

## **Achieving Food Security in China: The Challenges Ahead**

*Edited by Zhang-Yue Zhou*

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### **Moving from knowledge to wisdom in the pursuit of food security in China**

Wisdom is the right use of knowledge [...] Many men know a great deal, and are all the greater fools for it. But to know how to use knowledge is to have wisdom. (Charles Haddon Spurgeon)

Wisdom is not a trait that is easily or quickly gained. It is a process that takes time and living. But we can acquire wisdom and become wiser if we open our minds to the insights of others. This is how I regard Zhang-Yue Zhou's latest effort.

Zhou's *Achieving Food Security in China: The Challenges Ahead* is ostensibly about China's efforts to achieve food security. However, it is also about sharing a lifetime of acquired experience, analysis, knowledge and wisdom as to the circumstances, policies, processes, institutions and incentive systems which either contributed to or undermined the achievement of that goal. To some extent, this book also serves as a warning of the "never again" variety in the sense that the stories and insights are shared to avoid similar follies elsewhere and in future.

In the first part of Chapter 1, Professor Zhou provides a brief account of his early life and experiences with food shortages in China. His insights are of the hard-earned variety, first gained as a toddler during the zenith of Mao's "Great Leap Forward" and then as a teenager during the "Cultural Revolution." From his early memories, Zhou moves on to present an overview of evolving food availability between the 1950s and the 2010s. His experiences and observations drove him to explore the underlying causes behind the location, incidence and magnitude of manifestations of abundance and of shortages.

The remainder of Chapter 1 sets out the framework, terminology, metrics and sequence with which the remainder of this treatise proceeds. For the sake of discussion and analytical consistency, Zhou embraces concepts related to Food Security first broached at the World Food Conference in 1974 and refined at the 1996 World Food Summit (WFS):

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

The 1996 definition adequately reflects the distinctive features of food as noted above. It also adequately embraces and highlights several important aspects or dimensions of food security:

- Food availability: all people...have sufficient...food.
- Supply sustainability: adds time dimension...all people, at all times, have...sufficient...food.
- Food quality and safety: safe and nutritious food that meets all peoples' dietary needs.
- Cultural acceptability: food (is not too alien) and that meets peoples'...food preferences.
- Access to food: adds proximity all people...have physical and economic access to...food.



After establishing his motivation and common points of reference to enable the subsequent discussion, Zhou then outlines how the rest of the book will unfold.

Zhou turns his attention to the efforts and insights of earlier researchers examining China's Food Security in Chapter 2. To some degree, it is an academic revisiting of the more personal stories related earlier. But it is a necessary retelling as it is a more structured treatment, and one that is necessary to substantiate the ensuing discussion... rather than being open to dismissal as purely anecdotal. The author also uses this review to identify gaps, inconsistencies and shortfalls in integrating analysis into meaningful policy and regulatory prescriptions. Zhou observes that some shortcomings are deliberate because some individuals with authority did not want to reflect too deeply on their own culpability.

While some continue to blame "natural disasters" for the famine of 1958–1962, the preponderance of research summarized by Zhou suggests that the fundamental cause was institutional failure and misaligned incentives. By 1958, through active collectivization, the people's commune campaign in rural areas, and the transforming of private businesses to state-owned or state-private jointly owned businesses in urban areas, China had become a planned economy. Through various interventions, government agencies controlled virtually all aspects of life. Government agencies monopolized all resources, and controlled the production and distribution of all goods and services. Resource monopolies eroded incentives for individual initiative, leading to shortages of food, other goods and services. The accumulation of supply shortages together with the deliberate self-isolation of China from the international community exacerbated matters.

Control over the media and communication channels was also problematic. If ordinary people said there was shortage of grains, they might be punished for criticizing the socialist system for its inability to provide enough food to eat. Because of state control over the media, there were very few reports about the famine to inform the government and the public for action. Some who dared to report food shortages were sent to prison. Because of rewards systems and incentives to over-report production and concurrent punishments for ordinary folk and media to report anything to the contrary, little meaningful information as to the true state of production and food availability was in the public domain.

Even today, few studies have examined how the lack of open communication might have played a role in the 1958–1962 famine. Zhou observes that books on the famine that are accessible to the public are still not widely available in China. When published abroad, such books face obstacles to distribution in China. How can one learn from the past if one is kept in the dark about it?

Outside China, the true picture of the unfolding Great Famine was not readily available at the time either. At the time of the famine, efforts were made to show the world that there were no serious food shortages in China. How can we learn from and help each other in the absence of information or, worse yet, with falsified information? It is difficult to make progress when information, views and voices that are inconsistent with prevailing wisdom or which do not adhere to party lines are not welcome.

Having discussed the Great Famine, Zhou directs his attention to the collective efforts of researchers to understand the Cultural Revolution's ups and downs, growing availability in the 1980s and 1990s, and the multiple demands now facing China's agri-food sector. Concerning China's food security research, Zhou suggests two major shortcomings. One is the lack of coordinated research capability at the national level to simulate and forecast changes in food demand and supply domestically and globally. Zhou suggests that, while scattered efforts do exist, there is little synergy among them to generate a comprehensive understanding. A greater degree of coordination is called for.

Apparently a recent attempt to fill this gap was made by the Agricultural Information Institute of the Chinese Academy of Agricultural Sciences, but such efforts are in their infancy. This reviewer is also aware of efforts by the China Centre for Agricultural Policy

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within the Chinese Academy of Sciences to undertake such comprehensive work[1][2]. Regardless, the over-arching point is well taken.

It is also the case that research is often disseminated only to government authorities and a small number of elites who have little interest in including a wider audience in public discourse. Moreover, research and observations that are inconsistent with the prevailing agenda are not always welcome. Indeed, they may subject researchers to unpleasant political attention regardless of how professional and scrupulous their efforts.

The other major weakness Zhou delineates is the lack of effort in establishing a hierarchy of priorities. At present, any perturbation in food markets is regarded nervously as potentially catastrophic. This can contribute to hasty preemptive and sometimes regressive policies that can be counter-productive. Such over-statement and potential for over-prescribing remedies is a real danger. Moreover, the legacy of central planning looms large; there remain those that would relish a return to a more interventionist approach, regardless of the implications for society at large.

Having set the stage, Zhou uses Chapter 3 to highlight food security practices in China since the early 1950s, identifying major factors that resulted in food scarcity prior to the 1980s and relative abundance since then. The major factors responsible for China's improved food supply, however, are largely economic in nature. The reinstatement of incentives to individual workers and the reintroduction of markets have been primarily responsible for improved food security.

Zhou observes that, although economic institutions and incentives have improved, there have been few fundamental changes in its governmental, administrative or political institutions. The lack of fundamental changes in the political institutions to make the government accountable to the people and to make government operations transparent has been responsible for wide-spread malfeasance. Zhou sees manifestations arising from this in epidemics of unsafe foods, income inequality, and damage to natural resources and the environment. Such problems pose serious challenges to China's longer-term food security as well as to its political and social stability.

In Chapter 4, Zhou notes that – as a result of economic reforms undertaken since the 1980s – China's food availability has improved impressively, and especially so since the mid-1990s. Indeed, China's achievement in feeding the huge population is most commendable. However, despite much success in improving food availability, there are areas where more effort is needed to further raise China's food security. Major outstanding challenges for China include improving food safety and quality, protecting the environment and natural resources for sustainable food production, and reducing income inequality to improve the poor's access to food. Zhou touches on these challenges in Chapter 5.

Within Chapter 5, Zhou notes that, for China to achieve greater food security, fundamental reforms to China's governmental, economic and educational institutions are imperative. Officials need to hold themselves to a correspondence principle of sorts: their degree of power and authority should be accompanied by a commensurate degree of accountability to the citizens under their jurisdiction and for the issues and subject matters with which they have been entrusted. Transparency and public scrutiny is also a critical underpinning for progress and to avoid policy and regulatory capture: citizens need to be empowered to monitor the doings of government officials, so that the latter work for improving everyone's standard of living. If the governments at all levels become responsible to their citizens as well as harnessing the insights and energy of those same citizens, many problems will be reduced.

Public officials often act as though they are omniscient and omnipotent, embracing technical and physical "solutions" before they embrace incentive-based solutions. This can sometimes result in disaster. Misaligned incentives relating to water use are a case in point. Because water is often under-valued, serious over-use and over-extraction occurs precisely in

regions where water scarcity is acute. In the short to medium term, this leads to troubling outcomes like the export of relatively water intense products from water scarce regions. With the passage of time and the cumulative impact of such phenomena, over pumping has led to land subsidence in certain regions (e.g. Loess Plateau, North China Plain) and serious damage to ground water and aquifers. This is harmful in a static economic and resource allocation sense, but even more harmful from a sustainability and environmental perspective.

Perverse land use outcomes are also a legacy of the quota system. In many parts of China where grazing or agri-forestry may have been more appropriate, fragile lands were put to the plow to meet grain production goals. The quota system and supporting institutional actors created strong incentives for farmers to grow grain crops and cultivate fertile but fragile land rather than leave it as pasture or in agri-forestry uses. Such outcomes led to wide-spread erosion, water depletion, organic matter depletion and deterioration in the land's productive capacity.

Zhou has articulated how China's agri-food system has been over-managed, over administered, over-engineered and over-interfered. Empirical work undertaken at both the micro (firm) and the sector level strongly suggests that certain sectors – especially those deemed “strategic” by central authorities – were well into Stage 3 of the production curve as far as managerial and administrative oversight was concerned. This means that such industries and enterprises would actually be better off and more beneficial to society if they paid some managers and administrative personnel to stay at home. A key message is that inappropriate institutional behavior is a key root cause of China's lack of food security. If not reformed, China cannot achieve greater food security regardless of progress with food availability.

Of considerable importance is Zhou's call to elites in particular to place more of the collective insights from scientific and socio-scientific research in the public domain. An ill-informed or disenfranchised public is one where lessons gained from past errors or errors elsewhere are lost and – therefore – are at risk of being repeated or replicated. Only by informing and engaging both leaders and the citizenry in the ramifications of government decisions – past and present – can we avoid a nightmare scenario where the errors of the past recur time after time. Recent events in China and across the globe demonstrate that we are not yet immune to such phenomena.

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#### Notes

1. For example, CCAP, by design, is committed to collaborating closely with policy makers, domestic colleagues and international researchers working on food, agricultural, natural resource and environmental issues. CCAP has often played a catalytic role in creating networks among individuals and groups both within and outside of China to increase the effectiveness of policy analysis.
2. Internationally, this reviewer is also aware of projects where IFPRI, the OECD and the FAO (both independently and together) have undertaken work in collaboration with the Chinese Academy of Sciences and the Chinese Academy of Agricultural Sciences to develop models and frameworks that would help to fill such gaps. The Development Research Center of the State Council has also undertaken work in collaboration with organizations like the World Bank, Asian Development Bank and the GTAP consortium.