

The logic is strong. If a service center only earns from field operations, its income may remain highly seasonal and vulnerable to competition. If it can also support value retention and local branding, it gains a second source of relevance. Recent research on grain cultivation and food security in China shows that rice production now has to be understood not only as a matter of output, but also of quality structure and stable supply conditions (Tang et al., 2022). A center that can connect standardized production with recognizable local rice products is better positioned for the future than one that remains only an operation contractor.

For Mashan, this means continuing to strengthen the chain from seedling to market: standardized seedling supply, coordinated operations, quality-conscious drying, safe storage, simple processing, local branding, and more stable market channels. The “Xinfeng” rice case suggests that this path is already realistic.

### **8.5 Enhancing emergency agricultural service capacity under climate risks**

Finally, future development should place more explicit emphasis on emergency service capacity under climate risk. The emergency harvesting case shows that Mashan already has a useful base, but climate pressure is likely to persist and perhaps intensify. That means resilience should be formalized rather than treated as an occasional success story.

Several practical steps follow from this. Seasonal emergency plans should be prepared before peak harvest. Machinery, dryers, fuel, and temporary storage arrangements should have reserve capacity. Coordination with township governments, village planners, and possibly agricultural insurance mechanisms should be strengthened. Weather information should be integrated more directly into early service planning. Training for emergency dispatch should be treated as part of ordinary center capability.

The real lesson of recent rice climate research is not just that risks are increasing, but that adaptation must be organized (Chen et al., 2025). Modern agricultural service centers are well placed to become that organizing mechanism at the regional level.

## **9 Conclusion**

This study examined the operational model of modern agricultural service centers in socialized rice production services through the case of Mashan Agricultural Service Center in Shangyu District, Zhejiang Province. The main argument is that the value of such centers lies less in the possession of machinery itself than in the organization of coordinated services. A modern agricultural service center works as a regional platform that links seedling raising, machinery operation, drying, storage, technical guidance, training, and sometimes branding into a connected production-support system.

The discussion shows that Mashan’s operational model has several defining features. It combines physical infrastructure with specialized teams rather than treating mechanization as mere equipment ownership. It operates through layered service radii, with both nearby intensive support and broader regional outreach. It pays serious attention to postharvest functions, which are often the true dividing line between partial and integrated service. And it increasingly connects production service with value-extension functions such as processing and branding.

The practical significance of this model is equally clear. Modern agricultural service centers can improve production efficiency, reduce labor pressure and coordination costs, strengthen emergency response under weather shock, support greener and more standardized rice production, and make it easier for smallholder-based production systems to remain linked with modern agricultural development. In developed provinces such as Zhejiang, where agriculture must often compete through quality, organization, and service rather than through simple expansion of scale, these functions are especially important.

At the same time, the Mashan case also shows that this model is not without pressure. Capital costs remain high. Skilled technical staff are hard to build and keep. Farmers are heterogeneous in demand and capacity. Digital management is still uneven. Climate risk is rising. These are not temporary inconveniences; they are structural issues that will shape whether service centers continue to function well over time.