

Application of Short Videos in Agricultural Scenarios and Basic Production Techniques

Jinfa HE*, Jiancheng DING, Peiqin WANG, Lianwei SHAN, Lijuan ZHANG, Zichen LYU

Vegetable Science Research Institute of Chuanhui District, Zhoukou 466000, China

Abstract The application of short videos in agricultural scenarios has become a new form of productive force driving agricultural development, injecting new vitality and opportunities into traditional agriculture. These videos leverage the unique expressive logic of the platform by adopting a small entry point and prioritizing dissemination rate. They are strategically planned in terms of content, visuals, and interaction to cater to users' needs for relaxation, knowledge acquisition, social sharing, agricultural product marketing, and talent display. Through careful design, full creativity, rich emotion, and the creation of distinct character personalities, these videos deliver positive, entertaining, informative, and opinion-driven agricultural content. The production and operation of agricultural short videos can be effectively optimized by analyzing the characteristics of both popular and less popular videos, and utilizing smart tools and trending topics.

Key words Short video; Small entry point; Dissemination rate; Three-second law; Popular video

DOI:10.19759/j.cnki.2164-4993.2025.05.018

China currently has over 1.1 billion internet users, making it the largest netizen group in the world. Short videos account for the largest share of time spent online by Chinese netizens, consistently ranking first. The application of short videos in agricultural scenarios holds broad prospects. First and foremost, short videos provide a highly efficient platform for the dissemination of agricultural science and technology. Previously, the promotion of agricultural techniques relied on offline technical training and on-site guidance by technicians, which were inefficient, had limited coverage, and involved heavy workloads. Short video platforms have broken through these temporal and spatial constraints. Agricultural researchers, agronomists, new-type farmers and other technical personnel can now quickly disseminate advanced planting and breeding techniques, as well as experiences and skills in agricultural production, to the vast number of farmers in need of relevant expertise by publishing short videos^[1]. Secondly, short videos have revolutionized the marketing models for agricultural products. Integrating e-commerce functions, they provide one-stop services from product display to sales, reducing the cost of bringing agricultural products to market while increasing their exposure and profitability. According to estimates by the Ministry of Agriculture and Rural Affairs, the value of new quality productive forces in agriculture driven by short videos is projected to exceed one trillion yuan by 2025. This "productivity revolution on the screen" is rewriting the genetic code of Chinese agriculture. Thirdly, rural life embodies values such as truth-seeking and pragmatism, health and contentment, diligence and simplicity, harmony with nature, and the cycle of sowing and reaping. Tao Yuanming idealized the countryside as an escape from spiritual constraints and a place of contentment in simplicity, offering final psychological solace under the oppression of the feudal bureaucratic system. In modern

times, scholar Liang Shuming resigned from his highly paid position as a professor at Peking University, dedicating himself to rural reconstruction by integrating Neo-Confucian spirit with modern science. He experimented with reshaping rural ethics and improving agricultural techniques, viewing rural development as the fundamental path to building a harmonious, prosperous and self-governing Chinese society. Today, rural revitalization has been incorporated into the Chinese government's long-term development plans, with countless individuals of insight dedicating themselves to building beautiful countryside. The local dialect remains the most profound memory of an unforgettable childhood, while nostalgia represents an indelible sentiment of returning to one's roots and giving back^[2]. The production and dissemination of high-quality short videos depicting agricultural scenes can effectively heighten public attention towards agriculture, rural areas, and farmers, while stimulating a desire for rural revitalization. With the continuous development and refinement of science and technology, particularly digital and agricultural technologies, short videos are poised to play an increasingly significant role in advancing agricultural modernization and realizing the rural revitalization strategy.

Why Short Videos

Short videos offer the advantages of easy self-production and low barriers to recording. The possibility of self-production means that creating short videos does not require professional equipment, while low barriers imply that even ordinary individuals, without relatively high professional skills, can easily participate in content creation. The low cost of short video production, sometimes requiring only a smartphone for shooting and editing, makes it particularly advantageous for rural residents with relatively lower incomes, as shown in Fig. 1.

Short videos enable people to quickly acquire vivid and multi-dimensional information during fragmented time periods (offering high information density per unit of time). As the pace of modern life accelerates, consuming more information during

Received: July 19, 2025 Accepted: September 25, 2025

Jinfa HE (1972–), male, P. R. China, associate professor, devoted to research about vegetable planting and popularization.

* Corresponding author.

fragmented time periods has become commonplace. The dynamic and multi-dimensional nature of short video content has made it the most widely accepted form of information structure in modern society. Even populations in remote areas with limited access to higher education, young children and elderly individuals can easily comprehend the information conveyed through visuals, which also forms the foundation for short videos' wide-reaching audience.

The development of young generations' self-awareness has driven the rapid growth of short videos. With the application of AI and other intelligent technologies, this era is no longer just about the explosion of knowledge. The younger generation needs to understand more information and continuously engage in learning and cognition more than in any previous period, in order to find their own space for development in this increasingly competitive society. For young residents in agricultural areas, acquiring knowledge and skills in agricultural scenarios presents a rare opportunity to enhance their overall competence and seek new life chances through a "curve overtaking" strategy. Short videos have the characteristics of rich subcategories, precise recommendations, and vast amount of content. When using short video apps, the users benefit from precise recommendation features that allow them to continuously explore content within their field of interest. The rise of countless rural internet celebrities and the flourishing of high-quality agricultural short videos demonstrate that short videos represent the most promising new quality productive force in agriculture. The creation and operation of outstanding agricultural short videos will determine the future direction and pace of agricultural development.

Significance and Production Methods of Positive Energy Videos in Agricultural Scenarios

Positive short videos in agricultural scenarios represent a perfect integration of technology empowering industry, content connecting urban and rural areas, and emotions warming society. They are not merely a form of entertainment but a substantial force driving agricultural development, rural progress, and farmer prosperity. These videos stand as one of the most vivid and effective mediums for telling China's stories regarding agriculture, rural areas, and farmers, and for conveying the positive energy of China in the new era. They serve as a vital digital tool that empowers agriculture, revitalizes rural areas, connects emotions, and transmits values^[3]. They can foster a social atmosphere that pays attention to agriculture and cares for farmers, alleviate urban anxiety, and provide "spiritual healing". They also act as an important carrier for inheriting farming culture and preserving rural memories. Specific production can be approached from the following aspects^[4].

Recording beautiful moments in daily life and spreading positive energy

Creating agricultural short videos can start with documenting the beautiful moments in everyday life. This approach gives life a positive and uplifting voice, conveying abundant positive energy while bringing joy and a sense of fulfillment to people.

Assisting in rural social governance and enhancing fraud prevention awareness among the agricultural population

The agricultural population is large, and most individuals are honest and kind-hearted, making them a key target for fraud. By producing short videos on rural fraud prevention, we can alert the broader agricultural community, raise their awareness of scams, and help them guard against deception, thereby avoiding losses caused by fraud.

Exploring local characteristics and building a rural identity

Mountains have their solemnity, and waters possess their tenderness. Regional differences serve as an effective way to attract the attention of diverse groups, as every locality boasts unique resources or culture. The countryside is vast and rich in resources, with diligence, heritage and innovation being key positive elements. Efforts can focus on local products, folk customs, notable figures, cuisine, and landscapes^[5].

Eliminating information barriers and promoting equitable access to knowledge

Short videos facilitate the contribution of professional expertise, popularization of laws and regulations, and promotion of literacy enhancement. They can effectively disseminate information and various types of knowledge, and are characterized by their substantial information capacity and high dissemination rate.

Facilitating cultural heritage: Disseminating traditional culture

Cultural heritage is an integral part of cultural confidence. Traditional cultures, such as opera and martial arts, can be promoted through short videos, enabling more people to appreciate the charm of traditional culture and engage in its inheritance and promotion.

Strategies and means in the creation of short video content

The agricultural issue has been the primary focus of China's No. 1 Central Document in recent years, signifying its status as a top national priority. The state has provided directional policy guidance in various aspects, embodying the collective wisdom in addressing this challenge. Rural residents constitute a substantial proportion of the current population. Agricultural technology, agricultural economy and agricultural life have a substantial audience. By selecting themes for production that are in line with national directional guidance and preferred by the vast agricultural population, the produced content will generate correspondingly enormous traffic due to the widespread concern of this large audience for agricultural issues.

"Small entry point" is an important strategy in short video content creation

The term "small entry point" means that the content should be focused, precise, and start from a very specific point, rather than being general. The core of a "small entry point" in short video content lies in precise positioning. Three dimensions need to be considered: user group, specific scenarios, and segmented needs. The entry point may vary entirely according to different groups and

scenarios. Content with a "small entry point" is more likely to capture the audience's interest in a short time. By focusing on a narrow topic, it can be explored more deeply and professionally, delivering greater value to the audience. Such focused, niche topics are easier for the audience to remember and share, and can also spark discussions. Identifying a specific small direction is more manageable and executable than attempting to cover a broad theme, thereby reducing the difficulty of production. For example, the videos can focus on a specific group of people, a particular scenario, a concrete problem or need, an interesting angle or story, or a specific product or service. Specific content means you clearly understand what problem you want to solve, what need you aim to meet, or what message you intend to convey^[6]. This is like an article, where the most important aspect is the clarity of its central idea, as too many arguments can make it difficult to grasp.

Focusing on a specific point is the prerequisite for extracting high-quality and high-impact keywords. A small entry point or a concrete problem or need can be translated into precise keywords. The more specific the content is, the easier the extraction of keywords becomes. Accurate keywords make video content more discoverable through search by specific agricultural audiences and enable platform algorithms to recommend it more accurately to interested groups. The agricultural population and agricultural environment offer endless potential entry points to explore.

High-quality short videos have certain expressive logical principles

These include, for example, the 3-second law, the 8-second law, and reinforcing retention at the end. A video should introduce the main topic within the first 3 seconds and establish relevance within 8 seconds, similar to a flashback, with associated interactions. The "3-second law" means that users decide within the first 3 seconds whether to continue watching the content. The "8-second law" refers to the "tolerance limit" of short video platform algorithms for the initial engagement of a video. Neuroscience research shows that the human brain needs only 13 milliseconds to process visual information, and 3 seconds is sufficient to form a first impression. Short videos emphasize that the opening must instantly capture the audience's interest. Common design strategies include visually impact type such as film-level camera movements, high-saturation color contrasts, and counter-intuitive imagery, information hook type such as suspenseful questioning, benefit-driven promises, and impact manufacturing, as well as emotion-triggering type including baby laughter, exaggerated expressions, unexpected situations, and nostalgic references. High-quality short videos achieve a click-through rate of over 65% within the first 3 seconds. After this initial period, the viewer drop-off rate increases by 7.2% with each additional second. Therefore, when creating short videos, it is essential to avoid gradual content buildup, text-only openings, and static product displays. Common advanced techniques include the use of ASMR sound effects (referring to sounds specifically designed to trigger Autonomous Sensory Meridian Response, such as wind, rain, ocean waves, whispering, tapping, friction, squeezing, clock ticking and chewing), which can

increase viewing duration by up to 40%. The optimal number of characters per frame in the first 3 seconds is 7 to 9. The speed of switching between close-ups and panoramic shots affects the completion rate by 12%. Strengthening memory retention at the end is the easiest way to elevate the artistic conception, leaving a lasting impression like a lingering melody.

Driving data is key (dissemination rate)

Whether it's a positive theme or a small entry point, the ultimate goal is to achieve a higher dissemination rate. The nature of the short video industry dictates that driving data is crucial. Without dissemination rate, the operation of a short video ultimately fails. As a key point of the new quality productive forces in agriculture, its advantage lies in its speed of propagation, which surpasses that of traditional media. Dissemination rate encompasses multiple dimensions: content quality, platform algorithms, posting timing, engagement strategies, and more. To enhance dissemination rate, efforts should focus on the following aspects: content creativity, platform selection, posting schedule, interaction and comments, and leveraging of trending topics. Data-driven decision-making, encompassing content optimization (analyzing data including completion rate and viewing duration to adjust video pacing and content types and enhance user engagement), user insight (leveraging audience profiles and interaction data to precisely target demographics and deliver customized content), algorithm adaptation (understanding platform recommendation mechanisms to boost traffic through tags, titles, and cover design), and ROI evaluation (tracking conversion rates and monetization outcomes to refine distribution strategies), enables the more efficient creation of high-quality short videos and improves their dissemination rate. Furthermore, the creation of highly short videos with dissemination rate should identify psychological resonance points with the audience. Through deep analysis on user needs and emotions, creators can accurately grasp these points of connection to produce more engaging and impactful content. Integrating trending topics and user interests, while skillfully designing interactive elements, enhances the audience's sense of participation, thereby enhancing content dissemination effectiveness and strengthening user loyalty.

Application of Short Videos in Agricultural Contexts

Short videos are often used for relaxation and leisure. Quietly browsing short videos has become a new way for many people to unwind and a means to kill time. Proper rest and relaxation can reduce the risk of heart disease. Being able to effortlessly and comfortably watch favorite short videos after a tiring day is a high-level enjoyment of life. However, it is important to avoid cognitive overload, which can lead to unnecessary mental exhaustion. Short video content can be easily addictive, so it is crucial to manage time wisely to prevent negative impacts on studies, daily life, and especially eye health^[7].

Short videos serve as an important channel for accessing agricultural information and knowledge. They offer high immediacy and entertainment value in information and knowledge acquisition.

Multi-sensory learning through various channels is generally more effective than learning through monotonous media like textbooks. However, due to the fragmented nature and uneven quality of information, it is advisable to select credible sources or verify information authenticity through multiple channels. Users can follow high-quality creators, monitor popular topics and trends, search for specific themes, and engage in interactions and comments, as shown in Fig. 2.

Short videos can be utilized for social sharing. Sharing short videos serves social purposes and enhances public visibility. This is particularly crucial in the vast agricultural environments where transportation is relatively underdeveloped, as the internet enables connections to be established across all corners of the country^[8].

The monetization of agricultural products through marketing is a significant manifestation of short videos as a new quality productive force in agriculture. Through online marketing strategies, sales volumes can be achieved that are unmatched by offline methods. It has become the most beneficial function brought by agricultural short videos, as the speed of information dissemination is faster and more effective than that of physical stores, representing a new quality productive force in agricultural development, as shown in Fig. 3.

Short videos can be used to showcase agricultural culture and personal talents. Through dissemination of rural culture through short videos and displaying one's skills, individuals can allow more people to recognize their ability and seek out new opportunities that suit them.

Planning and Operation of Short Videos in Agricultural Contexts

Short video planning should encompass content (such as theme, storyline, and presentation style), visuals (special effects, editing, transitions), and interaction (questions, polls, challenges). The overall goal is to make the content entertaining, informative, and perspective-driven. Entertainment, with strong appeal, is an effective means to attract viewers. Being informative means providing valuable knowledge. It's common to hear short video creators mention that their content is "all dry goods" (practical and valuable information). When watching short videos, audiences often seek knowledge in specific areas. Having an attitude means infusing the content with genuine emotion such as patriotism, friendship, love, and more, to move the audience emotionally. Evoking strong emotional resonance is a key focus in short video creation. However, humor must be context-appropriate. It's crucial to avoid treating tragic subjects as comedic.

Meticulously designed audiovisual effects are essential

Mastery comes through diligent practice. Significant effort must be invested in aspects such as scripting, scene setting, and shooting. It is a prerequisite for producing outstanding agricultural short videos. As the saying goes, "Ten years of practice offstage for one minute on stage". Only by settling down with dedication and cultivating ideas with care can exceptional work be created. It

also involves possessing unexpectedly creative expression. Unexpected creativity can surprise the audience, quickly capture their attention, and create more memorable points. Creativity is the core of short videos, and outstanding short videos all possess unique creative concepts. Distinct character personalities are the soul of short videos, serving as the foundation for literary depth. Emotionally charged impact engages viewers on a deeper level, far surpassing the effect of theoretical instruction.

Whenever possible, short videos should be shot and produced with people appearing on camera

Characters can quickly guide the audience into the topic. Since short video platforms have highly refined recommendation functions, viewers of such videos are often groups with high expectations in this field, hoping to gain more information within this domain. Strong narrative skills make people more interested in watching. Good music is highly immersive, and popular tracks have proven to be more effective through practice, while inappropriate background music can act like noise, disrupting the audience's focus, evoking negative associations, and diverting their train of thought.

Leveraging the power of hot topics

Leveraging the power of hot topics refers to what people often call "riding the wave" of hot topics or traffic. We can imitate trending content, as trends have a driving effect. We can also combine popular topics and create content related to the trends.

Leveraging AI tools

(1) AI can be utilized for learning short video production, covering everything from fundamental shooting techniques to advanced editing skills.

(2) AI assists in rapidly generating video scripts. As scripts form the foundation of short video creation, well-structured screenplays developed through AI can be directly applied to production.

(3) AI-generated virtual personas serve as sources of creative inspiration. These non-physical intelligent figures exhibit diverse characteristics and possess functions comparable to those of human beings.

Conclusions

The dominant position of short videos in online applications continues to strengthen, profoundly reshaping Chinese netizens' media usage habits, information consumption patterns, and even shopping behaviors. In today's era where short videos have become a "nationwide" application, their use in agricultural contexts has undoubtedly emerged as a new quality productive force driving agricultural development, injecting fresh vitality and opportunities into traditional farming practices. As someone in the agricultural industry, if you missed the opportunities of Taobao and micro-business, then starting now, strive not to miss out on short videos. Modern technological advancements are rapidly evolving, and we must firmly grasp the pulse of the times and become pioneers in the agricultural field!



Fig. 1 Creation of short Videos in agricultural production



Fig. 2 Agricultural technicians seek agricultural information and knowledge



Fig. 3 Marketing and monetization of agricultural products



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Editor: Yingzhi GUANG

Proofreader: Xinxiu ZHU

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Editor: Yingzhi GUANG

Proofreader: Xinxiu ZHU