Postprint: Strategies for Enhancing the Impact of Comprehensive Agricultural Science and Technology Journals Sponsored by Local Agricultural Universities

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Abstract

Abstract

Objective: To explore strategies for enhancing the influence of comprehensive agricultural science and technology journals sponsored by local agricultural universities, thereby providing a foundation for developing first-class journals in this field.

Methods: We conducted an investigation and comprehensive analysis of 24 representative comprehensive agricultural science and technology journals sponsored by local agricultural universities. Our analysis focused on publication cycle, article volume, total citation frequency, influence index, impact factor, inclusion in major domestic and international databases, column and special issue/topic organization, editorial board composition, Chinese and English website development, and WeChat Official Account platform construction. Based on identified challenges, we propose targeted strategies for enhancing journal influence.

Results: The influence of these journals can be enhanced through multiple strategies: optimizing article volume, reducing publication delays, rationally organizing columns, actively developing special issues/topics, leveraging editorial board expertise through an expert-driven operational model, strengthening English website development to align with international database inclusion standards, and enhancing new media platform construction.

Conclusion: Comprehensive agricultural science and technology journals sponsored by local agricultural universities should leverage their unique strengths, establish scientifically-grounded and precise positioning, adopt an expert-driven

operational model, strengthen new media platform development, broaden international dissemination channels, and thereby enhance their overall influence and dissemination capacity.

Full Text

Strategies for Enhancing the Influence of Comprehensive Agricultural Science and Technology Journals Sponsored by Regional Agricultural Universities

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[**Objective**] To explore strategies for enhancing the influence of comprehensive agricultural science and technology journals sponsored by regional agricultural universities, thereby laying a foundation for cultivating first-class agricultural sci-tech journals. [**Method**] This study conducted a comprehensive investigation and analysis of 24 representative comprehensive agricultural sci-tech journals sponsored by provincial agricultural universities, examining aspects including publication cycle, article volume, total citation frequency, impact index, impact factor, indexing in major domestic and international databases, column and special issue setup, editorial board construction, Chinese and English website development, and WeChat official account platform construction. Based on this analysis, existing problems were identified and targeted strategies for influence enhancement were proposed. [**Results**] The influence of comprehensive agricultural sci-tech journals sponsored by regional agricultural universities can be enhanced through strategies such as adjusting article volume and shortening publication delays, rationally setting up columns and actively organizing special issues, fully mobilizing the enthusiasm of editorial board members to pursue an expert-led operation model, strengthening English website construction to align with foreign database indexing requirements, and enhancing new media platform construction. [**Conclusion**] Comprehensive agricultural sci-tech journals sponsored by regional agricultural universities should, based on their own advantages, establish a scientific and precise positioning, pursue an expert-led operation model, strengthen new media platform construction, and broaden international dissemination channels, thereby improving journal influence and dissemination capacity.

Keywords: regional agricultural university; comprehensive agricultural sci-tech journal; influence; database; editorial board member; column; new media
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Building world-class sci-tech journals is a common goal for all sci-tech journal professionals in China. Agricultural sci-tech journals serve as crucial platforms for showcasing and disseminating agricultural research achievements, acting as intermediaries for transforming agricultural scientific and technological achievements into practical productive forces. They play a vital role in promoting the dissemination of agricultural research findings and advancing agricultural science and technology innovation [1]. Comprehensive agricultural sci-tech journals sponsored by regional agricultural universities constitute an important component of agricultural sci-tech journals and serve as key platforms for disseminating regional agricultural research achievements, thereby significantly contributing to the development of agricultural science and technology in their respective regions and across the nation. Compared with other journals, those sponsored by regional agricultural universities are relatively few in number, regionally based, and mostly characterized by geographical specificity. Their authors and affiliated institutions are relatively concentrated, exhibiting a certain degree of introversion. Some journals suffer from unclear positioning, repetitive topic selection, lack of professional distinctiveness, and serious homogenization, resulting in the loss of high-quality manuscript sources [2-3]. These journals should leverage their own advantages and new media platforms to establish a scientific and precise positioning, build a strong journal brand, and enhance their influence and dissemination capacity. Currently, research on comprehensive agricultural sci-tech journals sponsored by representative agricultural universities across various provinces remains scarce, and no comprehensive systematic studies on their characteristics have been reported.

1. Research Samples and Data Sources

This study selected 24 comprehensive agricultural sci-tech journals sponsored by representative agricultural universities across various provinces as research samples (Table 1). Data were collected from the *Overview of Chinese Core Journals* (2023 edition), *Chinese Academic Journals International Citation Annual Report (Natural Science and Engineering Technology Edition)* (2023 edition), official journal websites, CNKI (China National Knowledge Infrastructure), WeChat official accounts, and other sources.

2. Current Status of Comprehensive Agricultural Sci-Tech Journals Sponsored by Regional Agricultural Universities

2.1 Publication Cycle and Article Volume

The investigation revealed that the 24 comprehensive agricultural sci-tech journals sponsored by regional agricultural universities are predominantly bimonthly, with 22 journals (91.67%) adopting this schedule, while only 2 journals (8.33%) are monthly publications (Table 1). In terms of annual article volume in 2022 (Table 1), significant variation exists among the 24 journals, ranging from 68 to 199 articles. Specifically, 6 journals (25%) published

fewer than 100 articles annually, with the *Journal of Xinjiang Agricultural University* having the lowest output at 68 articles. Conversely, 18 journals (75%) published more than 100 articles annually, with the *Journal of Northwest A&F University (Natural Science Edition)* (199 articles), *Journal of Huazhong Agricultural University* (186 articles), and *Agricultural Research in the Arid Areas* (182 articles) showing relatively high publication volumes. The remaining journals all published fewer than 160 articles, with most concentrating in the range of 100-135 articles.

2.2 Total Citation Frequency, Impact Index, and Impact Factor

The investigation found that total citation frequencies for the 24 journals ranged from 1,026 to 8,078, indicating substantial inter-journal disparities (Table 1). The *Journal of Northwest A&F University (Natural Science Edition)* (8,078 citations) and *Agricultural Research in the Arid Areas* (7,304 citations) demonstrated relatively high citation frequencies, while the *Journal of Xinjiang Agricultural University* (1,026 citations) showed the lowest. Overall, 5 journals had citation frequencies between 1,000-2,000, 11 journals between 2,001-3,000, 5 journals between 3,001-4,000, and 1 journal each in the ranges of 4,001-5,000 and 7,001-8,000. The impact index (CI values) for these journals ranged from 108.058 to 593.095. The *Journal of Northwest A&F University (Natural Science Edition)* and *Agricultural Research in the Arid Areas* exhibited high impact indices exceeding 500. Four journals fell in the 401-500 range, eight in the 301-400 range, six in the 201-300 range, and four in the 101-200 range. The composite impact factors ranged from 0.464 to 2.682, with the *Journal of Jilin Agricultural University* ranking highest, followed by the *Journal of South China Agricultural University*. Specifically, 6 journals had composite impact factors exceeding 2.0, 1 journal fell below 1.0, and the remaining journals ranged between 1.0-2.0. The comprehensive impact factors ranged from 0.320 to 1.768, with the *Journal of South China Agricultural University* (1.768) and the *Journal of Huazhong Agricultural University* (1.767) showing relatively high values. Six journals had comprehensive impact factors below 1.0, while 18 journals exceeded 1.0. In summary, the impact-related metrics among the 24 journals sponsored by regional agricultural universities show considerable variation, with composite impact factors primarily concentrated between 1.5-2.0 and comprehensive impact factors mainly between 1.0-1.5.

2.3 Indexing in Major Domestic and International Databases

Among the 24 journals, 20 (83.33%) are source journals for the *Overview of Chinese Core Journals*, including 15 titled "Journal of ···Agricultural University" . Nineteen journals (79.17%) are indexed in the Chinese Science Citation Database (CSCD), including 14 with the "Journal of ···Agricultural University" title. Regarding international databases, the 24 journals are indexed in 1-13 foreign databases, primarily including CABI (Centre for Agriculture and Bioscience International, Full Text Repository, UK), CA (Chemical Abstracts,

USA), P (AJ) (Abstracts Journal, Russia), EBSCO (USA), AGRIS (International Agricultural Literature Index, FAO), Scopus (Netherlands), ZR (Zoological Record, UK), FSTA (Food Science and Technology Abstracts, UK), Ulrichsweb (Ulrich' s Periodicals Directory Online, USA), IC (Index Copernicus, Poland), and JST (Japan Science and Technology Agency Database). Specifically, 4 journals are indexed in only 1 foreign database, 3 journals each are indexed in 2, 5, 6, and 7 databases respectively, 2 journals in 3 databases, and 1 journal each in 4, 8, 9, 10, and 13 databases—these being the *Journal of Gansu Agricultural University*, *Journal of Huazhong Agricultural University*, *Journal of Nanjing Agricultural University*, *Journal of Zhejiang University (Agriculture and Life Sciences Edition)*, and *Journal of South China Agricultural University*. Overall, 3 journals are neither source journals for the *Overview of Chinese Core Journals* nor indexed in CSCD, while 18 journals are both source journals for the *Overview of Chinese Core Journals* and indexed in CSCD.

2.4 Column Setup and Special Issue Organization

An investigation into the column setup of the 24 journals over the past two years revealed that 6 journals have no columns, while the remaining 18 have established varying numbers of columns ranging from 2 to 11. Among these, columns totaling 2, 6, and 8 are most common, with 4 journals each (50.00% combined). Two journals each have 9 and 11 columns (16.67% combined), while 1 journal each has 4 and 7 columns (8.33% combined). Seven journals (29.17%) have organized special issues, all on an ad-hoc basis; no journals have established regular special columns.

2.5 Editorial Board Construction

An investigation into the editorial boards of the 24 journals found that all have established complete editorial boards, though board sizes vary considerably, ranging from 22 to 102 members. Specifically, 16 journals (66.67%) have fewer than 50 board members, while 8 journals (33.33%) have more than 51 members. Additionally, 3 journals have young editorial board members: *Journal of Huazhong Agricultural University*, *Journal of South China Agricultural University*, and *Journal of Shanxi Agricultural University (Natural Science Edition)*. Furthermore, only 1 journal has international board members: *Journal of Zhejiang University (Agriculture and Life Sciences Edition)*. In summary, all 24 journals have established editorial boards, but board sizes differ significantly and international board members are notably lacking.

2.6 Chinese and English Website Construction

An investigation into the Chinese and English website construction of the 24 journals revealed that all have Chinese-language websites with relatively clear interface design, complete basic functions, and user-friendly operation, with 2 journals also offering e-books. Thirteen journals have English websites, of which 7 feature substantial content with specific information under each section, fully

consistent with or even more comprehensive than their Chinese counterparts. However, 6 journals have incomplete English websites with no content across sections or only content on the homepage. In summary, all 24 journals have Chinese websites, but most lack English websites or have incomplete English website content.

2.7 WeChat Official Account Platform Construction

New media, particularly WeChat official accounts, offer advantages such as rapid dissemination, rich content, and accessible approaches. An investigation into the WeChat official account platform construction of the 24 journals found that only 3 journals have not established official accounts, while 21 journals (87.50%) have done so. However, most publish relatively monotonous content, primarily including current issue tables of contents, selected papers, journal activities, and virtual special issues, with minimal coverage of paper writing techniques or research hotspot information. Among these, 6 journals have also launched WeChat video channels, though most have very few videos, ranging from only 2 to 8. Evidently, these journals generally suffer from insufficiently attractive WeChat content and lack of reader interaction. Moreover, most published content is highly specialized, with a notable deficiency in popularized, accessible material.

3. Strategies for Enhancing the Influence of Comprehensive Agricultural Sci-Tech Journals Sponsored by Regional Agricultural Universities

This study conducted a detailed investigation and comprehensive analysis of the publication cycles, article volumes, total citation frequencies, impact indices, impact factors, indexing in major domestic and international databases, column and special issue setup, editorial board construction, Chinese and English website development, and WeChat official account platform construction of 24 comprehensive agricultural sci-tech journals sponsored by regional agricultural universities. Based on these findings, the following recommendations are proposed to enhance the academic influence and dissemination capacity of these journals.

3.1 Adjust Article Volume and Shorten Publication Delays

The investigation revealed that among the 24 journals, the vast majority are bimonthly publications. Six journals publish fewer than 100 articles annually, while three journals have annual volumes of 180-199 articles. Excessively low publication volume cannot generate broad and lasting impact in relevant research fields, whereas excessively high volume may compromise manuscript quality, particularly academic quality, thereby hindering the enhancement of journal academic influence. Additionally, with a fixed number of editorial staff, higher article volumes lead to longer publication delays and slower dissemination of in-

novative research findings, which is detrimental to improving journal academic influence. Therefore, appropriate adjustment of article volume and shortening of publication delays are necessary to accelerate the publication of research achievements. To shorten publication delays, the foremost and most critical step is reducing the peer review cycle. This requires enhancing editors' professional expertise to improve review speed and accuracy, ensuring manuscripts are promptly and precisely sent to external reviewers with relevant research expertise to avoid invalid reviews that prolong review time or result in the misuse of substandard manuscripts. Simultaneously, editors should continuously monitor external review status and elapsed review time, appropriately reminding reviewers to expedite the process.

3.2 Rationalize Column Setup and Actively Organize Special Issues

Journal columns reflect journal characteristics and positioning. Well-designed columns can attract scholars in relevant fields, secure high-quality manuscript sources, and consequently enhance journal academic influence [4-5]. The investigation found that the 24 journals have between 0 and 11 columns, with some having no columns or too few, while others have too many. The absence of columns or insufficient column numbers limits the scope of manuscript solicitation and hinders influence enhancement; such journals should appropriately establish or increase columns. Conversely, excessive column numbers can blur journal characteristics and positioning, preventing the highlighting of distinctive features and focused orientation, making it difficult to generate broad and lasting impact in relevant research fields. These journals should re-evaluate the value of each column and concentrate resources on building key columns. Additionally, only 7 journals have organized special issues on an ad-hoc basis, and none have established regular special columns. Special issues (columns) offer advantages such as concentrated themes and strong knowledge integration, playing a significant role in enhancing journal academic influence [6-9]. Comprehensive agricultural sci-tech journals should focus on key priorities, frontiers, and hot topics in agricultural research development to actively organize special issues (columns).

3.3 Mobilize Editorial Board Enthusiasm and Pursue Expert-Led Operation

Editorial board members play a crucial role in enhancing journal influence [10-12]. The investigation found that all 24 journals have established editorial boards, with 3 having young board members and only 1 having international members. Research indicates that most board members participate minimally in journal positioning, topic planning, and manuscript solicitation [13], leaving their enthusiasm and potential underutilized. Therefore, comprehensive measures should be implemented to mobilize board members' enthusiasm, enabling them to fully contribute to topic planning, manuscript solicitation, and peer review, gradually transitioning toward an expert-led operation model. Addi-

tionally, strengthening young editorial board team construction—led by senior experts with young members as the main force—can maximize the academic potential of the editorial board [14-15]. Furthermore, actively building international editorial board teams can promote journal internationalization.

3.4 Strengthen English Website Construction and Align with Foreign Database Indexing Requirements

International databases serve as primary channels for global journal dissemination. The investigation revealed that the 24 journals are indexed in 1-13 foreign databases, with most indexed in relatively few. Therefore, journals should actively align with foreign database indexing requirements to secure inclusion and enhance international dissemination capacity. To achieve foreign database indexing, beyond aligning content and format with requirements, robust English website construction is essential to facilitate the review process by database evaluation staff. The investigation found that only 13 of the 24 journals have English websites, and half of these are incomplete with content only on the homepage or no content at all. Consequently, journals should actively and meticulously develop English websites according to foreign database indexing requirements, while also attending to details such as browsing habits of international users.

3.5 Strengthen New Media Platform Construction

The investigation found that among the 24 journals, 3 have not established WeChat official accounts, while 21 journals (87.50%) have done so. However, most publish relatively monotonous content, primarily including current issue tables of contents, selected papers, journal activities, and virtual special issues, with minimal coverage of paper writing techniques or research hotspot information. Among these, 6 journals have also launched WeChat video channels, though most have very few videos, ranging from only 2 to 8. Evidently, these journals generally suffer from insufficiently attractive WeChat content and lack of reader interaction. Moreover, most published content is highly specialized, with a notable deficiency in popularized, accessible material. Therefore, on one hand, journals should reprocess published papers, using images, audio, and video to create accessible reinterpretations of specialized research, thereby attracting more readers, accelerating knowledge dissemination, and enhancing influence. On the other hand, content publication should be diversified to include materials of interest to readers and researchers, and virtual special issues should be actively organized based on published content to accommodate readers' fragmented "shallow reading" habits. Furthermore, journals should actively launch video channels with enriched video content to attract more readers and elevate journal influence.

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Note: Figure translations are in progress. See original paper for figures.