learning on animal husbandry practices, latest innovations, and policy updates. These kinds of platforms enable farmers to listen and learn while performing routine tasks. Audio sharing platforms are most suitable for farmers with limited internet bandwidth or literacy challenges. Spotify, SoundCloud, Apple Podcasts, Anchor, and Clubhouse are some of the examples of Audio sharing platforms. Telegram Voice Notes for Quick Updates and Information, WhatsApp Voice Messages for Group Knowledge Sharing can also be used.

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Example: CEAH Podcast

Voice over Internet Protocol (VoIP) Platforms (Zoom, Skype, Google Meet)

The main purpose of these kinds of platforms is to enable virtual consultations, training sessions, and knowledge-sharing webinars. These facilitate real-time expert guidance and farmer group discussions. Capacity-building programs for rural farmers through online training can be conducted and allow direct interaction between farmers and veterinary experts. Thus, VoIP platforms ensure farmers get the right information at the right time.

Examples:

- Zoom/Google Meet Webinars for veterinary training and farmer education can be conducted.
- Skype Consultations can be done for individualized veterinary advice.
- WhatsApp, Microsoft Teams are other examples.

Document Sharing and Collaboration Tools

These kinds of tools will facilitate data sharing, document editing, and collaboration among stakeholders. For eg: sharing disease outbreak reports, vaccination schedules, and farm performance records, etc. Thus, allows seamless collaboration on research and policy development and ensures that all stakeholders have access to updated information.

Examples: Google Drive/Dropbox (Share research papers and case studies) and Microsoft Teams/Slack (For collaborative discussions and knowledge sharing).

In Google Drive, folders, and subfolders (like Breeding, Feeding, Livestock performance data) for various categories can be created. Appropriate sharing permissions for farmers, veterinarians, and stakeholders can be set and offline access can be enabled for farmers with limited internet connectivity.

Use Dropbox for Easy Access and Sharing of Large Files. Large multimedia files such as tutorial videos, images, and manuals can be shared. Offline access to animal husbandry resources for remote farmers can be enabled.

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Google Docs and Microsoft Word Online for Real-Time Collaboration with editing options can be used. Also, export documents as PDFs or Word files for offline sharing is possible.

Use Microsoft OneDrive for Secure File Management. Critical livestock management documents can be stored, organized, and shared securely. Any guidelines, and training manuals can be uploaded. Microsoft Word, Excel, and PowerPoint can be used to create documents, track performance, and present data. Microsoft Forms can be used for data collection and survey responses from farmers

Google Sheets and Microsoft Excel for Data Collection and Analysis of livestock health records, vaccination schedules, and feed plans. Google Forms or Microsoft Forms can be used for data collection and link responses to the spreadsheet.

Google Meet and Zoom for Virtual Knowledge Transfer like hosting online training sessions, webinars, and workshops on animal husbandry. Also, enable farmers and experts to collaborate and share experiences. Recording the sessions and sharing of recorded content with participants after the meeting is also possible.

Photo Sharing Tools

The tools allow farmers, veterinarians, and animal husbandry experts to visually document, share, and educate others about livestock management, disease prevention, and best practices. Platforms such as Flickr, Instagram, Google Photos, Pinterest, and Facebook provide opportunities to engage audiences and facilitate information transfer effectively.

Flickr can be used to create a visual repository of animal husbandry practices and share high-resolution photos with relevant descriptions and tags. Also allow downloads so that others can use your photos for educational purposes. By leveraging Flickr's features such as albums, photo descriptions, group discussions, and video sharing, effective transfer information to a wide audience is possible.

Instagram can be used for sharing Real-Time Information and Tutorials to educate and engage farmers and livestock enthusiasts. Hashtags like #AnimalHusbandry, #LivestockFarming, #FarmTips, and #DairyCare can be used to increase post visibility.

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Pinterest can be used to create pinboards with categorized information for farmers. Infographics, photo tutorials, and success stories can be pinned to boards.

Google Photos can be used to store, organize images, and share visual content securely with farmer groups or veterinary experts.

Canva can be used to design visually appealing educational content for sharing on multiple platforms and helps in simplifying complex concepts through easy-to-understand graphics. Templates already available can be used to make infographics related to various aspects of animal husbandry. These infographics can be downloaded and shared across platforms like Flickr, Instagram, and Facebook.

Crowdsourcing and Open Data Platforms

These kinds of platforms enable data collection, analysis, and sharing of livestock performance metrics and encourage community-driven research and knowledge exchange. Thus, these contribute to evidence-based decision-making in animal husbandry and promote transparency and knowledge-sharing across communities. Example: AgriCrowd – Crowdsourcing data from Indian farmers.

Cloud-Based Farm Management Software

This software offers real-time monitoring, record-keeping, and performance analysis for livestock. Also helps to automate breeding, feeding, and health management tasks. Thus, improves operational efficiency and productivity and enables farmers for data-driven decision-making to optimize livestock performance. Example: DeLaval Herd Management System – Monitors cattle health and milk production.

Conclusion:

The integration of internet-based tools in animal husbandry has revolutionized the way information is transferred, empowering farmers, veterinarians, and livestock managers with timely and accurate data. These tools, including mobile applications, web-based platforms, online advisory services, and digital marketplaces, have enhanced decision-making, improved disease management, and facilitated the adoption of best practices in livestock rearing. By bridging the

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gap between researchers, extension workers, and farmers, these technologies have enabled knowledge sharing and capacity building, leading to increased productivity and sustainable animal husbandry practices.

However, while the benefits are undeniable, challenges such as digital literacy, internet accessibility in rural areas, and the need for localized content must be addressed to maximize the potential of these tools. Moving forward, greater efforts in training, infrastructure development, and policy support are essential to ensure the widespread adoption and effective utilization of internet-based tools in animal husbandry. With continued advancements in technology and increased internet penetration, the future holds immense potential for further transforming livestock management and ensuring the sustainability of the animal husbandry sector.

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SCRIPT WRITING FOR ELECTRONIC MEDIA

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Introduction

In media production, script refers to the blueprint of the programme in a written form. A script translates ideas into actions that can be recoded and transmitted to the listener/ viewer. It contains spoken words, various cues and a set of instructions that are useful to other members of the production team. In short, a script tells the cast and the crew what to do, when to do and how to do. All programs produced for radio and television require a script.

Qualities of a Script Writer

A good script writer has following qualities:

1. S/he must know the scope and limitations of production.
2. The plot, characterization, scenic descriptions, and language used in the script should keep the availability of resources in mind.
3. S/he must present original ideas in an interesting manner. A scriptwriter should not be a copycat.
4. Her/ his ideas must appeal to the audience - at least to the target audience.
5. S/he should be able to deal with the plot in an entertaining manner.
6. S/he should have a clear idea about whom s/he is writing for and know their preferences.
7. S/he should be experienced and knowledgeable about how the medium operates. An insight into the language and technicalities of production will enable the scriptwriter to fit her/his work better into the production requirements.

Programme formats

Radio and television programs generally fulfill the basic functions of mass communication – information, entertainment, and education. There are various types of programs which the mass media offers to the audience. Based on format, which refers to the arrangement and style of message, they can be classified into the following types:

1. Interview: An interview programme takes the question-and-answer form. In an interview, the interviewer (reporter/ host) asks questions to the interviewee (expert/ respondent) who answer them for the benefit of the audience. Interview can take several forms. In one form, the interviewer questions the interviewee alone... In another form, two or more interviewers take turns to ask questions, to which the interviewee(s) provides answers. This is known as forum or panel interview. Sometimes, the reporter stations himself/herself at a public place and asks people about their opinion on an issue or an event or a personality. This is known as vox pop (from the Latin expression *vox populi*). In phone – in interview, the guest answers the questions posed by audience located at far off places.
2. Discussion: Discussion programme is mainly aimed towards the exchange of opinions and information and arriving at solutions. The purpose of the discussion programmes is to help clarify issues which are not clear to the public. A discussion usually has a beginning, middle and an end and needs to be planned carefully. In this, the discussants try to convince each other. Any issue or problem, which is directly relevant to the audience can be used for discussion. The discussion itself can take many forms like symposium, panel, group discussion and debate.
3. Magazine: In radio or television production, a magazine programme contains several items which are seamlessly linked by the presenter. Each item of the magazine is allotted time after which another segment takes over. To ensure effective linkage of various segments, music or commercials is often used as a bridge. Sometimes the presenter can bridge the segments by summarizing the preceding segment and telling the audience about the upcoming segment. A magazine programme can include music, news, interviews, discussion, human interest features, sport, especial events, skits, etc.
4. Documentary: A documentary programme refers to a presentation which provides a complete record of a place, person, or subject of special significance. It contains record of real events. The documentary contains real experience, real people, and real situations or settings.

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5. **Feature:** The feature programme is based on ideas of the producer, re-enactments of what has happened by actors, people playing the parts of those originally involved in the events or experiences being enacted. It only deals with one subject at a time, which makes it different from the magazine programme (which deals with many subject topics at a time). While producing a feature program, the producer enjoys reasonable degree of freedom to exercise her/his creativity, without misleading the people.
6. **Drama:** A drama programme is the most common format in radio and television production. This has high entertainment value and is fictitious. Drama programmes can often effectively combine elements of education and entertainment (edutainment). A drama on radio and television can take several forms. A single-play or independent drama contains a complete story presented in one broadcast. In series, the same characters are used in each episode. However, a different story/ theme is dramatized in each episode. A serial is an ongoing story that continuous from one broadcast to another. Each episode is open-ended, and the story is picked up and continues in the next episode.

Writing for Radio: Though radio script is written, it is meant to be spoken not read by receiver. Hence, following points should be kept in mind while writing for radio:

- a) It should be written for the ear, not the eye.
- b) It is heard only once, so build in some degree of repetition to ensure that the message is retained by the listener.
- c) It should sound conversational without being informal.
- d) Avoid usage of difficult or unfamiliar words.
- e) The sentences should be short and simple.
- f) Confine to one idea/topic/theme.
- g) Avoid using vague or abstract words, but the script should be able to create pictures in the minds of the listeners.
- h) Avoid abbreviations and short forms.
- i) If the script consists of numbers, round them off to the nearest whole number.
- j) Do not overuse human voice or spoken words. Try to include other sound elements where ever possible.

Use silence creatively, but sparingly as it may confuse the listener.

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Example of a Radio Script

[OPENING MUSIC]

Interviewer: “Good morning, I’m [Name] and today we have with us an eminent marine biologist. Dr [Name] and his team have recently discovered a new species in the Indian Ocean. Dr [Name] Welcome to the show. Can you tell our listeners about this new marine species?”

Dr [Name]: “Good morning, everyone. We discovered this new species quite by accident. Our team is still examining whether it is a new species, or an evolved version of species found in the area.”

Interviewer: “What are the implications if it is an entirely new species?”

Dr [Name]: “If it turns out to be a new species, it will pose a challenge to the present system of classification.”

Writing for Television

Following points should be kept in mind while writing the script for television:

- a) The script should predominantly rely on visuals to move the narrative forward.
- b) All dialogues must be written for the ear and to complement the visuals.
- c) Sentences should be simple, direct and to the point.
- d) The language used should direct attention to the visual information.
- e) Audio elements should complement and strengthen the visual information.

Script Formats

Format refers to the layout and design of the script and scripts can be of four types based on the format. They are:

- a) Full script: It includes every word that is to be spoken during a show as well as detailed audio and video instructions. It does not allow any deviation. News, commercials, and drama use the full script format.
- b) Partial script: This is also known as a semi-scripted show format. In general, the opening and closing remarks are fully scripted, but the bulk of what people say is only indicated. In this case, the talent/cast is given an opportunity to ad-lib, and contribute to the production, within the theme. The partial script includes all the words to be delivered by the anchor.

The talents ad-lib from their experience but in line with the role they are expected to play, to meet the purpose of the programme. Product demonstrations, interviews on specific subjects and educational programmes, take this format of presentation.

- c) **Rundown Sheet:** The rundown format shows the outline of the entire show, from the beginning to the final fade-out. It shows the order in which the programme is going to unfold and indicates the accompanying dialogue in a fairly sketchy manner. A well-written run-down sheet or format indicates each segment, the cast involved and its approximate running time. Rundown format can be used for some musical programmes, magazine programmes, discussion programmes.
- d) **Show format:** The show format only lists the order of a particular show segment. It lists the major points in which action is going to take place, as and major clock and running times for the segments. A show format is frequently used in studio productions that have established performance routines, such as a daily morning show, or a quiz show.

VIDEO	AUDIO
1) FADE UP TO A TWO SHOT OF THE HOST AND THE GUEST IN THE STUDIO	(FADE UP MUSIC)
2) MCU OF THE HOST	(FADE MUSIC UNDER) HOST: Good morning, I'm [Name] and today we have with us an eminent marine biologist. Dr [Name] and his team have recently discovered a new species in the Indian Ocean. Dr [Name] welcome to the show. Can you tell our listeners about this new marine species.
3) MCU OF THE GUEST	DR X: Good morning, everyone. We discovered this new species quite by accident. Our team is still examining whether it is a new species, or an evolved version of species found in the area.
4) MS OF HOST	HOST: What are the implications of your discovery, if it is an entirely new species.

5) MCU OF GUEST. ZOOM OUT TO A TWO SHOT.	GUEST: If it turns out to be a new species, it will pose a challenge to the present system of classification.
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Summary

Script is the backbone of media programmes. It tells the production team what to do, reduces time and cost of production and reduces confusion. A good script writer should have a thorough understanding of the medium and the limitations within which the production is going to take place. Programs can be divided into various types based on the format. Important among them are interview, drama, documentary, feature, discussion, and magazine. A good radio script is always written for the ear, should use short sentences and simple words and have some degree of repetition. On the other hand, a television script should predominantly rely on visuals, all dialogues must be written to complement the visuals and the language used should direct attention to the visual information. Scripts are of four types, viz; full, partial, run-down sheet and show format.

WRITING FOR SOCIAL MEDIA: TIPS & TOOLS**Devesh Thakur**

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Part A: Navigating Social Media with Purpose

In today's digital age, social media is not just a tool for communication; it is a powerful platform for sharing knowledge, building communities, and driving change. However, to truly harness its potential, it's essential to approach social media with clarity and intent. This is where the Japanese concept of Ikigai comes into play—a philosophy that encourages finding purpose and fulfillment in all aspects of life. By aligning your social media activities with your Ikigai, you can create content that resonates deeply with your audience while staying true to your values and passions.

Introduction to Ikigai

Ikigai, a Japanese concept that translates to "your reason for being," originated from Okinawa, Japan, an island known for its high population of centenarians. This philosophy is considered a significant factor in their longevity and joyful lives. Ikigai emphasizes a harmonious blend of purpose and happiness, forming the essence of a fulfilling life.

Reflecting on Your Ikigai

When contemplating your ikigai, it's essential to consider all aspects of your life, not just your professional identity. Ikigai exists at the intersection of four key elements:

1. **What You Are Good At** - This includes both everyday skills, like making people laugh, and specialized abilities, like technical expertise.
2. **What You Love** - Activities you enjoy so much that time flies when you are engaged in them.
3. **What the World Needs** - Beyond formal qualifications and jobs, determine if the combination of your skills and passions addresses a meaningful problem.
4. **What You Can Be Paid For** - Are people willing to pay for it?

Introspecting on your ikigai may reveal other intersections, such as:

- **Your Passion:** What you love and are good at, even if it is not monetized yet.
- **Your Mission:** What you love and what the world needs, even if you are not good at it or able to monetize it.
- **Your Vocation:** What the world needs and what you can be paid for, which some may feel stuck in due to necessity.
- **Your Profession:** What you can be paid for and are good at, but it may not fulfill your deeper sense of purpose.

Steps to Discovering Your Ikigai

5. **Find Out What You Are Good At:** Ask friends and family about things you did that impressed them, even from childhood. Make a list.
6. **Identify What You Love:** From the list above, highlight the things you truly enjoy doing.
7. **Determine What the World Needs:** Consider how the combination of what you love and what you're good at can solve a problem for the world. Don't worry about competition or feasibility—focus on the opportunity.
8. **Consider What You Can Be Paid For:** Only consider this step when the first three are in order. Often, when aligned with your ikigai, revenue opportunities will naturally follow.

Ikigai is a positive-sum concept—multiple people can share the same ikigai, and it remains meaningful.

Ikigai and Your Social Media Journey

Understanding your ikigai is crucial as you navigate your journey in writing and engaging on social media. Here is how the four elements relate to your social media presence:

9. **What You Are Good At:**
 - Identify your strengths in writing and content creation. Whether it is crafting compelling narratives, creating visually appealing posts, or engaging with your audience, leveraging your skills will enhance your social media impact.

10. What You Love:

- Focus on the content you are passionate about. When you write about topics you love, your enthusiasm and genuine interest resonate with your audience, making your content more engaging and authentic.

11. What the World Needs:

- Think about how your social media can solve the needs or problems of your target audience. This might involve providing informative content, solutions, or inspiration, and building a meaningful connection with your followers.

Harnessing Ikigai for Effective Social Media Use in Animal Husbandry and Dairy Farming

Farmers in animal husbandry and dairy farming can use the philosophy of Ikigai to create meaningful and effective social media content, aligning what they are good at, what they love, what the world needs, and what they can be paid for.

12. What You Are Good At: Showcase Your Expertise

- Example: If you're an expert in dairy cattle breeding, create posts or videos explaining best practices in selecting, breeding, and caring for dairy cows.

13. What You Love: Share Your Passion

- Example: If you love traditional farming techniques, document, and share the process of hand-milking cows or organic feed preparation.

14. What the World Needs: Provide Value to Your Audience

- Example: Share content that helps small-scale farmers improve their operations, such as tips on reducing feed costs or improving milk quality.

15. What You Can Be Paid For: Monetize Your Expertise

- Example: If you produce high-quality dairy products, promote them on social media. Share behind-the-scenes content and offer special deals to your followers.

Integrating the Four Elements: Your Social Media Strategy

By integrating all four elements of Ikigai, you can create a balanced and effective social media strategy that is fulfilling for you and valuable to your audience. Your strategy should:

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- **Continue sharing what you love** (Passion).
- **Create content that serves the greater good** (Mission).
- **Balance mission with monetization opportunities** (Vocation).
- **Showcase your professional expertise** (Profession).

Conclusion: Finding Your Ikigai in Farming and Social Media

Applying Ikigai to your social media strategy allows you to build a meaningful online presence that aligns with your values and goals. Focus on what you are good at, what you love, what the world needs, and what you can be paid for, using social media as a platform for growth, connection, and impact in animal husbandry and dairy farming.

Part B Understanding the Diversity of Writing Styles

Writing is a versatile tool that serves various purposes, from sharing quick updates to exploring complex ideas in depth. The style and structure of your writing should align with your goals and audience. Whether you are creating a concise social media post, an engaging article, or a detailed report, understanding different writing styles is key to effective communication. In this section, we explore the various types of writing, categorized by length and purpose, to help you choose the best approach for your message.

A. Length-based Writing

16. Short-Form Writing:

- **Word Count:** Less than 100 words.
- **Focus:** Deals with one idea.
- **Purpose:** Designed for quick consumption, delivering a message with clarity and impact.
- **Examples:** Tweets, reel scripts, captions.

17. Medium-Form Writing:

- **Word Count:** 100-300 words.
- **Focus:** Builds upon one idea with more background.

- **Purpose:** Engages readers with a clear narrative or message, offering more depth than short-form writing.
- **Examples:** LinkedIn posts, blogs, articles.

18. Longer-Form Writing:

- **Word Count:** More than 500 words.
- **Focus:** Discusses multiple ideas in detail.
- **Purpose:** Targets readers deeply interested in a topic, providing a comprehensive exploration.
- **Examples:** Newsletters, books, essays.

B. Purpose-based Writing

19. Informational Writing:

- **Purpose:** Educates or informs the audience with clarity and precision.
- **Examples:** Articles, reports, essays.

20. Creative Writing:

- **Purpose:** Emphasizes self-expression and imagination, conveying deeper truths and human experiences.
- **Examples:** Storytelling, poetry, personal essays.

21. Functional Writing:

- **Purpose:** Practical and task-oriented, designed to facilitate clear communication.
- **Examples:** Instructions, emails, business documents.

Part C: Enhancing Social Media Content with Strategic Approaches

Creating effective social media content requires more than just posting regularly; it involves a thoughtful strategy that resonates with your audience and reflects your values. One such approach is the "3 Cs of Content" strategy, which helps content creators balance inspiration, organization, and originality in their posts. By understanding and applying this method, you can craft content that not only engages but also provides real value to your followers. Let us delve into how the "3 C's" can shape your social media strategy for maximum impact.

The Three C's Approach to Content Creation in Social Media

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The "3 Cs of Content" approach involves:

22. Copy:

- **Purpose:** Draw inspiration from successful content in your niche.
- **Method:** Adapt ideas from creators, publications, or posts, adding your personal insights.

23. Curate:

- **Purpose:** Gather and organize content from various sources to offer value to your audience.
- **Method:** Find relevant content, organize it, and present it to your audience with your own commentary or perspective.

2. Curate

- **Purpose:** To gather and organize content from various sources to offer value to your audience.
- **Method:**
 - a. Identify reputable sources, influencers, or publications that align with your niche.
 - b. Collect and compile content that your audience would find valuable, such as articles, videos, or social media posts.
 - c. Present this curated content with your own commentary or insights to add value and context for your followers.
- **Example:** If you are focusing on sustainable dairy farming, you might curate a weekly roundup of articles on the latest eco-friendly farming practices, supplemented with your own tips and experiences.

3. Create

- **Purpose:** To produce original content that showcases your unique perspective and expertise.
- **Method:**
 - d. Start with an idea or insight that is uniquely yours or deeply resonates with your experiences and passions.

- e. Develop this idea into a piece of content—whether it's a blog post, video, infographic, or podcast—that reflects your voice and expertise.
 - f. Ensure your content is both engaging and informative, providing real value to your audience.
- **Example:** Create a detailed video tutorial on effective dairy cattle management, based on your hands-on experience, offering step-by-step guidance for beginners.

Integrating the 3 Cs into Your Social Media Strategy

By combining these three approaches, Copy, Curate, and Create—you can build a robust and dynamic social media presence:

- **Copy:** Use it to stay relevant and inspired, bringing tried-and-tested ideas to your audience in a fresh way.
- **Curate:** Show that you are well-connected and knowledgeable by sharing valuable content from other experts.
- **Create:** Establish your unique voice and authority by regularly producing original content that reflects your personal or professional expertise.

Conclusion

Using the "3 C's of Content" approach in tandem with the principles of Ikigai can help you develop a meaningful, impactful social media presence. Whether you are in animal husbandry, dairy farming, or any other niche, this strategy allows you to resonate with your audience, stay relevant, and achieve your social media goals.

MOBILE STORYTELLING & MOBILE JOURNALISM: RELEVANCE IN ANIMAL HUSBANDRY

Madhavi Ravikumar

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Introduction

Mobile journalism, or ‘mojo,’ has rapidly transformed the media landscape, providing an accessible and flexible platform for news gathering, reporting, and dissemination. By using smartphones and other portable devices, journalists and storytellers can produce high-quality content on the go, bypassing traditional constraints associated with conventional journalism. This approach is particularly significant in sectors like agriculture and animal husbandry, where real-time, localized, and context-specific information is crucial. The growth of mobile storytelling has not only democratized content creation but also enabled marginalized voices to contribute to the global narrative. In animal husbandry, mobile journalism plays a pivotal role in enhancing productivity by providing instant access to expert advice, informing stakeholders by sharing best practices and market trends and promoting sustainable practices by raising awareness. These benefits underscore the importance of mobile journalism in animal husbandry and advocate for its widespread adoption.

The growth of mobile journalism

Mobile storytelling has seen exponential growth over the past decade, fueled by advancements in smartphone technology, increased internet penetration, and the proliferation of social media platforms. This growth is especially prominent in regions where traditional media infrastructure is limited or inaccessible. Mobile journalism allows for immediacy, enabling journalists to capture and share stories as they unfold. Additionally, it offers cost-effective solutions for content creation, making it an attractive option for freelance journalists, small media houses, and even non-governmental organizations (NGOs).

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Mobile phone penetration in India

The growth of mobile journalism in India is strongly tied to the country's increasing mobile phone penetration. As of 2023, India had over 1.1 billion mobile phone users, with approximately 750 million of these being smartphone users. This widespread adoption has been driven by affordable data plans, the proliferation of low-cost smartphones, and government initiatives to promote digital inclusion. In rural India, where the majority of the population relies on agriculture and animal husbandry, mobile phone penetration has reached nearly 60%, significantly enhancing access to information and communication technologies.

According to the Telecom Regulatory Authority of India (TRAI), rural tele density (the number of telephone connections per 100 people) reached 60.84% by mid-2023. This marks a significant increase from the previous decade and highlights the growing importance of mobile technology in rural development. With more than half of rural households now having access to a mobile phone, the potential for mobile storytelling to reach and impact rural communities, especially in sectors like animal husbandry, is enormous.

Importance of mobile journalism in animal husbandry

The importance of mobile storytelling in animal husbandry cannot be overstated. It provides a platform for farmers, veterinarians, and other stakeholders to access and share critical information, leading to improved livestock management practices, disease control, and market access. Mobile journalism also facilitates the documentation of traditional knowledge, the reporting of on-ground realities, and the dissemination of success stories, all of which contribute to the overall development of the sector.

1. Real-time reporting on animal health

Mobile journalism allows for real-time reporting on animal health issues, such as disease outbreaks or the introduction of new veterinary practices. For instance, during the 2021 outbreak of Lumpy Skin Disease in cattle across several Indian states, mobile journalists were quick to report on the spread of the disease and the measures being taken by authorities to contain it. These

reports shared widely on social media and local news platforms, played a crucial role in raising awareness and guiding farmers on preventive measures.

2. Market information and livestock prices

Access to timely market information is vital for livestock farmers, as it directly impacts their income and decision-making processes. Mobile storytelling has been instrumental in providing real-time updates on livestock prices, demand, and market trends. In India, platforms like the AgriMarket app, which is integrated with mobile journalism practices, offer farmers the latest market information. Journalists contribute by covering local markets, interviewing traders, and reporting on price fluctuations, helping farmers make informed decisions.

3. Coverage of animal husbandry policies

Mobile journalism has also played a significant role in covering government policies related to animal husbandry. In 2019, when the Indian government launched the National Animal Disease Control Programme (NADCP), mobile storytellers were at the forefront of reporting on its implementation across different states. They documented the challenges faced by veterinarians in remote areas, the response from local communities, and the overall impact of the program. This coverage helped highlight the gaps in policy implementation and encouraged more effective solutions.

4. Highlighting local innovations

Mobile storytelling is a powerful tool for showcasing local innovations in animal husbandry. For example, a mobile journalist in Tamil Nadu documented the work of a farmer who developed a cost-effective method for feeding cattle using locally available resources. The story, shared widely on WhatsApp and Facebook, inspired other farmers in the region to adopt similar practices, leading to increased productivity and reduced costs.

Production, distribution, and consumption on smartphones

The advent of smartphones has transformed the entire ecosystem of media production, distribution, and consumption. Mobile journalism and storytelling are prime examples of this shift, particularly in fields like animal husbandry, where accessibility and immediacy are paramount.

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1. Production

Smartphones have revolutionised content production by enabling anyone with a mobile device to create high-quality multimedia content. Tools like high-resolution cameras, built-in editing software, and various mobile apps have made it possible to produce professional-grade content on the go.

Filmic Pro: This app provides advanced camera controls, allowing journalists to adjust exposure, focus, and frame rates, making it a favorite among mobile journalists for shooting high-quality videos.

LumaFusion: A powerful mobile video editing app, LumaFusion allows users to edit videos directly on their smartphones, offering features like multi-track editing, colour correction, and audio mixing.

Adobe Spark: This app enables users to create engaging visuals, including videos and social media posts, with easy-to-use templates and customization options.

2. Distribution

The distribution of content has been equally transformed by mobile technology. Social media platforms like Facebook, WhatsApp, Instagram, and YouTube are now primary channels for disseminating content. These platforms allow for instant sharing and viral distribution, making it possible for stories to reach a wide audience in a short time.

WhatsApp: Often used for community-based communication, WhatsApp allows journalists to distribute content directly to groups, fostering direct engagement with the audience.

YouTube: Mobile journalists can easily upload their videos to YouTube, where they can reach a global audience. The platform's algorithms help in content discovery, enabling relevant stories to reach the right audience.

Instagram: With its emphasis on visuals, Instagram is a popular platform for sharing photo essays, short videos, and stories. The Stories feature, in particular, allows for ephemeral content that engages viewers with timely updates.

3. Consumption

The consumption of media has also shifted to mobile platforms, with a growing number of people accessing news and stories through their smartphones. This has led to the rise of mobile-first content strategies, where stories are tailored for mobile consumption, often focusing on shorter, more engaging formats.

Scroll-based reading: Mobile users prefer content that is easy to scroll through, with headlines, bullet points, and images breaking up the text. This format is particularly effective in delivering quick updates on animal husbandry-related issues.

Video content: With the increasing preference for video content, mobile journalism has embraced video storytelling, where short clips and documentaries provide visual narratives that are easy to consume on the go.

Interactive content: Tools like polls, quizzes, and interactive maps engage users more deeply, making the consumption of content on smartphones an active experience rather than a passive one.

Case Studies from India

1. Reporting on drought and its impact on livestock

During the severe droughts in Maharashtra in 2016-2017, mobile journalists played a critical role in reporting on the impact of water scarcity on livestock. Using their smartphones, storytellers captured videos and photos of dried-up water bodies, interviews with distressed farmers, and the measures being taken to provide water and fodder to affected animals. These reports brought national attention to the plight of livestock farmers and prompted government intervention.

2. Mobile storytelling in promoting indigenous breeds

In Rajasthan, mobile journalists have been instrumental in promoting the conservation of indigenous cattle breeds like the Tharparkar and Rathi. By documenting the unique characteristics

of these breeds, their adaptability to local conditions, and the efforts of local communities to preserve them, these storytellers have raised awareness about the importance of indigenous breeds in sustainable animal husbandry. Their stories shared on platforms like YouTube and regional news websites, have reached a wide audience, including policymakers and agricultural researchers.

3. Crowdsourcing veterinary solutions

In Kerala, a mobile journalism initiative called "Vet on Wheels" has been successful in crowdsourcing veterinary solutions for remote communities. Journalists use mobile devices to capture and share videos of livestock health issues, which veterinarians and experts then analyse. The experts provide feedback and solutions through the same platform, ensuring that farmers receive timely and accurate advice. This initiative has improved animal health outcomes and reduced the dependency on physical veterinary visits.

Opportunities and challenges

While mobile storytelling offers numerous opportunities for enhancing animal husbandry, there are also challenges that need to be addressed.

1. Opportunities

Empowerment of rural communities: Mobile journalism empowers rural communities by giving them a voice and enabling them to share their stories with a global audience.

Cost-effective reporting: Mobile devices reduce the costs associated with traditional journalism, making it easier for small media outlets and freelancers to cover important stories in the animal husbandry sector.

Enhanced connectivity: The integration of mobile storytelling with social media platforms enhances connectivity among farmers, veterinarians, and other stakeholders, facilitating the exchange of knowledge and best practices.

2. Challenges

Technical barriers: Limited access to smartphones and internet connectivity in some rural areas can hinder the growth of mobile journalism.

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Quality and accuracy: Ensuring the quality and accuracy of content produced through mobile storytelling is crucial. Journalists must be trained in fact-checking and ethical reporting to avoid the spread of misinformation.

Sustainability: The sustainability of mobile journalism initiatives in animal husbandry depends on continuous support from both the government and private sectors, as well as the development of robust business models.

Conclusion

Mobile journalism has become an indispensable tool in the field of animal husbandry, offering new ways to report on, document, and share information. Its growth in India and other parts of the world has opened opportunities for real-time reporting, market access, and the promotion of sustainable practices. By addressing the challenges and leveraging the opportunities, mobile storytelling can continue to play a pivotal role in the development of animal husbandry, ultimately contributing to the well-being of both livestock and the communities that depend on them.

BLOGGING AS A TOOL TO DISSEMINATE ANIMAL HUSBANDRY INNOVATIONS

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Livestock Research institutions generate a lot of new information and launch innovative products for boosting animal productivity and animal health care. This new knowledge and products must reach to the intended beneficiaries without any delay to make best use of fresh insight. Traditionally, we have been disseminating such new information & popularizing new products through personal contacts, print media, radio & TV programs. These traditional media often cause delays and have restricted reach. In the age of Internet-enabled value-added services like Social Media channels there are immense possibilities to take the new information much faster and at much less cost. Blogging is one such option.

Blogging is hard because of the grind required to stay interesting and relevant- Sufia Tippu

What is a blog

Blog is a regularly updated website or web page, typically one run by an individual or small group, which is written in an informal or conversational style. You can find plenty of blogs online on a range of topics. The bloggers jot down their personal experiences and opinions, at times detailed information too on specific subjects like technology, leisure, travel, food, fashion, and more. Most of us are used to reading research papers, popular articles, case and success stories, written often in great lengths. But, often, most of us don't have time & patience to read lengthy articles. This is going to be even further harder with fast pacing of life. So, what's the option? blogs could be the answer-short, crisp, engaging & solution oriented.

Blog is a kind of online journal where an individual, group, or corporation presents a record of activities, thoughts, or beliefs, often a bit informal way-conversational

Why to write blog?

If you have created something unique or think you can make a difference in society or profession through your work or thoughts, which are so novel? You would be looking for the platform to share that innovative stuff with right audiences. How do I do this? Normally people write research papers, articles in newspapers, print magazines etc. But you want to share it with wider audiences with enhanced reach quickly and with desired impact. Here you can think of writing blog! You know the audience, whom you want to share your ideas with. It is important to understand whom you are writing for and why they would be interested in? This will help tailor your content to meet their needs and preferences. You must be clear, why you are writing the blog and what you want to achieve through your blog. As livestock and veterinary professionals your audience largely would be veterinarians, pet or livestock owners and professionals engaged in dairying etc. So, you would be interested in sharing information, which can be of interest to the stakeholders in livestock sector.

<p><i>I blog because I have something to say – Eddie Huang</i></p>

Many international organizations including CGIAR institutions, UN agencies, the World Bank, non-profits, and private companies are now sharing their ideas and good practices through blogs. The individuals like me too though only occasionally indulge in blogging to share my thoughts, ideas with wider audiences. I understand it well that blogging is like a business that requires effort, time, and attention. I believe writing blogs is one good way to hone my writing skills, explore new ideas and build an online presence that revolves around my passions and expertise. Through my blogs I can inspire, educate, and entertain my readers. Many professional bloggers are making money and even have made it their full-time job. I have yet to reach to that level of excellence & demand as blogger.

The first thing you learn when you are blogging is that people are one click away from leaving you. So, you have got to get to the point, you cannot waste people's time, you have got to give them some value for their limited attention span – Alex Tabarrok

How to write blog?

If you are getting tempted to write a blog and willing to take deep dive into the world of blogging, find first what is blogging? Blogging is the act of writing and publishing content on a blog. It involves creating posts, managing the blog's content, engaging with readers, and often promoting the blog through various channels. Again, I would emphasize, blogging is like a business that requires effort, time, and attention. Writing a good blog requires effort, planning, and a strong understanding of your target audience. Select a topic that is interesting and relevant to your target audience. Do some research and brainstorm ideas to help you come up with an engaging topic. In web search, you will find a lot of articles on blog writing. I liked the one which is very crisp-How to Write a Great Blog Post. This gives a lot of practical information in short reading time using hyperlinks. Also, I liked **“How to start a blog in 10 steps: a beginners guide”**.



Source: <https://www.wix.com/blog/how-to-start-a-blog>

Blogging can be a highly effective tool for disseminating animal husbandry innovations due to its accessibility, wide reach, and potential for engaging various stakeholders. Here's how blogging can serve this purpose:

1. **Accessibility and Reach:** Blogging platforms are accessible to a global audience, making it easier to share new practices, technologies, and research in animal husbandry with a broader audience. This includes farmers, researchers, educators, and policymakers who can access the information anytime and anywhere.
2. **Education and Awareness:** Blogs can be used to educate farmers and the general public about innovative techniques, such as sustainable farming practices, new breeds, or veterinary care advancements. By regularly updating the blog with new content, it can serve as an ongoing educational resource.
3. **Community Engagement:** Blogs can foster a sense of community among readers, where they can share their experiences, ask questions, and discuss the applicability of certain innovations. This engagement can lead to the exchange of ideas and further refinement of practices.
4. **Visual and Practical Content:** Through blogs, detailed guides, tutorials, and case studies can be shared, often accompanied by images, videos, and infographics. This visual content can make complex information more digestible and practical for farmers to implement.
5. **Searchability and Permanence:** Unlike other forms of communication, blog content remains searchable and can be archived, allowing for easy reference to past innovations or methods. This is particularly useful for building a repository of knowledge over time.
6. **Linking to Other Resources:** Blogs can link to other relevant resources, such as research papers, videos, and expert opinions, providing a comprehensive resource hub for those interested in animal husbandry innovations.

Overall, blogging not only helps in disseminating innovations but also in creating a platform for continuous learning and exchange of knowledge in the field of animal husbandry.

Look at your blog like a product or a brand. What's going to make your blog different from what's already out there? – Brian Dean

Title of the blog: An attention-grabbing headline

Remember, you are writing the blog for an audience about whom you already know about- their interests. Try to capture their attention from the very beginning. So, select topics that are relevant to your audience and interesting enough to capture their attention. The title of the blog should be so compelling and appealing that it makes them to love it at first sight. Ensure that the topic is well-covered and provides value to readers. Your title should grab the reader's attention and make them want to read more. Ensure the title accurately reflects the content of the post. Always keep in mind, a good blog post is about one topic, one story, one idea. Do not try to say so many different things in one blog post.

My Tips for blogging...

- Be engaged in activities worth sharing
- Be creative, interactive & engaging to sustain interest
- Be alert & updated on topics of interest
- Have a positive outlook, suggest ways forward
- Personalize actions, use "I", We, You
- Write like you talk
- Be aware of social media- DOs & DON'Ts
- Always remember, EVERYONE appreciates a simple, actionable, and enjoyable post

You can master blogging, just take the first step ...

The First para: A captivating lead paragraph

You know how much first impressions matter, right? If title of your blog has compelled the readers to read, the first para should excite them further to read it till the end. If at any point, the readers feel you are not interesting enough, they may give up reading it. It is your job to hook the readers. So, start with a question, a quote, or a surprising fact to draw readers in. Also, give readers an idea of what to expect from the post. It should generate curiosity among the readers to continue reading it.

If you want readers to actually read your post, you will have to seduce them and make it worth their while- Peter Casier, "The Art of Seduction"

Interesting supporting points, this is the body of the article

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It is the major task now to say, how. Break your content into sections with clear headings to improve readability. Keep paragraphs short and concise. Use lists and bullet points to highlight key points. Use simple and clear language; write as if you're having a conversation with the reader. Ensure your post is informative and provides real value to the reader. Use examples to illustrate your points and make the content relatable. Put the most information first, use sub-headings & bullets. It's better if links are provided for further & more detailed information by citing papers, articles and other information sources. Write in a conversational tone that is easy to read and understand. Use anecdotes, examples, and humor to make your writing engaging. People have short attention spans, so keep your blog post concise and to the point. Break up long paragraphs into shorter ones and use bullet points or subheadings to make the content easier to scan. Use images, videos, and infographics to break up the text and make your blog post more visually appealing. An ideal blog should not exceed 1000 words, better if wrapped-up in 600 to 800 words. It's a matter of training, practicing, continuous engagement & experience (Box1).

Box 1: My Blogging journey

I published my first blog on 7 July 2013 at AESA platform. Incidentally, it was also the beginning of the Blog section at AESA i.e BLOG-1: Beyond treatment and breed improvement. In this blog, I had argued, the focus of livestock development in India should shift from breed improvement and disease management to strengthening knowledge provision to livestock keepers. Afterwards, I went on writing blogs for several platforms. In 2014, I got awarded for my blog published on the occasion of World Congress on Agro-forestry. I got a big break in 2017, when I got an invitation to attend a social media Bootcamp at FAO Headquarters in Rome. This was a big turning point for me, since I learnt some basic skills of blogging from Peter Casier, who happened to be Social Media Coordinator at FAO then. In a week, under his erudite guidance, I could publish 5 blogs in 5 days covering different session of 44th sessions of FAO's Committee on Food Security. I wrote about gender, livestock, organic agriculture, soils and youth issues. It has been a memorable experience for me having lasting impact that enabled me to write several blogs at various platforms later on. Yet another great moment came for me in 2017, when Global Forum on Agricultural Research and Innovation (GFAiR) invited me to share my Social Media success story. Such breaks boost the morale & confidence.

I'm still learning every time I publish a new blog! Still a long way to go to write good blogs!

I believe, what Penelope Trunk said...

"Blogging is good for your career. A well-executed blog sets you apart as an expert in your field."

Blogs on Animal husbandry

While writing blogs my focus is always on the agricultural extension, particularly on the projects I am handling like Agricultural Education, Agricultural extension, youth, gender, organic farming & livestock etc. As you all know, Covid-19 was a difficult & unprecedented experience for all of us, when we were confined to four walls of our homes. I took this as an opportunity to indulge in blog writing. I wrote number of blogs during or after the Covid. Writing on issues of contemporary interests draws people to these blogs and appreciation I get inspires me to write even better & impactful. There can be number of areas; you can consider writing blogs for stakeholders in livestock sector. For instance, if you are animal health specialist, you can write on health ailments impacting livestock sector (Box2).

Box2: Treating mastitis without antibiotics

We know Mastitis is one of the most common and costly diseases affecting dairy cattle worldwide. Clinical and subclinical mastitis alone cause mean annual global losses of approximately US\$13B, and US\$9B. By following a comprehensive management approach, like maintaining high standards of hygiene, providing proper nutrition, and monitoring herd health closely, dairy farmers can minimize the incidence of mastitis and its associated costs. Also, early detection and prompt treatment are crucial to maintaining milk quality and the overall health of the dairy herd. Yet, mastitis is a huge problem in dairy developed nations as also in developing countries like India. This universally prevalent disease of dairy animals is mostly controlled by antibiotics-only proven remedy so far! But antibiotics are very problematic too. Indiscriminate use of antibiotics leads to development of multiple drug resistant mastitogen. Besides, antibiotic residues, drug resistant bacteria and their products present in the milk causes threat to consumer's health. Consumers are now a days are so much health conscious that they may give up consuming milk if they come to know antibiotics have been used to treat dairy animals. So, what is the remedy?

Many alternative therapies are being explored globally to find safe treatment of mastitis. Farmers' local practices what we call Indigenous Technical Knowledge or farmers' traditional wisdom, Ayurvedic medicines, homeopathic remedies etc are being tried. Some success has been achieved and reported by researchers from various parts of the globe. We come across such success stories on daily basis. We too tried some locally available herbs and found them very effective in treating sub-clinical mastitis. When compared to standard antibiotic treatment our formulation "X" was not only efficacious but also cost effective & safe. This tested and validated formulation is highly recommended for treating mastitis in dairy cattle in particular. Try and see yourself, if it works for you and share with us the outcome (I am not an animal health or

Mastitis expert, just tried to make a case, you can make it a lot better, practical & effective with your experience).

Summing up

A good blog invariably ends up with a call for action. I believe my blog post should end with a call-to-action that encourages my readers to take a specific action. Also, after reading the blog, readers should feel like leaving a comment. Before publishing my blog post, I generally make sure to edit and proofread it for grammar and spelling errors. Often, I ask someone to read it to catch any mistakes I might have missed. I focus on producing a blog that is great for my readers. Once I have published my blog post, I promote it on social media and other platforms to increase its visibility and reach among a larger audience. Once a blog is published, I often share the link at various Social Media channels, FB, LinkedIn, Tweeter including my email subscribers etc. to promote my blog. This helps my blog reaching to a broader audience. My job does not end here. I must nurture the blog by responding to readers' comments to build a community. At times, I encourage readers to comment, share, or suggest further ideas to improve my own understanding of the issues. Some bloggers even use analytics tools to track the performance of their blog posts to understand what works.

What you do after you create your content is what truly counts – Gary Vaynerchuk

I believe, this article and presentation made by me on this topic would help my readers particularly the participants of the training programme. I wish you would be able to create compelling, well-organized, and valuable blog posts that engage readers and keep them looking for more information.

Blogging gives me a platform to open up my thoughts to the external world

- Ashmeet Khurana

Chapter-12**BASICS OF PHOTOGRAPHY IN THE CONTEXT OF FARM JOURNALISM****Manjunatha, L.**

Professor & Head

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We are making photographs to understand what our lives means to us- Ralph Hattersley

A picture is worth thousand words. The old adage speaks all about the photographs. A story or news story or an extension publication without a photograph is like a body without a heart. The photograph in a story is like the heart and soul of the whole story. It provides evidence that the story happened and gives a whole new image of the story. Photos are crucial entities of journalism and they have created a niche position to be recognized as photojournalism.

WHAT IS PHOTOJOURNALISM?

It is a form of journalism in which stories are presented mainly through photographs rather than words. Here the written part of the article is subordinate to the pictorial, usually photographic representation of new stories or in which a high proportion of pictorial presentation is used.

A single picture in some cases is so powerful that it changes the public opinion. Photojournalism in its core is an objective way of educating people about the stories the photojournalist is covering.

Elements of photo journalism

- Possess a visual impact
- Defines life in the picture form
- It represents the reality
- The goal of photojournalism is to show its stories to the average people of the world
- Written text of newspaper and magazine alone cannot engage readers in all situations

WHAT IS PHOTOGRAPHY?

- Photography is an art form, like drawing and painting

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- Photographers – use camera to
 - Make us see life in a different way
 - Feel emotions and
 - Record stories and events

STYLES OF PHOTOGRAPHY

Landscape photography: It is photography of the environment or photography of the outdoors. It could be of the land, water, or buildings.

Portrait photography: It is photography of a person or animal. It is important to show an emotion.

Documentary photography: It presents facts without changing anything. Good documentary photographs make you wonder what the story is behind the photograph. Documentary photographs can be either landscape or portrait.

TYPES OF PHOTOGRAPHS:

Photos can be either portrait (vertical) or landscape (horizontal) view. They could be formal portraits, informal or environmental portraits, still-life photos, action photos & candid photos.

Formal portraits are taken in a photography studio, often in front of a portrait backdrop. The subjects are posed and look directly at the camera. These photos most frequently are for personal use, such as school pictures or professional headshots.

Informal portraits, or environmental portraits, also have the subject look toward the camera. The difference, however, lies in the surroundings. In an environmental portrait, the subject is photographed in a natural setting, such as his farm, his garden, or another scenic location. These images are useful for profile stories about agricultural producers, companies, and organizations.

Still life photos are photos of subjects such as crops, scenic landscapes, antiques, architectural details, etc. Other still-life examples might be photos of shadows, footprints, or equipment. These artistic photos can be used in a variety of ways.

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Action photos are still photographs that show someone or something in motion. Winnowing, ploughing, deweeding, vaccinating, conducting operations, grazing, riding a cart, etc and many more are all action photos only. Action photos draw readers and viewers into a story because of the emotion they often show.

Candid photos are those in which the subjects are not posed. News photos most often fall into this category. Subjects in candid photos are not looking at the camera and may not be aware they are being photographed. These photos also can provide an honest look at the subjects of a news or feature story

TYPES OF DIGITAL CAMERAS

1. Point and Shoot (P&S)
2. Prosumer*
3. DSLR - Digital Single Lens Reflex

Point and shoot	Prosumer	DSLR
Commonly used “consumer” digital cameras.	Advanced models of P&S	Combines optics & the mechanisms of a single-lens reflex camera with a digital imaging sensor.
Typically small, compact, and lightweight	Entry level DSLR's	Greater image quality
Typically, very User-Friendly	Similar in shape and appearance to Digital SLR's	Much larger and heavier
	Typically, have extended zoom range	Ability to interchange system lenses

What is the REAL difference between a digital SLR and a point and shoot camera?

- The short answer is.....Image Quality

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- Each digital image is made from millions of tiny squares, known as pixels.
- Essentially, an image is recorded by tiny micro lenses (pixels) which make up the camera's sensor
- A digital sensor is essentially made up of millions of tiny micro-lenses (pixels)
- Pixels are analog devices which record light and color data
- Larger sensors contain larger pixels, which are much better in collecting this data

DIGITAL CAMERA TERMINOLOGY:

Resolution: Though both film and digital cameras use light to create photographs, the digital camera saves the image as pixels, which are the tiny squares of a digital photo. Memory cards record the images. How many pixels the camera records in a square inch, is termed as resolution. The higher the resolution, the more pixels the camera records per inch, which allows the image to stay crisp when enlarged to jumbo sizes. Resolution is typically noted as pixels per inch (ppi) or dots per inch (dpi). Magazines require photos with a higher dpi than newspapers, and newspapers require a larger dip than Web publications. The higher the pixel dimensions of a photo, the larger the image files, which require more storage space. With technology today, storage space is easy to come by. However, when sending photos electronically, minimizing the file size based on use is important.

<p>Optimal Resolution</p> <p>Magazine 300 dpi</p> <p>Newspaper 150 dpi</p> <p>Web 72 dpi.</p>

Exposure: Photography is an art and skill of using light to capture a good photo. For practical purpose we may consider it as good exposure. A correct or good exposure occurs when you maintain as much details as possible in both the very bright parts (highlights) as well as the dark parts (shadows) of an image. There are three factors which influence the exposure of your image – ISO, aperture, and shutter speed. They are considered as the three sides of photographic light triangle. A balance of these three sides of the triangle indicates a correct or optimum exposure.

ISO: In digital photography, ISO is the sensitivity of the camera sensor to light. The higher the ISO number, the more sensitive the sensor is to light, ie, it will take less light to get the right exposure. Typically ranges from 100-1600 (new generation cameras have ISO even upto 64000).

Aperture is the size of the opening inside the lens attached to the camera and is described as a f-stop. The f-stop value is a fraction, which describes the diameter of the aperture. It is usually represented by f/1.8 or f/5.6, etc. Aperture also controls Depth of Field (DOF), which refers how much of your image is in focus. A wide aperture (small #) will give a shallow DOF and can be used to isolate a subject. A narrow aperture (big #) would result in deep depth of field or area of focus.

Shutter speed refers to how long the shutter is open, exposing the image sensor to light. Measured in seconds, from 30 down to 1/8000. A slow shutter speed will let in lighter and a fast shutter speed lets in less light. As a rule of thumb, a fast shutter speed is needed to stop action such as shooting sports photography, flight of birds, etc (1/500s & above). A slow shutter speed would be necessary to capture motion such as water rolling over rocks or streaming car lights (1/15s & below).

CHARACTERISTICS OF A GOOD PHOTO

- I. Shape
- II. Line
- III. Pattern
- IV. Texture
- V. Size and space

I. SHAPE

- Tends to be noticed first, before texture and pattern
- Easiest and most recognizable composition tool
 - Shape helps create a mood/character for the picture
 - Search for the unconventional or surprise shape in objects

Creating shape

- Common method —
 - use backlighting to create a silhouette
- Uncommon methods —
 - side lighting with simple background
 - underexpose to focus on shape v/s color or texture

Some common principles

1. Single dominant subject
2. Do not clutter the background
3. Avoid mergers
4. Working with angles - Low angles, High angle & Eye level
5. Avoid cut offs
6. Give the object direction
7. **Rule of Thirds**
 - A photo is more interesting if the subject is NOT directly in the center
 - Try placing your subject 1/3 to the left or right, or 1/3 from top or bottom
8. Work on balance of the photo
 - Balance color and weight in a picture
 - Formal and informal
 - Symmetrical and asymmetrical
9. Fill the frame /Proximity
 - Focus on subject & Details
 - Start far and move closer
 - Fill the frame with objects that “fit”
 - Long range shots provide depth and perspective
 - Don’t be shy! Get close to your subject

II. LINE

- Lines create Shape, Pattern, Depth & Perspective
- Line leads the eye
- Lines into the horizon show depth and perspective for the viewer
- Lines can lead us to vanishing point at which lines converge and vanish in to the horizon
- Close-ups decrease perspective while wide-angles can exaggerate it

III. PATTERN

- Orderly combination of shape, line, or color

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- Pattern can help echo the character of a photo
- They help in catching attention
- They could be random patterns, slight variation in a pattern

IV. TEXTURE

- Adds realism (sense of touch) to a photo
- Sharp (hard) light highlights texture
- Especially important for close-up and b/w shots
- Side lighting highlights texture
- Most portraits use front lighting to decrease texture on skin

Using light for depth

- Sometimes hard light is inappropriate for illustrating shape and depth
- Soft side lighting can give a sense of shape and depth without high contrast, especially for portraits & still life
- Three light directions
 - Front - sunny with high color
 - Side - depth and texture
 - Back - dynamic but challenging; silhouettes and water effects.

Contrast

- Hard vs. soft light
 - Sunny days – high contrast (hard light)
 - Cloudy days – low contrast (soft light)
- Portraits often use soft light (shaded area)
- Flash will reduce contrast
- Soft light helps with color variations

Contrast in other words is the difference between light and shadow.

TAKE-AWAY TIPS

- Think, experiment, move, wait & rule of thirds

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- The best, most appealing light appears at daybreak and sunset, often referred to as the golden hours. The harshest light occurs at midday, providing shadows and other challenges to the photographer.

WORKING TIPS ON PHOTOS:

Photograph Cropping: Cropping eliminates unwanted clutter or background, resulting in attention to the subject or area of emphasis. While cropping determines the placement of the subject using the Rule of Thirds. When cropping, square images should be avoided. Photo-editing softwares, such as Adobe Photoshop or Adobe Lightroom may be used.

Photo Captions: After headlines, photo captions are the most often read information in a publication. As such, captions demand tight writing that is easy to read and informative. Captions should not duplicate material in the accompanying story, but they should identify who is pictured in a photo and/or details about where a photo was taken. The caption should also include a photo credit indicating who shot the picture. Many newspapers use a caption style in which the first sentence is written in the present tense and following sentences are written in past tense. The first sentence explains what is occurring in the photo, and the following sentences provide context and background. Although brief, captions are written with complete sentences, including articles and conjunctions.

Additional Guidelines for Writing Captions

- Identify people left to right or clockwise
- Identify what is happening in the photo or graphic without trite phrases such as “pictured above,” “looks on” and “is shown”
- Use present tense, active voice verbs when possible
- Include pertinent details not found in the story
- Write the caption to stand alone so reading the story is not required
- Avoid editorializing and making judgments
- Stick to the facts
- Check the caption against the finished photo. People or objects may have been cropped out of the photo

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- Check spelling, punctuation, and grammar in captions

Legal and Ethical Practices

Photographers should practice ethical standards when taking and publishing photographs. In general, a photographer should get permission from anyone who appears in a photo. Using false identities, taking pictures secretly is considered unethical. To sell a picture for advertising purposes, the photographer must get written permission from the subject. A photographer can generally take pictures in any public place or on private property with permission. He should be sensitive to human suffering and be careful not to create fraudulent photographs. He should not distort a photograph to achieve a certain goal that conveys a personal bias. Use of computer software to digitally enhance or alter the appearance of a subject, misleading a potential buyer is also unethical. Photos are also subject to copyrights. Hence, while using from internet one may be careful.

PHOTOGRAPHY IN CONTEXT OF AGRI-LIVESTOCK JOURNALISM

Photographs place an important role in farm journalism. Photos give the reader or viewer a visual image of the story. These images also help convey content and meaning while making the article more pleasing to the eye. The average reader also gets engaged with photographs in news or feature articles. In Agri-livestock journalism a photograph may take a vital role as it basically deals with adult learning. In adult learning “seeing is believing” principle is widely applied. A good photograph may win the hearts of the farmers, may convince, and motivate them to adopt a practice. It also provides a real situation of the frames to influence the policy makers. Hence, every newspaper (both print and e-paper) publishes Agri-livestock news with attractive photographs. Likewise, the extension publications, be it a leaflet, folder, booklet, book, a report or a ppt, photos make them lively. An extension publication without a photo appears bland. Photos enhance their value.

A series of photos can show the steps in a process. Another important characteristic of photography in Agri-livestock setting is timeliness. Vaccination, calving, milking, or harvesting photos can be taken only during when that particular event is happening. The photographer must decide what images he will need and prepare himself to capture those images during that season.

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For example, the sowing, deweeding, harvesting, chaffing, brooding photos taken this year may be used subsequent years as well.

Photos taken in Agri-livestock sector would reach diverse audience. They could be those with direct farm experience or without farm experience. A photographer's knowledge of the audience for specific photos would help him or her to capture appropriate photo for the need and write a suitable caption to such photos. They could be public; farmer consumers of various agricultural inputs, machinery, etc; consumers of Agri-livestock products such as grains, milk, meat, eggs, etc; buyers of various breeds of livestock, animals, etc. Especially, in purebred livestock industry worldwide, breeders across the world rely on photos to showcase their animals in marketing and sales publications. Likewise, photos provide information to agricultural producers concerning new equipment and related products, as well as examples of diseases and pests. For non-agriculturalists, photos depicting agricultural practices are very important in giving a visual to the production process. Many consumers do not understand where their food comes from today. A photograph can be very impactful in sharing the story of agri-livestock production process.

References:

<https://oklahoma.gov/content/dam/ok/en/careertech/educators/resource-center/resources-by-career-cluster/agriculture/ag-comm.pdf>

<https://www.collinsdictionary.com/dictionary/english/photojournalism>

"One should really use the camera as though tomorrow you'd be stricken blind."

--Dorthea Lange

When you photograph a face, you photograph the soul behind it.

–Jean Luc Godard

Great photography is depth of feeling, not depth of field.

– Peter Adams

The best thing about a picture is that it never changes, even when the people in it do.

- Andy Warhol

Annexure

ANIMAL HUSBANDRY INFORMATION SOURCES FOR FARMERS

ICAR Publication for farmers	Indian Farming, Kheti, Phalphul, Krishi Chayanika ICAR NEWS ICAR Reports
Ministry of Agriculture Publication	Intensive Farming, Unnat Kheti, Krishi Vistar Samiksha
Publications by State Agriculture/Veterinary universities.	Farm digest, Parvatiy kheti, Changi kheti, Krishi sansar, Krishi lok etc developed by various state universities. PashuPragathi (Kannada Farm magazine published by KVAFSU, Bidar) Krishi Munnade (UAS Dharwad), Krishi Vignana-(UAS Bengaluru), Krishi Pradeepike (UAS Raichur) Negilu Midita (KSNUAHS, Shivamogga)
Published by Farmers for the farmers	Adike Patrike (Kannada)
E-Bulletin	Pashubandha (Published by Veterinary College (KVAFSU), Bengaluru).
Facebook	Bhartiya Pashu Palan Department of Animal Husbandry and Dairying
WhatsApp	Shetkari Whatsapp Group Pashu Palan Whatsapp Group Raithara Samparka Sankeerana
YouTube	IVRI You Tube channel

	<p>KVK, ICAR-IVRI Izatnagar, Bareilly</p> <p>IVRI- Deemed University Educational Channel</p> <p>National Dairy Development Board</p> <p>https://www.youtube.com/watch?v=QloAwS0Sxuc</p> <p>https://www.youtube.com/watch?v=66fFLvFM_0M&list=PLyWFySnes5ko174FklNWY1oSS93RB64C1</p> <p>https://www.youtube.com/@krishibelaku1433</p> <p>https://www.youtube.com/@krushisanchari</p>
Twitter	<p>Department of Animal Husbandry and Dairying (twitter.com/Dept_of_AHD)</p> <p>Ministry of Fisheries Animal Husbandry and Dairying (twitter.com/min_fahd)</p> <p>IFFCO (https://twitter.com/ IFFCO_PR)</p>
Instagram	<p>NDDB India</p> <p>Agriculture India</p> <p>Agriculture Extension in South Asia</p>
LinkedIn	<p>International Livestock Research Institute (ILRI)</p> <p>CII-FACE</p> <p>Department of Animal Husbandry and Dairying</p>
Blogs	<p>International Institute for Environment and Development (IIED), IFPRI and AESA are the organisations that use blogging websites for communicate the latest information and opinions about agriculture topics.</p>

	<p>aesa (Agricultural Extension in South Asia) blogs: https://www.aesanetwork.org/category/blogs/</p> <p>Tamil Nadu Agricultural University (TNAU) Blogs: https://agritech.tnau.ac.in/blogs.html https://www.naturalremedy.com/animal-health-care-blogs/ https://www.worldanimalprotection.org/latest/blogs/ https://pets.feedspot.com/animal_blogs/</p>
Vlogs (YouTube platform)	<p>Krishi Jagran</p> <p>The Indian Farmer</p> <p>Farmers' Academy</p> <p>Modern Farming Techniques</p> <p>Smart Farmer India</p> <p>Innovative Farmer</p>
Portals	<p>Dairy Knowledge Portal by NDDB</p> <p>Vikaspedia</p> <p>Access Agriculture</p> <p>KisanMitr – ‘Friends of the Farmers’ (The Government of India’s Farmer Portal)</p> <p>TNAU agritech portal</p>
Marketing platforms	<p>The e-NAM (National Agriculture Market) platform aims to create a unified national market for agricultural commodities by connecting existing Agricultural Produce Market Committees (APMCs) through an online portal.</p> <p>E-Pashuhaat, e-Choupal</p>

	Licious, Zappfresh, Tendercuts, Bakraw, Bigbasket, Country Delight, Doormilk etc (for the sale of meat and dairy products and have created a niche market.)
Mobile Applications	<p>KISAAN 2.0 (Krishi Integrated Solution for Agri Apps Navigation) by ICAR, is an application that serves as an aggregator for over 300 agricultural-related apps developed by ICAR Institutes, compiled into a unified Android mobile app.</p> <p>The KVK Mobile App delivers region-specific information to farmers. After registering on the app, farmers can choose their primary KVK (Krishi Vigyan Kendra) and access details about the KVK by selecting their state and district. Additionally, the app provides comprehensive information about all the facilities offered by the selected KVK.</p> <p>The e-Gopala portal also available as an app serves as a platform through which registered farmers can buy and sell dairy animals, get information on sources of quality semen doses for different breeds of cattle and buffalo, information and contact details for availability of sexed semen and IVF embryos.</p> <p>1962 Mobile App, Goat Farming (ICAR-CIRG), BAIF Godhan Seva,</p> <p>Dairy Kannada, Fodder Kannada (KVAFSU) https://dairy-jayalaxmi-agrotech.bd.aptoide.com/app</p> <p>https://goat-jayalaxmi-agrotech.en.aptoide.com/app</p> <p>Apps developed by IVRI (https://www.ivri.nic.in/Extension/MobileApps.aspx)</p> <p>-Animal Reproduction (Pashu Prajanan) App, Dairy Manager App, Pig Farming App, Vaccination Guide app, Waste Management Guide app, Disease Control App, The Parasite management guide App, Biosecurity and Biosafety app, Pashu Poshan and Pig Ration App. Online Veterinary Clinic App</p>

	<p>CARI Backyard Poultry Farming App</p> <p>MahaVetNet (by Maharashtra's Animal Husbandry Department)</p>
Consultancy services	<p>Kisan Call Centres (KCCs): offers farmers responses to their queries in their native language via a nationwide toll-free number (18000-180-1551)</p> <p>The mKisan SMS Portal for farmers: to give information/services/advisories to farmers by SMS in their language, preference of agricultural practices and location.</p> <p>The Kisan SARATHI provides intelligent online platform for supporting agriculture at local niche with national perspective.</p> <p>The IVRI- Online Veterinary Clinic App: provides the animal owner with easy and hassle-free access to IVRI veterinary polyclinic services at any given point in time from the comfort of their home, thus saving them the logistics, finance, and time incurred in bringing the animal to IVRI polyclinic.</p>
Websites	<ul style="list-style-type: none"> • Central Avian Research Institute (CARI): www.icar.org.in/cari/index.html • Central Institute for Research on Buffaloes (CIRB): www.cirb.gov.in/ • Central Institute for Research on Goats (CIRG): www.cirg.res.in/ • Central Sheep and Wool Research Institute (CSWRI): www.cswri.ernet.in/ • Dept. of Agricultural Research and Education (DARE): www.dare.gov.in/ • Dept. of Agriculture and Cooperation: www.agricoop.nic.in/ • Dept. of Animal Husbandry, Dairying and Fisheries: www.dahd.nic.in/ • Government of India: india.gov.in/ • Indian Council of Agricultural Research (ICAR): www.icar.org.in/ • Indian Grassland and Fodder Research Institute (IGFRI): www.igfri.ernet.in/ • Indian Veterinary Research Institute (IVRI): www.ivri.nic.in/ • National Bureau of Animal Genetic Resources (NBAGR): www.nbagr.ernet.in/

	<ul style="list-style-type: none"> • National Centre for Agricultural Economics and Policy Research: www.ncap.res.in/ • National Dairy Research Institute (NDRI): www.ndri.res.in/ • National Institute of Animal Nutrition and Physiology (NIANP): www.nianp.res.in/ • National Research Centre on Camel (NRCC): www.nrccamel.com/ • National Research Centre on Equines (NRCE): www.nrce.nic.in/index1.htm • National Research Centre on Mithun (NRCM): www.nrcmithun.org/ • National Research Centre on Yak (NRCY): www.nrcy.org.in/ • State Agricultural Universities (SAUs): www.icar.org.in/sau.html • KVAFSU (www.kvafsu.edu.in)
AI powered Chatbots	<p>IVRI- Dairy SHRIA</p> <p>IVRI Sheep & Goat SHRIA</p> <p>IVRI Swine SHRIA</p> <p>Milchbot</p>
Community Radio Stations	<p>Krishi Community Radio (UAS, Dharwad)</p> <p>Sharada Krishi Vahini (Krishi Vigyan Kendra, Baramati)</p> <p>TNAU e Community radio</p> <p>Pantnagar Janvani</p> <p>Vasundhara Krishi Vahini,</p> <p>Radio Adan</p> <p>Kisan Vani</p>
Television channels	<p>Krishi Darshan is a television program which telecasted on DD National and DD Kisan TV Channels.</p> <p>DD Kisan (Agricultural television channel by GOI-Ministry of Information and Broadcasting).</p> <p>Kisan TV (Prasar Bharati network)</p>

	Shramajeevi TV (Private Channel)
Information/ Expert Systems (of IVRI)	<p>Livestock and Poultry Disease Information System (LPDIS)</p> <p>Pashudhan avum Kukkat Rog Suchna Pranali (PAKRSP).</p> <p>“Animal Health Information System” (AHIS) in English for paravets/stockmen and another for the farmers of Maharashtra entitled “Health information system for dairy animals” in Marathi has been developed at IVRI, Izatnagar for animal health management.</p> <p>Pashuchikitsa and Pashupalan Prashnottri</p> <p>Bhains Prajanan soochna Pranali</p> <p>Goat Health Management Information system (GHMIS)</p> <p>Dog health Management Trainer (DHMT)</p> <p>Expert System on Dog health</p> <p>Pig Feed Formulator</p>
Web Enabled Interactive Information Delivery System	https://ndri.res.in/WIIDS/index.html
Helpline	1800-425-0012 (Govt of Karnataka initiative)

**The above list is indicative only. Many such information sources are available on the public domain.*

DEVELOPMENT OF FARMER-FRIENDLY LITERATURE RELATED TO ANIMAL HUSBANDRY

**Siddalingaswamy Hiremath, Shivakumar Radder,
Manjunatha L. Shahaji S Phand and SushrIREKHA Das**

Empowering Livestock Farmers Through Knowledge—A Guide for Veterinary Communicator.

This eBook is a thoughtfully curated compilation of articles contributed by resource persons of a collaborative online training program on "**Development of Farmer-Friendly Literature Related to Animal Husbandry**" conducted by Veterinary College (KVAFSU) Gadag, Karnataka & MANAGE, Hyderabad, Telangana. It brings together diverse perspectives on how veterinary professionals can bridge the gap between science and the field by creating content that is simple, visual, local-language based, and action-oriented.

A unique feature of this compilation is its focus on what and how veterinarians can write for farmers. Many veterinarians wish to contribute but are often unsure about where to begin and how to begin. This resource addresses that need by throwing light on principles of farm journalism.

The eBook also explores how modern tools like social media, blogs, mobile journalism, digital journalism, and farm photography can be effectively used to disseminate animal husbandry knowledge. It introduces internet-based platforms and mobile apps as powerful channels to reach farmers, especially youth and women in rural areas.

This volume is both a practical guide and an inspiration—for veterinarians, extension professionals, academicians, research scholars, students, and communicators—who aspire to make animal husbandry knowledge accessible, engaging, and impactful.

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