



STRAW MANAGEMENT ADOPTION CAPACITY IN LONG AN PROVINCE

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INITIATIVE ON
Asian Mega-Deltas

Suggested citation:

Ong Q.C., Vu D.Q., Bui T.Y., Sander, B.O., Vu H.T., Barnard, J., Nguyen V.H., Nelson, K. 2022. Straw Management Adoption Capacity in Long An Province. Hanoi, Vietnam: International Rice Research Institute.

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This work was implemented as part of the CGIAR Initiative on Securing the Food Systems of Asian Mega-Deltas for Climate and Livelihood Resilience (INIT-18), which is carried out with support from funders who supported this research through their contributions to the CGIAR Trust Fund. For details please visit: <https://www.cgiar.org/funders/>.

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Contents

I. Introduction	5
II. Methodology	7
III. Results	9
3.1. Straw management adoption capacity in Tan An city	9
3.2. Straw management adoption capacity in Kien Tuong town	14
3.3. Straw management adoption capacity in Tan Hung district	17
3.4. Straw management adoption capacity in Vinh Hung district	22
3.5. Straw management adoption capacity in Moc Hoa district	26
3.6. Straw management adoption capacity in Tan Thanh district	31
3.7. Straw management adoption capacity in Thanh Hoa district	36
3.8. Straw management adoption capacity in Duc Hue district	41
3.9. Straw management adoption capacity in Duc Hoa district	46
3.10. Straw management adoption capacity in Ben Luc district	54
3.11. Straw management adoption capacity in Thu Thua district	57
3.12. Straw management adoption capacity in Tan Tru district	62
3.13. Straw management adoption capacity in Can Duoc district	67
3.14. Straw management adoption capacity in Can Giuoc district	70
IV. Conclusion	78
References	80
Appendix 1: The adoption capacity for straw removal management by district, Long An province	83

**STRAW MANAGEMENT ADOPTION CAPACITY
IN LONG AN PROVINCE**

I. Introduction

Agriculture contributes significantly to greenhouse gas emissions globally, especially in industrially developing economies that are currently heavily dependent on income from agriculture, such as Vietnam. The country has identified agriculture-related emission reduction commitments for its Nationally Determined Contributions in the Paris Agreement (Nelson et al., 2021). Vietnam is the 4th rice producer and ranks as the 2nd largest global exporter, selling approximately 8 million tons (Mt) of milled rice (2014), which is one-fifth of the global trade volume (US\$4 billion in rice export) (Tivet and Boulakia, 2017). The Mekong Delta, located in the South of Vietnam, is the biggest rice granary in the country. Annually, it produces up to 50% of the total rice output and comprises more than 95% of Vietnam's total milled rice export (ESCAP-CSAM, 2018). Long An province is the fourth largest rice production in the Mekong Delta, with 2,774.9 thousand tons in 2019. The rice planted area of Long An province in 2019 is 506.3 thousand ha.

Rice production has been identified as a significant source of atmospheric methane emissions because it is labor, water, and energy-intensive crop (McFadden et al., 2013). Rice is a dominant and vital crop for Vietnam. However, traditional paddy rice production also emits significant greenhouse gases, accounts for 50% of the country's agriculture emissions, and 15% of its total greenhouse gas emissions (IRRI, 2020). Efforts to reduce greenhouse gas emissions from rice production are a national priority for achieving Vietnam's Nationally Determined Contributions. One of the factors influencing the amount of greenhouse gas emitted from rice production is residue/post-harvesting management (Nelson et al., 2021). Rice straw is a rice by-product produced when harvesting paddy. Each kg of milled rice results in roughly 0.7-1.4 kg of rice straw depending on variety, cutting height of the stubbles, and moisture content during harvest. Rice straw is separated from the grains after the plants are threshed either manually, using stationary threshers, or, more recently, using a combine harvester (IRRI Rice Knowledge Bank). Approximately one-fourth of the straw is burned on the field, which is a common practice in intensive rice cultivation systems in the Mekong Delta. This is because there is limited time to prepare the field for the next crop. The spread of intensive rice production in the Mekong Delta may increase the total biomass of burning crop residues, significantly contributing to greenhouse gas emissions in Vietnam (Hong Van et al., 2014; Arai et al., 2015).

Open-field burning is an uncontrolled combustion process during which gases such as CO₂, nitrous oxide (N₂O), CH₄, CO, non-methane hydrocarbons (NMHC), NO_x, SO₂, particulate matter (PM), and few others are being emitted. The greenhouse gases (GHGs) of importance are N₂O and CH₄, which contribute to global warming and

climate change (Gadde et al., 2009). Rice straw burning in the field causes greenhouse gas (GHG) emissions, including 0.7-4.1 g of CH₄ and 0.019-0.057 g of N₂O per kg of dry rice straw, and emission of other gaseous pollutants such as SO₂, NO_x, HCL and, to some extent, dioxins and furans (Oanh et al., 2011; Jenkins et al., 2003). Burning causes almost complete N loss, P losses of about 25 percent, K losses of 5 to 60 percent. The amount of nutrient lost depends on the method used to burn the straw (Dobermann and Fairhurst, 2002).

To reduce air pollution from the impact of burning rice straw in Vietnam, it is suggested that modern technology practices such as incorporation, mushroom cultivation, compost, and biochar be adopted instead of the traditional use of straw (Duong and Yoshiro, 2015). Incorporation, mushroom production, cattle feed, and biogas production should be promoted to return organic matters to the soil (Hien, 2017). Partial and complete removal of rice straw reduces greenhouse gas emissions by 30% and 40% compared to complete straw retention, respectively (Nguyen-Van-Hung et al., 2019). However, the adoption of environmentally-friendly straw management is mainly driven by the market, rainfall distribution, and quality of transportation network (Bui et al., 2020). To date, limited knowledge exists about the factors that influence the straw adoption capacity.

Thus, this study aims to evaluate the straw management adoption capacity in Long An province. Key informant interview (KII) with district-level DARD officials in Long An province to determine the straw management adoption capacity in Winter-Spring, Summer-Autumn, and Autumn-Winter season.

II. Methodology

Key informant interview (KII) with fifteen district-level DARD officials in Long An province to determine each season's straw management adoption capacity (Winter-Spring, Summer-Autumn, and Autumn-Winter). District-level DARD officials evaluated every commune in their district on the influencing factors related to straw removal.

The scale from 1-10 was used to evaluate the factors that influence the straw adoption capacity for each commune. The scale was labeled with low and high responses. The influencing factors and the level of these factors were presented in Table 1.

Table 1. The influencing factors and the level of these factors

No.	Influencing factor	Level
1	Baling equipment availability	Low: never available/no balers Medium: sometimes available but difficult to schedule High: plenty of balers available to schedule when needed
2	Labor availability	Low: never available/no labor Medium: sometimes available but challenging to hire High: plenty of labor available to hire when needed
3	Straw buyers	Low: never available/no straw buyers Medium: sometimes available but difficult to sell High: plenty of straw buyers available to sell
4	Net gain to farmer	Low: 200,000 VND/ha Medium: 500,000 VND/ha High: 1,000,000 VND/ha
5	Transportation	Low: low quality of transportation network Medium: medium quality of transportation network High: high quality of transportation network
6	Storage availability	Low: never available/no storage Medium: a few storages available to stock straw High: plenty of storages available to stock straw
7	Storage affordability	Low: storage facilities too expensive to be able to earn profit from straw Medium: storage facilities expensive but straw sales still profitable High: cost for storage facilities is a small expenditure overall
8	Time between seasons	Low: the duration between two successive rice seasons is not enough for adopting straw removal practices. Medium: the duration between two successive rice seasons is relatively short. High: the duration between two successive rice seasons is enough for adopting straw removal practices.
9	Farmers' interest	Low: no interest in adopting straw removal practices Medium: relative interest in adopting straw removal practices High: great interest in adopting straw removal practices

10	Farmers' organization	Low: no supportive Medium: sometimes supportive High: always supportive for farmers to adopt straw removal practices
11	Local government	Low: no supportive Medium: sometimes supportive High: always supportive for farmers to adopt straw removal practices

The survey with stakeholders, including four scientists, four technical staff, and four farmers, was conducted to rank the importance of these factors from 1 to 11, with 1 being the most important factor and 11 being the least important, in their influence on straw removal management. Based on this survey, the weight of these factors were presented in Table 2.

Table 2. The level of importance of influencing factors on straw removal management

No.	Influencing factor	Overall ranking	Weight value
1	Baling equipment availability	1	0.17
2	Labor availability	4	0.12
3	Straw buyers	3	0.14
4	Net gain to farmer	9	0.05
5	Transportation	8	0.06
6	Storage availability	10	0.03
7	Storage affordability	11	0.02
8	Time between seasons	7	0.08
9	Farmers' interest	2	0.15
10	Farmers' organization	6	0.09
11	Local government	5	0.11
	Total		1.00

III. Results

3.1. Straw management adoption capacity in Tan An city

All communes and wards in Tan An city had a medium adoption capacity for straw removal in the Winter-Spring season. Khanh Hau ward, Tan Khanh ward, Binh Tam commune, Loi Binh Nhon commune, An Vinh Ngai commune, Huong Tho Phu commune, Nhon Thanh Trung commune had a high score for factor about baling equipment availability. In contrast, others had a medium score for this factor. All communes and wards in Tan An city had a high score for straw buyers, while they had a medium score for labor availability. However, they had a low score for farmers' interest. Farmers usually practiced the burning of rice straw and the incorporation of rice straw depending on whether rice straw was dry or wet. Besides, they also had a low score for farmers' organization and local government factors. Farmers' organizations and local government mainly propagated to farmers but did not provide much support for farmers to practice the removal of rice straw. In addition, they had a medium score for the time between seasons, but they had a high score for transportation. The score of straw management adoption capacity of Tan An city in the Winter-Spring season was presented in Table 3.

In the Summer-Autumn season, all communes and wards in Tan An city had a medium adoption capacity for straw removal management. Most communes and wards had a high score for baling equipment availability, except for Ward 6 and Ward 7. However, they had a low score for farmers' interest. Farmers usually practiced the incorporation of rice straw since the rice straw was wet in this season. Besides, all communes in this season had a medium score for the labor availability factor, but they had a high score for straw buyers. All communes and wards in this season also had a low score for farmers' organization and local government factors. However, they had a high score for the transportation factor. The score of straw management adoption capacity of Tan An city in the Summer-Autumn season was presented in Table 4.

In the Autumn-Winter season, all communes and wards in Tan An city had a medium adoption capacity for straw removal management. All communes and wards in this season had a high score for baling equipment availability and straw buyers. However, they had a low score for farmers' interest. Farmers usually practiced the incorporation of rice straw since the rice straw was wet in this season. All communes and wards in this season also had a low score for farmers' organization and local government factors. However, they had a medium score for the factor about the time between seasons. Farmers in Tan An city practiced three cropping seasons per year; thus, they had to clean the field for planting of succeeding paddy crop. Besides, they had a high score for

the transportation factor. The score of straw management adoption capacity of Tan An city in the Autumn-Winter season was presented in Table 5.

Table 3. Straw management adoption capacity of Tan An city in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Ward 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Ward 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Ward 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Ward 4	7	1.19	7	0.84	9	1.26	7	0.35	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.90	Medium
5. Ward 5	7	1.19	7	0.84	9	1.26	7	0.35	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.90	Medium
6. Ward 6	7	1.19	7	0.84	9	1.26	7	0.35	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.90	Medium
7. Ward 7	7	1.19	7	0.84	9	1.26	7	0.35	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.90	Medium
8. Khanh Hau Ward	8	1.36	7	0.84	9	1.26	7	0.35	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.07	Medium
9. Tan Khanh Ward	8	1.36	7	0.84	9	1.26	7	0.35	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.07	Medium
10. Binh Tam Commune	8	1.36	7	0.84	9	1.26	7	0.35	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.07	Medium
11. Loi Binh Nhon Commune	8	1.36	7	0.84	9	1.26	7	0.35	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.07	Medium
12. An Vinh Ngai Commune	8	1.36	7	0.84	9	1.26	7	0.35	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.07	Medium
13. Huong Tho Phu Commune	8	1.36	7	0.84	9	1.26	7	0.35	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.07	Medium
14. Nhon Thanh Trung Commune	8	1.36	7	0.84	9	1.26	7	0.35	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.07	Medium

-: Not planted

S: Score; WS: Weighted score; TWS: Total weighted score

Table 4. Straw management adoption capacity of Tan An city in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Ward 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Ward 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Ward 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Ward 4	8	1.36	7	0.84	9	1.26	5	0.25	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.97	Medium
5. Ward 5	8	1.36	7	0.84	9	1.26	5	0.25	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.97	Medium
6. Ward 6	7	1.19	7	0.84	9	1.26	5	0.25	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.80	Medium
7. Ward 7	7	1.19	7	0.84	9	1.26	5	0.25	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.80	Medium
8. Khanh Hau Ward	8	1.36	7	0.84	9	1.26	5	0.25	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.97	Medium
9. Tan Khanh Ward	8	1.36	7	0.84	9	1.26	5	0.25	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.97	Medium
10. Binh Tam Commune	8	1.36	7	0.84	9	1.26	5	0.25	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.97	Medium
11. Loi Binh Nhon Commune	8	1.36	7	0.84	9	1.26	5	0.25	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.97	Medium
12. An Vinh Ngai Commune	8	1.36	7	0.84	9	1.26	5	0.25	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.97	Medium
13. Huong Tho Phu Commune	8	1.36	7	0.84	9	1.26	5	0.25	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.97	Medium
14. Nhon Thanh Trung Commune	8	1.36	7	0.84	9	1.26	5	0.25	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	5.97	Medium

-: Not planted

S: Score; WS: Weighted score; TWS: Total weighted score

Table 5. Straw management adoption capacity of Tan An city in Autumn-Winter season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Ward 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Ward 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Ward 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Ward 4	8	1.36	7	0.84	9	1.26	6	0.30	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.02	Medium
5. Ward 5	8	1.36	7	0.84	9	1.26	6	0.30	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.02	Medium
6. Ward 6	8	1.36	7	0.84	9	1.26	6	0.30	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.02	Medium
7. Ward 7	8	1.36	7	0.84	9	1.26	6	0.30	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.02	Medium
8. Khanh Hau Ward	8	1.36	7	0.84	9	1.26	6	0.30	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.02	Medium
9. Tan Khanh Ward	8	1.36	7	0.84	9	1.26	6	0.30	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.02	Medium
10. Binh Tam Commune	8	1.36	7	0.84	9	1.26	6	0.30	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.02	Medium
11. Loi Binh Nhon Commune	8	1.36	7	0.84	9	1.26	6	0.30	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.02	Medium
12. An Vinh Ngai Commune	8	1.36	7	0.84	9	1.26	6	0.30	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.02	Medium
13. Huong Tho Phu Commune	8	1.36	7	0.84	9	1.26	6	0.30	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.02	Medium
14. Nhon Thanh Trung Commune	8	1.36	7	0.84	9	1.26	6	0.30	8	0.48	4	0.12	5	0.10	7	0.56	4	0.60	2	0.18	2	0.22	6.02	Medium

-: Not planted

S: Score; WS: Weighted score; TWS: Total weighted score

3.2. Straw management adoption capacity in Kien Tuong town

In the Winter-Spring season, all communes and wards in Kien Tuong town had a medium adoption capacity for straw removal management. In this season, Thanh Tri commune had the highest total weighted score, with 6.27, whereas Ward 2 had the lowest total weighted score, with 5.87. Only Binh Hiep commune had a high score for baling equipment availability, whereas others had low and medium scores for this factor. Most communes and wards in Kien Tuong town had a low score for farmers' interest, except for Binh Tan commune and Thanh Tri commune, with a medium score. However, all communes and wards in Kien Tuong town had a high score for factor about straw buyers. Besides, all communes and wards had a medium score for labor availability and local government factors. Ward 1, Ward 2, and Ward 3, Binh Hiep commune, and Tuyen Thanh commune had a medium score for farmers' organization factor, while Binh Tan commune and Thanh Tri commune had the low score for this factor. In addition, only Binh Tan commune and Thanh Tri commune had a medium score for the time between seasons. In contrast, others had a low score for this factor. The score of straw management adoption capacity of Kien Tuong town in the Winter-Spring season was presented in Table 6.

In the Summer-Autumn season, all communes and wards in Kien Tuong town had a medium adoption capacity for straw removal management. In this season, Thanh Tri commune had the highest total weighted score, with 5.78, whereas Ward 2 had the lowest total weighted score, with 4.45. Only Binh Hiep commune had a high score for baling equipment availability, whereas other communes and wards had medium and low scores for this factor. Only Binh Tan commune and Thanh Tri commune had a medium score for farmers' interest. In contrast, others had a low score for this factor. Besides, this season, all communes and wards in Kien Tuong town had a medium score for straw buyers and labor availability factors. Most communes and wards in Kien Tuong town had a medium score for farmers' organization and local government factors, while Thanh Tri commune had a low score for these factors. In addition, Binh Tan commune and Thanh Tri commune had a medium score for the time between seasons, whereas others had a low score for this factor. The score of straw management adoption capacity of Kien Tuong town in the Summer-Autumn season was presented in Table 7.

Table 6. Straw management adoption capacity of Kien Tuong town in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Ward 1	5	0.85	5	0.60	9	1.26	5	0.25	6	0.36	5	0.15	3	0.06	3	0.24	2	0.30	5	0.45	5	0.55	5.07	Medium
2. Ward 2	3	0.51	5	0.60	9	1.26	5	0.25	6	0.36	5	0.15	3	0.06	3	0.24	2	0.30	5	0.45	5	0.55	4.73	Medium
3. Ward 3	4	0.68	5	0.60	9	1.26	5	0.25	6	0.36	5	0.15	3	0.06	3	0.24	2	0.30	5	0.45	5	0.55	4.90	Medium
4. Binh Hiep Commune	8	1.36	5	0.60	9	1.26	5	0.25	6	0.36	5	0.15	3	0.06	3	0.24	2	0.30	5	0.45	5	0.55	5.58	Medium
5. Binh Tan Commune	6	1.02	7	0.84	8	1.12	7	0.35	7	0.42	2	0.06	3	0.06	7	0.56	6	0.90	2	0.18	4	0.44	5.95	Medium
6. Thanh Hung Commune	6	1.02	6	0.72	8	1.12	6	0.30	7	0.42	4	0.12	4	0.08	2	0.16	3	0.45	6	0.54	6	0.66	5.59	Medium
7. Thanh Tri Commune	7	1.19	7	0.84	8	1.12	7	0.35	7	0.42	2	0.06	3	0.06	7	0.56	7	1.05	2	0.18	4	0.44	6.27	Medium
8. Tuyen Thanh Commune	7	1.19	6	0.72	8	1.12	6	0.30	6	0.36	4	0.12	4	0.08	3	0.24	3	0.45	6	0.54	6	0.66	5.78	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

Table 7. Straw management adoption capacity of Kien Tuong town in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Ward 1	5	0.85	5	0.60	7	0.98	5	0.25	6	0.36	5	0.15	3	0.06	3	0.24	2	0.30	5	0.45	5	0.55	4.79	Medium
2. Ward 2	3	0.51	5	0.60	7	0.98	5	0.25	6	0.36	5	0.15	3	0.06	3	0.24	2	0.30	5	0.45	5	0.55	4.45	Medium
3. Ward 3	4	0.68	5	0.60	7	0.98	5	0.25	6	0.36	5	0.15	3	0.06	3	0.24	2	0.30	5	0.45	5	0.55	4.62	Medium
4. Binh Hiep Commune	9	1.53	5	0.60	7	0.98	5	0.25	6	0.36	5	0.15	3	0.06	3	0.24	2	0.30	5	0.45	5	0.55	5.47	Medium
5. Binh Tan Commune	5	0.85	6	0.72	6	0.84	7	0.35	7	0.42	2	0.06	3	0.06	8	0.64	6	0.90	3	0.27	5	0.55	5.66	Medium
6. Thanh Hung Commune	5	0.85	6	0.72	6	0.84	6	0.30	7	0.42	4	0.12	4	0.08	2	0.16	3	0.45	6	0.54	6	0.66	5.14	Medium
7. Thanh Tri Commune	6	1.02	6	0.72	6	0.84	7	0.35	7	0.42	2	0.06	3	0.06	8	0.64	7	1.05	2	0.18	4	0.44	5.78	Medium
8. Tuyen Thanh Commune	6	1.02	6	0.72	6	0.84	6	0.30	6	0.36	4	0.12	4	0.08	3	0.24	3	0.45	6	0.54	6	0.66	5.33	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

3.3. Straw management adoption capacity in Tan Hung district

In the Winter-Spring season, communes in Tan Hung district had medium and high adoption capacity for straw removal management. Hung Dien commune, Hung Ha commune, Hung Thanh commune, and Vinh Chau B commune had a high adoption capacity for straw removal management. In contrast, other communes had a medium adoption capacity for straw removal management. This season, Vinh Chau B commune had the highest total weighted score, with 8.23, whereas Vinh Chau A commune and Vinh Thanh commune had the lowest total weighted score, with 4.41. Besides, Hung Dien commune, Hung Ha commune, Hung Thanh commune, Vinh Buu commune, and Vinh Chau B commune had a high score for baling equipment availability. In contrast, other communes had medium and low scores for this factor. All communes in Tan Hung district had a high score for farmers' interest factor. In addition, Hung Dien commune, Hung Ha commune, Hung Thanh commune, and Vinh Chau B commune also had a high score for straw buyers and labor availability factors, while other communes had a low score for these factors. All communes had a medium score for the local government factor. Approximately 60% of communes in Tan Hung district had a high score for the time between seasons. The score of straw management adoption capacity of Tan Hung district in the Winter-Spring season was presented in Table 8.

In the Summer-Autumn season, communes in Tan Hung district had medium and high adoption capacity for straw removal management. Only four communes, Hung Dien commune, Hung Ha commune, Hung Thanh commune, and Vinh Chau B commune, had a high adoption capacity for straw removal management. In contrast, other communes had a medium adoption capacity for straw removal management. This season, Vinh Chau B commune had the highest total weighted score, with 8.23, whereas Vinh Chau A commune and Vinh Thanh commune had the lowest total weighted score, with 4.41. Hung Dien commune, Hung Ha commune, Hung Thanh commune, Vinh Buu commune, and Vinh Chau B commune had a high score for baling equipment availability, whereas other communes had medium and low scores for this factor. In addition, all communes in this season also had a high score for farmers' interest factor. Most communes in Tan Hung district had a low score for straw buyers and labor availability factors, except for Hung Dien commune, Hung Ha commune, Hung Thanh commune, and Vinh Chau B commune. Besides, all communes in this season also had the medium score for the local government factor. Only four communes, Hung Dien commune, Hung Ha commune, Hung Thanh commune, Vinh Buu commune, and Vinh Chau B commune, had a high score for farmers' organization factor, while other communes had a medium score for this factor. Farmers' organizations

in Hung Dien commune, Hung Ha commune, Hung Thanh commune, Vinh Buu commune, and Vinh Chau B commune had a vigorous development; thus, they provided training on rice straw handling for farmers and also supported to buy rice straw from farmers. The score of straw management adoption capacity of Tan Hung district in the Summer-Autumn season was presented in Table 9. In the Autumn-Winter season, only four communes, Vinh Buu commune, Vinh Chau A commune, Vinh Dai commune, and Vinh Loi commune, had rice cultivation. These communes had a medium adoption capacity for straw removal management. This season, Vinh Buu commune had the highest total weighted score, with 5.46, whereas Vinh Chau A commune had the lowest total weighted score, with 4.41. Only Vinh Buu commune had a high score for baling equipment availability, whereas other communes had a low score for this factor. All communes had a high score for farmers' interest factor, while they had a low score for straw buyers and labor availability factors. These communes also had a medium score for local government and farmer' organization factors. The score of straw management adoption capacity of Tan Hung district in the Autumn-Winter season was presented in Table 10.

Table 8. Straw management adoption capacity of Tan Hung district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Tan Hung Townlet	6	1.02	4	0.48	3	0.42	8	0.40	8	0.48	1	0.03	1	0.02	8	0.64	8	1.20	6	0.54	5	0.55	5.78	Medium
2. Hung Dien Commune	8	1.36	8	0.96	8	1.12	8	0.40	8	0.48	10	0.30	8	0.16	8	0.64	8	1.20	8	0.72	5	0.55	7.89	High
3. Hung Dien B Commune	6	1.02	8	0.96	3	0.42	8	0.40	8	0.48	1	0.03	1	0.02	8	0.64	8	1.20	6	0.54	5	0.55	6.26	Medium
4. Hung Ha Commune	8	1.36	8	0.96	8	1.12	8	0.40	8	0.48	1	0.03	1	0.02	8	0.64	8	1.20	8	0.72	5	0.55	7.48	High
5. Hung Thanh Commune	8	1.36	8	0.96	8	1.12	8	0.40	8	0.48	1	0.03	1	0.02	8	0.64	8	1.20	8	0.72	5	0.55	7.48	High
6. Thanh Hung Commune	3	0.51	4	0.48	3	0.42	8	0.40	8	0.48	1	0.03	1	0.02	4	0.32	8	1.20	6	0.54	5	0.55	4.95	Medium
7. Vinh Buu Commune	8	1.36	4	0.48	3	0.42	8	0.40	8	0.48	1	0.03	1	0.02	8	0.64	8	1.20	6	0.54	5	0.55	6.12	Medium
8. Vinh Chau A Commune	3	0.51	4	0.48	3	0.42	2	0.10	8	0.48	1	0.03	1	0.02	1	0.08	8	1.20	6	0.54	5	0.55	4.41	Medium
9. Vinh Chau B Commune	10	1.70	8	0.96	8	1.12	8	0.40	8	0.48	10	0.30	8	0.16	8	0.64	8	1.20	8	0.72	5	0.55	8.23	High
10. Vinh Dai Commune	4	0.68	4	0.48	3	0.42	6	0.30	8	0.48	1	0.03	1	0.02	1	0.08	8	1.20	6	0.54	5	0.55	4.78	Medium
11. Vinh Loi Commune	4	0.68	4	0.48	3	0.42	8	0.40	8	0.48	1	0.03	1	0.02	1	0.08	8	1.20	6	0.54	5	0.55	4.88	Medium
12. Vinh Thanh Commune	3	0.51	4	0.48	3	0.42	2	0.10	8	0.48	1	0.03	1	0.02	1	0.08	8	1.20	6	0.54	5	0.55	4.41	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

Table 9. Straw management adoption capacity of Tan Hung district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Tan Hung Townlet	6	1.02	4	0.48	3	0.42	8	0.40	8	0.48	1	0.03	1	0.02	8	0.64	8	1.20	6	0.54	5	0.55	5.78	Medium
2. Hung Dien Commune	8	1.36	8	0.96	8	1.12	8	0.40	8	0.48	10	0.30	8	0.16	8	0.64	8	1.20	8	0.72	5	0.55	7.89	High
3. Hung Dien B Commune	6	1.02	8	0.96	3	0.42	8	0.40	8	0.48	1	0.03	1	0.02	8	0.64	8	1.20	6	0.54	5	0.55	6.26	Medium
4. Hung Ha Commune	8	1.36	8	0.96	8	1.12	8	0.40	8	0.48	1	0.03	1	0.02	8	0.64	8	1.20	8	0.72	5	0.55	7.48	High
5. Hung Thanh Commune	8	1.36	8	0.96	8	1.12	8	0.40	8	0.48	1	0.03	1	0.02	8	0.64	8	1.20	8	0.72	5	0.55	7.48	High
6. Thanh Hung Commune	3	0.51	4	0.48	3	0.42	8	0.40	8	0.48	1	0.03	1	0.02	4	0.32	8	1.20	6	0.54	5	0.55	4.95	Medium
7. Vinh Buu Commune	8	1.36	4	0.48	3	0.42	8	0.40	8	0.48	1	0.03	1	0.02	8	0.64	8	1.20	6	0.54	5	0.55	6.12	Medium
8. Vinh Chau A Commune	3	0.51	4	0.48	3	0.42	2	0.10	8	0.48	1	0.03	1	0.02	1	0.08	8	1.20	6	0.54	5	0.55	4.41	Medium
9. Vinh Chau B Commune	10	1.70	8	0.96	8	1.12	8	0.40	8	0.48	10	0.30	8	0.16	8	0.64	8	1.20	8	0.72	5	0.55	8.23	High
10. Vinh Dai Commune	4	0.68	4	0.48	3	0.42	6	0.30	8	0.48	1	0.03	1	0.02	1	0.08	8	1.20	6	0.54	5	0.55	4.78	Medium
11. Vinh Loi Commune	4	0.68	4	0.48	3	0.42	8	0.40	8	0.48	1	0.03	1	0.02	1	0.08	8	1.20	6	0.54	5	0.55	4.88	Medium
12. Vinh Thanh Commune	3	0.51	4	0.48	3	0.42	2	0.10	8	0.48	1	0.03	1	0.02	1	0.08	8	1.20	6	0.54	5	0.55	4.41	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

Table 10. Straw management adoption capacity of Tan Hung district in Autumn-Winter season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Tan Hung Townlet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Hung Dien Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Hung Dien B Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Hung Ha Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Hung Thanh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6. Thanh Hung Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7. Vinh Buu Commune	8	1.36	4	0.48	3	0.42	6	0.30	8	0.48	1	0.03	1	0.02	1	0.08	8	1.20	6	0.54	5	0.55	5.46	Medium
8. Vinh Chau A Commune	3	0.51	4	0.48	3	0.42	2	0.10	8	0.48	1	0.03	1	0.02	1	0.08	8	1.20	6	0.54	5	0.55	4.41	Medium
9. Vinh Chau B Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Vinh Dai Commune	4	0.68	4	0.48	3	0.42	6	0.30	8	0.48	1	0.03	1	0.02	1	0.08	8	1.20	6	0.54	5	0.55	4.78	Medium
11. Vinh Loi Commune	4	0.68	4	0.48	3	0.42	6	0.30	8	0.48	1	0.03	1	0.02	1	0.08	8	1.20	6	0.54	5	0.55	4.78	Medium
12. Vinh Thanh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

-: Not planted

S: Score; WS: Weighted score; TWS: Total weighted score

3.4. Straw management adoption capacity in Vinh Hung district

In the Winter-Spring season, communes in Vinh Hung district had medium and low adoption capacity for straw removal management. Hung Dien A commune, Khanh Hung commune, Thai Binh Trung commune, Thai Tri commune, and Vinh Binh commune had a medium adoption capacity for straw removal management. In contrast, other communes had a low adoption capacity for straw removal management. In this season, Hung Dien A commune, Khanh Hung commune, and Thai Binh Trung commune had the highest total weighted score, with 5.22, whereas Tuyen Binh Tay commune had the lowest total weighted score, with 2.39. Hung Dien A commune, Khanh Hung commune, Thai Binh Trung commune, Thai Tri commune, and Vinh Binh commune had a medium score for baling equipment availability, whereas other communes had a low score for this factor. Besides, all communes in Vinh Hung district had a high score for farmers' interest factor. Hung Dien A commune, Khanh Hung commune, Thai Binh Trung commune, and Thai Tri commune had a medium score for straw buyers and labor availability factors, while other communes had a low score for these factors. It should be note that straw buyers mainly came from outside of Vinh Hung district. All communes in Vinh Hung district had a very low score for farmers' organization and local government factors. Farmers' organizations and local governments in these communes did not support farmers for the removal of rice straw. In addition, 60% of the communes had a medium score for the time between seasons. In contrast, others had a low score for this factor. The score of straw management adoption capacity of Vinh Hung district in the Winter-Spring season was presented in Table 11.

In the Summer-Autumn season, communes in Vinh Hung district had medium and low adoption capacity for straw removal management. Only three communes in Vinh Hung district, namely, Hung Dien A commune, Khanh Hung commune, Thai Binh Trung commune, had a medium adoption capacity for straw removal management. In contrast, other communes had a low adoption capacity for straw removal management. In this season, Hung Dien A commune, Khanh Hung commune, and Thai Binh Trung commune had the highest total weighted score, with 4.18, whereas Tuyen Binh Tay commune had the lowest total weighted score, with 1.88. Hung Dien A commune, Khanh Hung commune, Thai Binh Trung commune, and Vinh Binh commune had a medium score for baling equipment availability, whereas other communes had a low score for this factor. In contrast with the Winter-Spring season, all communes in the Summer-Autumn season had a low score of farmers' interest. In addition, Hung Dien A commune, Khanh Hung commune, Thai Binh Trung commune, and Thai Tri commune had a medium score for straw buyers and labor availability factors, while other communes had a low score for these factors. All communes in Vinh Hung district had a very low score for farmers' organization and local government factors. Besides, only two

communes, Vinh Tri commune and Vinh Thuan commune, had a low score for the time between seasons, whereas others had a medium score for this factor. The score of straw management adoption capacity of Vinh Hung district in the Summer-Autumn season was presented in Table 12.

Table 11. Straw management adoption capacity of Vinh Hung district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Vinh Hung Townlet	3	0.51	2	0.24	2	0.28	2	0.10	4	0.24	3	0.09	6	0.12	6	0.48	8	1.20	2	0.18	1	0.11	3.55	Low
2. Hung Dien A Commune	6	1.02	6	0.72	6	0.84	2	0.10	6	0.36	6	0.18	6	0.12	6	0.48	8	1.20	1	0.09	1	0.11	5.22	Medium
3. Khanh Hung Commune	6	1.02	6	0.72	6	0.84	2	0.10	6	0.36	6	0.18	6	0.12	6	0.48	8	1.20	1	0.09	1	0.11	5.22	Medium
4. Thai Binh Trung Commune	6	1.02	6	0.72	6	0.84	2	0.10	6	0.36	6	0.18	6	0.12	6	0.48	8	1.20	1	0.09	1	0.11	5.22	Medium
5. Thai Tri Commune	5	0.85	6	0.72	6	0.84	2	0.10	5	0.30	4	0.12	5	0.10	5	0.40	8	1.20	1	0.09	1	0.11	4.83	Medium
6. Tuyen Binh Commune	3	0.51	2	0.24	4	0.56	2	0.10	3	0.18	3	0.09	4	0.08	3	0.24	8	1.20	1	0.09	1	0.11	3.40	Low
7. Tuyen Binh Tay Commune	1	0.17	1	0.12	2	0.28	1	0.05	2	0.12	1	0.03	3	0.06	2	0.16	8	1.20	1	0.09	1	0.11	2.39	Low
8. Vinh Binh Commune	6	1.02	3	0.36	3	0.42	2	0.10	6	0.36	3	0.09	6	0.12	6	0.48	8	1.20	1	0.09	1	0.11	4.35	Medium
9. Vinh Tri Commune	4	0.68	2	0.24	5	0.70	2	0.10	4	0.24	2	0.06	4	0.08	2	0.16	8	1.20	1	0.09	1	0.11	3.66	Low
10. Vinh Thuan Commune	3	0.51	2	0.24	3	0.42	2	0.10	3	0.18	2	0.06	4	0.08	3	0.24	8	1.20	1	0.09	1	0.11	3.23	Low

S: Score; WS: Weighted score; TWS: Total weighted score

Table 12. Straw management adoption capacity of Vinh Hung district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Vinh Hung Townlet	3	0.51	2	0.24	2	0.28	3	0.15	3	0.18	3	0.09	6	0.12	6	0.48	3	0.45	1	0.09	1	0.11	2.70	Low
2. Hung Dien A Commune	5	0.85	6	0.72	6	0.84	2	0.10	4	0.24	6	0.18	6	0.12	6	0.48	3	0.45	1	0.09	1	0.11	4.18	Medium
3. Khanh Hung Commune	5	0.85	6	0.72	6	0.84	2	0.10	4	0.24	6	0.18	6	0.12	6	0.48	3	0.45	1	0.09	1	0.11	4.18	Medium
4. Thai Binh Trung Commune	5	0.85	6	0.72	6	0.84	2	0.10	4	0.24	6	0.18	6	0.12	6	0.48	3	0.45	1	0.09	1	0.11	4.18	Medium
5. Thai Tri Commune	4	0.68	6	0.72	6	0.84	2	0.10	4	0.24	4	0.12	5	0.10	5	0.40	3	0.45	1	0.09	1	0.11	3.85	Low
6. Tuyen Binh Commune	2	0.34	2	0.24	4	0.56	2	0.10	3	0.18	3	0.09	4	0.08	5	0.40	3	0.45	1	0.09	1	0.11	2.64	Low
7. Tuyen Binh Tay Commune	1	0.17	1	0.12	2	0.28	1	0.05	2	0.12	1	0.03	3	0.06	5	0.40	3	0.45	1	0.09	1	0.11	1.88	Low
8. Vinh Binh Commune	5	0.85	3	0.36	3	0.42	2	0.10	3	0.18	3	0.09	6	0.12	6	0.48	3	0.45	1	0.09	1	0.11	3.25	Low
9. Vinh Tri Commune	3	0.51	2	0.24	5	0.70	2	0.10	2	0.12	2	0.06	4	0.08	2	0.16	3	0.45	1	0.09	1	0.11	2.62	Low
10. Vinh Thuan Commune	2	0.34	2	0.24	3	0.42	1	0.05	1	0.06	2	0.06	4	0.08	3	0.24	3	0.45	1	0.09	1	0.11	2.14	Low

S: Score; WS: Weighted score; TWS: Total weighted score

3.5. Straw management adoption capacity in Moc Hoa district

In the Winter-Spring season, communes in Moc Hoa district had medium and low adoption capacity for straw removal management. Binh Hoa Dong commune, Binh Hoa Tay commune, Binh Hoa Trung commune, and Binh Thanh commune had a medium adoption capacity for straw removal management. In contrast, other communes had a low adoption capacity for straw removal management. In this season, Binh Hoa Tay commune and Binh Hoa Trung commune had the highest total weighted score, with 4.83, whereas Tan Lap commune had the lowest total weighted score, with 3.68. All communes in Moc Hoa district had a low score for baling equipment availability and farmers' interest factors. Most farmers were not concerned about the removal of rice straw and the negative effect of burning rice straw on the environment. Binh Hoa Tay commune, Binh Hoa Trung commune, and Binh Thanh commune had a medium score for straw buyers factor, while other communes had a low score for this factor. In addition, Binh Hoa Dong commune, Binh Hoa Tay commune, Binh Hoa Trung commune, and Binh Thanh commune had a high score for labor availability, while others had a medium score for this factor. All communes in Moc Hoa district had a low score for farmers' organization and local government factors. Besides, only Tan Lap commune had a low score for the time between seasons. In contrast, others had a high score for this factor. The score of straw management adoption capacity of Moc Hoa district in the Winter-Spring season was presented in Table 13.

In the Summer-Autumn season, communes in Moc Hoa district had medium and low adoption capacity for straw removal management. Binh Hoa Dong commune, Binh Hoa Tay commune, Binh Hoa Trung commune, and Binh Thanh commune had a medium adoption capacity for straw removal management. In contrast, other communes had a low adoption capacity for straw removal management. In this season, Binh Hoa Tay commune and Binh Hoa Trung commune had the highest total weighted score, with 4.30, whereas Tan Lap commune had the lowest total weighted score, with 3.44. All communes in this season also had a low score for baling equipment availability and farmers' interest factors. The score of straw buyer factor was also low in all communes. In addition, only four communes in this season, namely, Binh Hoa Dong commune, Binh Hoa Tay commune, Binh Hoa Trung commune, and Binh Thanh commune, had a high score for labor availability. In contrast, others had a medium score for this factor. Besides, all communes in this season also had a low score for farmers' organization and local government factors, while they had a high score for the time between seasons. The score of straw management adoption capacity of Moc Hoa district in the Summer-Autumn season was presented in Table 14.

Only Tan Lap commune had rice cultivation in the Autumn-Winter season. Tan Lap commune had a low adoption capacity for straw removal management. This commune

had a low score for all influencing factors, except for labor availability and storage affordability. The score of straw management adoption capacity of Moc Hoa district in the Autumn-Winter season was presented in Table 15.

Table 13. Straw management adoption capacity of Moc Hoa district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Binh Phong Thanh Townlet	2	0.34	7	0.84	3	0.42	4	0.20	4	0.24	1	0.03	5	0.10	8	0.64	3	0.45	3	0.27	4	0.44	3.97	Low
2. Binh Hoa Dong Commune	3	0.51	8	0.96	4	0.56	5	0.25	5	0.30	2	0.06	5	0.10	8	0.64	3	0.45	3	0.27	4	0.44	4.54	Medium
3. Binh Hoa Tay Commune	3	0.51	8	0.96	5	0.70	5	0.25	5	0.30	2	0.06	5	0.10	8	0.64	4	0.60	3	0.27	4	0.44	4.83	Medium
4. Binh Hoa Trung Commune	3	0.51	8	0.96	5	0.70	5	0.25	5	0.30	2	0.06	5	0.10	8	0.64	4	0.60	3	0.27	4	0.44	4.83	Medium
5. Binh Thanh Commune	3	0.51	8	0.96	5	0.70	5	0.25	5	0.30	1	0.03	5	0.10	8	0.64	4	0.60	3	0.27	4	0.44	4.80	Medium
6. Tan Lap Commune	2	0.34	7	0.84	3	0.42	4	0.20	4	0.24	2	0.06	5	0.10	4	0.32	3	0.45	3	0.27	4	0.44	3.68	Low
7. Tan Thanh Commune	2	0.34	7	0.84	3	0.42	4	0.20	4	0.24	1	0.03	5	0.10	8	0.64	3	0.45	3	0.27	4	0.44	3.97	Low

S: Score; WS: Weighted score; TWS: Total weighted score

Table 14. Straw management adoption capacity of Moc Hoa district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Binh Phong Thanh Townlet	2	0.34	7	0.84	2	0.28	2	0.10	4	0.24	1	0.03	5	0.10	8	0.64	3	0.45	3	0.27	4	0.44	3.73	Low
2. Binh Hoa Dong Commune	3	0.51	8	0.96	2	0.28	3	0.15	5	0.30	2	0.06	5	0.10	8	0.64	3	0.45	3	0.27	4	0.44	4.16	Medium
3. Binh Hoa Tay Commune	3	0.51	8	0.96	3	0.42	3	0.15	5	0.30	2	0.06	5	0.10	8	0.64	3	0.45	3	0.27	4	0.44	4.30	Medium
4. Binh Hoa Trung Commune	3	0.51	8	0.96	3	0.42	3	0.15	5	0.30	2	0.06	5	0.10	8	0.64	3	0.45	3	0.27	4	0.44	4.30	Medium
5. Binh Thanh Commune	3	0.51	8	0.96	2	0.28	3	0.15	5	0.30	1	0.03	5	0.10	8	0.64	3	0.45	3	0.27	4	0.44	4.13	Medium
6. Tan Lap Commune	2	0.34	7	0.84	2	0.28	2	0.10	4	0.24	2	0.06	5	0.10	4	0.32	3	0.45	3	0.27	4	0.44	3.44	Low
7. Tan Thanh Commune	2	0.34	7	0.84	2	0.28	2	0.10	4	0.24	1	0.03	5	0.10	8	0.64	3	0.45	3	0.27	4	0.44	3.73	Low

S: Score; WS: Weighted score; TWS: Total weighted score

Table 15. Straw management adoption capacity of Moc Hoa district in Autumn-Winter season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Binh Phong Thanh Townlet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Binh Hoa Dong Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Binh Hoa Tay Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Binh Hoa Trung Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Binh Thanh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6. Tan Lap Commune	2	0.34	7	0.84	1	0.14	2	0.10	4	0.24	2	0.06	5	0.10	4	0.32	3	0.45	3	0.27	4	0.44	3.30	Low
7. Tan Thanh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

-: Not planted

S: Score; WS: Weighted score; TWS: Total weighted score

3.6. Straw management adoption capacity in Tan Thanh district

In the Winter-Spring season, communes in Tan Thanh district had high and medium adoption capacity for straw removal management. Only three communes, Tan Lap commune, Nhon Hoa Lap commune, and Hau Thanh Dong commune, had a high adoption capacity for straw removal management. In contrast, other communes had a medium adoption capacity for straw removal management. In this season, Tan Lap commune had the highest total weighted score, with 7.07, whereas Nhon Hoa commune had the lowest total weighted score, with 6.22. Over half of the communes in Tan Thanh district had a high score for baling equipment availability, while others had a medium score for this factor. All communes in Tan Thanh district had a high score for farmers' interest factor. In addition, they had a medium score for straw buyers, while they had a low score for labor availability. Besides, most communes in Tan Thanh district had a medium score for farmers' organization and local government factors. However, all communes had a high score for the time between seasons. The score of straw management adoption capacity of Tan Thanh district in the Winter-Spring season was presented in Table 16.

In the Summer-Autumn season, all communes in Tan Thanh district had a medium adoption capacity for straw removal management. In this season, Tan Lap commune had the highest total weighted score, with 6.09, whereas Tan Binh commune had the lowest total weighted score, with 5.37. The baling equipment availability and straw buyer factors were medium in all communes, while the labor availability factor was low. Straw buyers came from outside Tan Thanh district; they mainly came from Ben Tre province, Tien Giang province, and Chau Thanh district. Only three communes, Tan Thanh townlet, Nhon Hoa commune, and Tan Binh commune, had a medium score for farmers' interest factor, while others had a high score for this factor. Besides, all communes in Tan Thanh district had a medium score for farmers' organization and local government factors. Tan Thanh townlet, Nhon Hoa commune, and Tan Binh commune had a high score for time between seasons, while other communes had a medium score for this factor. This was because Tan Thanh townlet, Nhon Hoa commune, and Tan Binh commune cultivated only two cropping seasons (Winter-Spring and Summer-Autumn season). Thus, farmers in these communes had enough time to remove rice straw. The score of straw management adoption capacity of Tan Thanh district in the Summer-Autumn season was presented in Table 17.

In the Autumn-Winter season, all communes in Tan Thanh district had a medium adoption capacity for straw removal management. In this season, Kien Binh commune had the highest total weighted score, with 4.29, whereas Hau Thanh Tay commune had the lowest

total weighted score, with 5.37. The baling equipment availability was medium in all communes, while the straw buyer and labor availability factors were low. It should be noted that the quality of rice straw was wet in this season due to much rain. Thus, straw buyers did not buy too much rice straw in this season. In addition, all communes had a low score for farmers' interest factor. Farmers had difficulty in the removal of rice straw since there was much rain in this season. Thus, farmers mainly practiced the incorporation of rice straw in this season. Bac Hoa commune, Hau Thanh Dong commune, Hau Thanh Tay commune, Kien Binh commune, and Nhon Hoa Lap commune had a high score for local government factor, while other communes had a medium score for this factor. Besides, all communes had a low score for farmers' organization factor. However, they had a medium score for time between seasons. The score of straw management adoption capacity of Tan Thanh district in the Autumn-Winter season was presented in Table 18.

Table 16. Straw management adoption capacity of Tan Thanh district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Tan Thanh Townlet	7	1.19	2	0.24	7	0.98	6	0.30	8	0.48	2	0.06	1	0.02	8	0.64	8	1.20	7	0.63	7	0.77	6.51	Medium
2. Bac Hoa Commune	9	1.53	2	0.24	7	0.98	6	0.30	8	0.48	2	0.06	3	0.06	8	0.64	8	1.20	7	0.63	8	0.88	7.00	Medium
3. Hau Thanh Dong Commune	9	1.53	2	0.24	7	0.98	6	0.30	8	0.48	3	0.09	2	0.04	8	0.64	8	1.20	7	0.63	8	0.88	7.01	High
4. Hau Thanh Tay Commune	7	1.19	2	0.24	7	0.98	5	0.25	7	0.42	1	0.03	2	0.04	8	0.64	8	1.20	7	0.63	8	0.88	6.50	Medium
5. Kien Binh Commune	6	1.02	2	0.24	7	0.98	5	0.25	8	0.48	4	0.12	4	0.08	8	0.64	8	1.20	7	0.63	7	0.77	6.41	Medium
6. Nhon Hoa Commune	6	1.02	2	0.24	7	0.98	5	0.25	6	0.36	3	0.09	2	0.04	8	0.64	8	1.20	7	0.63	7	0.77	6.22	Medium
7. Nhon Hoa Lap Commune	9	1.53	2	0.24	7	0.98	7	0.35	8	0.48	2	0.06	2	0.04	8	0.64	8	1.20	7	0.63	8	0.88	7.03	High
8. Nhon Ninh Commune	8	1.36	2	0.24	7	0.98	7	0.35	8	0.48	2	0.06	2	0.04	8	0.64	8	1.20	7	0.63	7	0.77	6.75	Medium
9. Tan Binh Commune	6	1.02	2	0.24	7	0.98	6	0.30	6	0.36	3	0.09	2	0.04	8	0.64	8	1.20	7	0.63	7	0.77	6.27	Medium
10. Tan Hoa Commune	9	1.53	2	0.24	7	0.98	7	0.35	8	0.48	2	0.06	3	0.06	8	0.64	8	1.20	7	0.63	7	0.77	6.94	Medium
11. Tan Lap Commune	9	1.53	2	0.24	7	0.98	7	0.35	8	0.48	5	0.15	5	0.10	8	0.64	8	1.20	7	0.63	7	0.77	7.07	High
12. Tan Ninh Commune	9	1.53	2	0.24	7	0.98	7	0.35	8	0.48	3	0.09	2	0.04	8	0.64	8	1.20	7	0.63	7	0.77	6.95	Medium
13. Tan Thanh Commune	9	1.53	2	0.24	7	0.98	7	0.35	8	0.48	2	0.06	3	0.02	8	0.64	8	1.20	7	0.63	7	0.77	6.51	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

Table 17. Straw management adoption capacity of Tan Thanh district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Tan Thanh Townlet	5	0.85	2	0.24	5	0.70	5	0.25	6	0.36	2	0.06	2	0.04	9	0.72	6	0.90	6	0.54	7	0.77	5.43	Medium
2. Bac Hoa Commune	6	1.02	2	0.24	5	0.70	5	0.25	6	0.36	1	0.03	2	0.04	7	0.56	8	1.20	6	0.54	7	0.77	5.71	Medium
3. Hau Thanh Dong Commune	6	1.02	2	0.24	5	0.70	5	0.25	6	0.36	3	0.09	1	0.02	7	0.56	8	1.20	6	0.54	7	0.77	5.75	Medium
4. Hau Thanh Tay Commune	6	1.02	2	0.24	5	0.70	5	0.25	5	0.30	2	0.06	2	0.04	7	0.56	8	1.20	6	0.54	7	0.77	5.68	Medium
5. Kien Binh Commune	7	1.19	2	0.24	5	0.70	5	0.25	6	0.36	4	0.12	3	0.06	7	0.56	8	1.20	6	0.54	7	0.77	5.99	Medium
6. Nhon Hoa Commune	6	1.02	2	0.24	5	0.70	5	0.25	5	0.30	2	0.06	1	0.02	9	0.72	6	0.90	6	0.54	7	0.77	5.52	Medium
7. Nhon Hoa Lap Commune	7	1.19	2	0.24	5	0.70	6	0.30	6	0.36	3	0.09	2	0.04	7	0.56	8	1.20	6	0.54	7	0.77	5.99	Medium
8. Nhon Ninh Commune	7	1.19	2	0.24	5	0.70	6	0.30	6	0.36	2	0.06	1	0.02	7	0.56	8	1.20	6	0.54	7	0.77	5.94	Medium
9. Tan Binh Commune	5	0.85	2	0.24	5	0.70	5	0.25	5	0.30	2	0.06	2	0.04	9	0.72	6	0.90	6	0.54	7	0.77	5.37	Medium
10. Tan Hoa Commune	7	1.19	2	0.24	5	0.70	6	0.30	6	0.36	1	0.03	2	0.04	7	0.56	8	1.20	6	0.54	7	0.77	5.93	Medium
11. Tan Lap Commune	7	1.19	2	0.24	5	0.70	6	0.30	6	0.36	5	0.15	4	0.08	7	0.56	8	1.20	6	0.54	7	0.77	6.09	Medium
12. Tan Ninh Commune	7	1.19	2	0.24	5	0.70	6	0.30	6	0.36	2	0.06	1	0.02	7	0.56	8	1.20	6	0.54	7	0.77	5.94	Medium
13. Tan Thanh Commune	7	1.19	2	0.24	5	0.70	6	0.30	6	0.36	2	0.06	2	0.04	7	0.56	8	1.20	6	0.54	7	0.77	5.96	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

Table 18. Straw management adoption capacity of Tan Thanh district in Autumn-Winter season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Tan Thanh Townlet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Bac Hoa Commune	5	0.85	2	0.24	3	0.42	5	0.25	5	0.30	2	0.06	2	0.04	6	0.48	3	0.45	3	0.27	8	0.88	4.24	Medium
3. Hau Thanh Dong Commune	5	0.85	2	0.24	3	0.42	5	0.25	5	0.30	2	0.06	2	0.04	6	0.48	3	0.45	3	0.27	8	0.88	4.24	Medium
4. Hau Thanh Tay Commune	4	0.68	2	0.24	3	0.42	5	0.25	5	0.30	1	0.03	2	0.04	6	0.48	3	0.45	3	0.27	8	0.88	4.04	Medium
5. Kien Binh Commune	5	0.85	2	0.24	3	0.42	5	0.25	5	0.30	3	0.09	3	0.06	6	0.48	3	0.45	3	0.27	8	0.88	4.29	Medium
6. Nhon Hoa Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7. Nhon Hoa Lap Commune	5	0.85	2	0.24	3	0.42	5	0.25	5	0.30	2	0.06	2	0.04	6	0.48	3	0.45	3	0.27	8	0.88	4.24	Medium
8. Nhon Ninh Commune	5	0.85	2	0.24	3	0.42	5	0.25	5	0.30	1	0.03	2	0.04	6	0.48	3	0.45	3	0.27	7	0.77	4.10	Medium
9. Tan Binh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Tan Hoa Commune	5	0.85	2	0.24	3	0.42	5	0.25	5	0.30	2	0.06	2	0.04	6	0.48	3	0.45	3	0.27	7	0.77	4.13	Medium
11. Tan Lap Commune	5	0.85	2	0.24	3	0.42	5	0.25	5	0.30	4	0.12	3	0.06	6	0.48	3	0.45	3	0.27	7	0.77	4.21	Medium
12. Tan Ninh Commune	5	0.85	2	0.24	3	0.42	5	0.25	5	0.30	2	0.06	2	0.04	6	0.48	3	0.45	3	0.27	7	0.77	4.13	Medium
13. Tan Thanh Commune	5	0.85	2	0.24	3	0.42	5	0.25	5	0.30	1	0.03	1	0.02	6	0.48	3	0.45	3	0.27	7	0.77	4.08	Medium

-: Not planted

S: Score; WS: Weighted score; TWS: Total weighted score

3.7. Straw management adoption capacity in Thanh Hoa district

All communes in Thanh Hoa district had a medium adoption capacity for straw removal management in the Winter-Spring season. In this season, Tan Tay commune had the highest total weighted score, with 6.38, whereas Thanh An commune had the lowest total weighted score, with 4.69. Tan Dong commune, Tan Tay commune, Thanh Phu commune, Thanh Phuoc commune, Thuan Nghia Hoa commune, and Thuy Dong commune had a medium score for baling equipment availability. In contrast, others had a low score for this factor. Most of the communes in Thanh Hoa district had a medium score for farmers' interest factor. Only Tan Tay commune had a high score for the straw buyer factor, whereas other communes had a medium score for this factor. There were many yellow Mai flower growers in Tan Tay commune; thus, they needed rice straw to mulch this flower. Over half of the communes in Thanh Hoa district had a medium score for labor availability. In contrast, other communes, namely, Thanh An commune, Thuan Binh commune, Thuan Nghia Hoa commune, Thuy Dong commune, had a low score for this factor. In addition, all communes had a medium score for farmers' organization and local government factors. The score of straw management adoption capacity of Thanh Hoa district in the Winter-Spring season was presented in Table 19.

In the Summer-Autumn season, all communes in Thanh Hoa district had a medium adoption capacity for straw removal management. In this season, Tan Tay commune also had the highest total weighted score, with 6.38, whereas Thanh An commune also had the lowest total weighted score, with 4.69. Tan Dong commune, Tan Tay commune, Thanh Phu commune, Thanh Phuoc commune, Thuan Nghia Hoa commune, and Thuy Dong commune also had a medium score for baling equipment availability in this season. In contrast, others had a low score for this factor. Most of the communes in Thanh Hoa district had a medium score for farmers' interest, except for Thanh An commune. This was because Thanh An commune cultivated three cropping seasons. Tan Tay commune also had a high score for the straw buyer factor in this season, whereas other communes had a medium score for this factor. Over half of the communes in Thanh Hoa district had a medium score for labor availability, while others had a low score for this factor. Besides, all communes had a medium score for farmers' organization and local government factors. The score of straw management adoption capacity of Thanh Hoa district in the Summer-Autumn season was presented in Table 20.

Only Thanh An commune had rice cultivation in the Autumn-Winter season. Thanh An commune had a medium adoption capacity for straw removal management. This commune had a low score for baling equipment availability, farmers' interest, and labor availability. It had a medium score for straw buyer, local government, and farmers'

organization factors. The score of straw management adoption capacity of Thanh Hoa district in the Autumn-Winter season was presented in Table 21.

Table 19. Straw management adoption capacity of Thanh Hoa district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Thanh Hoa Townlet	3	0.51	5	0.60	6	0.84	7	0.35	7	0.42	2	0.06	2	0.04	6	0.48	6	0.90	7	0.63	5	0.55	5.38	Medium
2. Tan Dong Commune	7	1.19	5	0.60	6	0.84	7	0.35	6	0.36	3	0.09	2	0.04	6	0.48	6	0.90	6	0.54	5	0.55	5.94	Medium
3. Tan Hiep Commune	4	0.68	6	0.72	5	0.70	6	0.30	5	0.30	3	0.09	2	0.04	6	0.48	7	1.05	6	0.54	5	0.55	5.45	Medium
4. Tan Tay Commune	5	0.85	7	0.84	8	1.12	7	0.35	6	0.36	3	0.09	2	0.04	6	0.48	7	1.05	6	0.54	6	0.66	6.38	Medium
5. Thanh An Commune	3	0.51	4	0.48	5	0.70	7	0.35	5	0.30	2	0.06	2	0.04	2	0.16	4	0.60	8	0.72	7	0.77	4.69	Medium
6. Thanh Phu Commune	6	1.02	5	0.60	5	0.70	5	0.25	5	0.30	2	0.06	2	0.04	6	0.48	6	0.90	6	0.54	6	0.66	5.55	Medium
7. Thanh Phuoc Commune	6	1.02	7	0.84	6	0.84	5	0.25	5	0.30	3	0.09	2	0.04	5	0.40	7	1.05	6	0.54	7	0.77	6.14	Medium
8. Thuan Binh Commune	2	0.34	4	0.48	7	0.98	4	0.20	4	0.24	3	0.09	2	0.04	6	0.48	7	1.05	6	0.54	7	0.77	5.21	Medium
9. Thuan Nghia Hoa Commune	7	1.19	4	0.48	7	0.98	5	0.25	6	0.36	3	0.09	3	0.06	7	0.56	6	0.90	7	0.63	6	0.66	6.16	Medium
10. Thuy Dong Commune	7	1.19	3	0.36	7	0.98	5	0.25	5	0.30	3	0.09	2	0.04	6	0.48	6	0.90	7	0.63	5	0.55	5.77	Medium
11. Thuy Tay Commune	4	0.68	7	0.84	5	0.70	6	0.30	7	0.42	3	0.09	2	0.04	5	0.40	5	0.75	6	0.54	5	0.55	5.31	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

Table 20. Straw management adoption capacity of Thanh Hoa district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Thanh Hoa Townlet	3	0.51	5	0.60	6	0.84	7	0.35	7	0.42	2	0.06	2	0.04	6	0.48	6	0.90	7	0.63	5	0.55	5.38	Medium
2. Tan Dong Commune	7	1.19	5	0.60	6	0.84	7	0.35	6	0.36	3	0.09	2	0.04	6	0.48	6	0.90	6	0.54	5	0.55	5.94	Medium
3. Tan Hiep Commune	4	0.68	6	0.72	5	0.70	6	0.30	5	0.30	3	0.09	2	0.04	6	0.48	7	1.05	6	0.54	5	0.55	5.45	Medium
4. Tan Tay Commune	5	0.85	7	0.84	8	1.12	7	0.35	6	0.36	3	0.09	2	0.04	6	0.48	7	1.05	6	0.54	6	0.66	6.38	Medium
5. Thanh An Commune	3	0.51	4	0.48	5	0.70	7	0.35	5	0.30	2	0.06	2	0.04	2	0.16	4	0.60	8	0.72	7	0.77	4.69	Medium
6. Thanh Phu Commune	6	1.02	5	0.60	5	0.70	5	0.25	5	0.30	2	0.06	2	0.04	6	0.48	6	0.90	6	0.54	6	0.66	5.55	Medium
7. Thanh Phuoc Commune	6	1.02	7	0.84	6	0.84	5	0.25	5	0.30	3	0.09	2	0.04	5	0.40	7	1.05	6	0.54	7	0.77	6.14	Medium
8. Thuan Binh Commune	2	0.34	4	0.48	7	0.98	4	0.20	4	0.24	3	0.09	2	0.04	6	0.48	7	1.05	6	0.54	7	0.77	5.21	Medium
9. Thuan Nghia Hoa Commune	7	1.19	4	0.48	7	0.98	5	0.25	6	0.36	3	0.09	3	0.06	7	0.56	6	0.90	7	0.63	6	0.66	6.16	Medium
10. Thuy Dong Commune	7	1.19	3	0.36	7	0.98	5	0.25	5	0.30	3	0.09	2	0.04	6	0.48	6	0.90	7	0.63	5	0.55	5.77	Medium
11. Thuy Tay Commune	4	0.68	7	0.84	5	0.70	6	0.30	7	0.42	3	0.09	2	0.04	5	0.40	5	0.75	6	0.54	5	0.55	5.31	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

Table 21. Straw management adoption capacity of Thanh Hoa district in Autumn-Winter season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity	
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS			
1. Thanh Hoa Townlet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Tan Dong Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Tan Hiep Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Tan Tay Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Thanh An Commune	3	0.51	4	0.48	5	0.70	5	0.25	4	0.24	2	0.06	2	0.04	2	0.16	4	0.60	8	0.72	7	0.77	4.53	Medium	
6. Thanh Phu Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7. Thanh Phuoc Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8. Thuan Binh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9. Thuan Nghia Hoa Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Thuy Dong Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Thuy Tay Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

-: Not planted

S: Score; WS: Weighted score; TWS: Total weighted score

3.8. Straw management adoption capacity in Duc Hue district

In the Winter-Spring season, all communes in Duc Hue district had a high adoption capacity for straw removal management. Binh Hoa Bac commune had the highest total weighted score in Duc Hue district, with 8.79, whereas My Thanh Bac commune had the lowest total weighted score, with 7.39. All communes in Duc Hue district had a high score for baling equipment availability. Most communes had a high score for farmers' interest factor, except for Binh Hoa Nam commune and My Thanh Bac commune. In addition, all communes also had a high score for straw buyer and labor availability factors. However, they had a low score for local government factor. The score for farmers' organization factor was high in all communes. Only My Thanh Dong commune had a low score for time between seasons, while other communes had medium and high scores for this factor. The score of straw management adoption capacity of Duc Hue district in the Winter-Spring season was presented in Table 22.

In the Summer-Autumn season, communes in Duc Hue district had medium and high adoption capacity for straw removal management. Only two communes, Binh Hoa Nam commune and My Thanh Bac commune, had a medium adoption capacity for straw removal management. In contrast, other communes had a high adoption capacity for straw removal management. In this season, Binh Thanh commune had the highest total weighted score, with 7.95, whereas My Thanh Bac commune had the lowest total weighted score, with 6.84. All communes in this season had a high score for baling equipment availability, straw buyer, and labor availability factors. Most communes had a high score for farmers' interest factor, except for Binh Hoa Nam commune and My Thanh Bac commune, with a medium score. All communes had a low score for local government factor, while they had a high score for farmers' organization factor. Only My Thanh Dong commune had a low score for time between seasons, while other communes had medium and high scores for this factor. The score of straw management adoption capacity of Duc Hue district in the Summer-Autumn season was presented in Table 23.

Only five communes, Binh Hoa Bac commune, My Quy Dong commune, My Quy Tay commune, My Thanh Bac commune, and My Thanh Dong commune, had rice cultivation in the Autumn-Winter season. My Thanh Bac commune had a medium adoption capacity for straw removal management, while other communes had a high adoption capacity for straw removal management. Binh Hoa Bac commune had the highest total weighted score, with 8.30, whereas My Thanh Bac commune had the lowest total weighted score, with 6.84. All communes in this season had a high score for baling equipment availability, straw buyer, and labor availability factors. Most communes had a high score for farmers' interest factor, except for My Thanh Bac commune. Besides, all

communes had a low score for local government factor, while they had a high score for farmers' organization factor. The score of straw management adoption capacity of Duc Hue district in the Autumn-Winter season was presented in Table 24.

Table 22. Straw management adoption capacity of Duc Hue district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Dong Thanh Townlet	10	1.70	8	0.96	8	1.12	6	0.30	4	0.24	1	0.03	5	0.10	9	0.72	8	1.20	8	0.72	3	0.33	7.42	High
2. Binh Hoa Bac Commune	10	1.70	10	1.20	10	1.40	10	0.50	9	0.54	3	0.09	6	0.12	8	0.64	9	1.35	9	0.81	4	0.44	8.79	High
3. Binh Hoa Hung Commune	10	1.70	9	1.08	9	1.26	9	0.45	7	0.42	1	0.03	6	0.12	9	0.72	8	1.20	8	0.72	3	0.33	8.03	High
4. Binh Hoa Nam Commune	10	1.70	8	0.96	8	1.12	8	0.40	7	0.42	1	0.03	7	0.14	8	0.64	7	1.05	8	0.72	3	0.33	7.51	High
5. Binh Thanh Commune	10	1.70	10	1.20	10	1.40	10	0.50	10	0.60	2	0.06	5	0.10	9	0.72	9	1.35	9	0.81	3	0.33	8.77	High
6. My Binh Commune	8	1.36	8	0.96	9	1.26	8	0.40	6	0.36	1	0.03	6	0.12	9	0.72	8	1.20	8	0.72	4	0.44	7.57	High
7. My Quy Dong Commune	9	1.53	10	1.20	10	1.40	10	0.50	9	0.54	2	0.06	6	0.12	7	0.56	9	1.35	9	0.81	2	0.22	8.29	High
8. My Quy Tay Commune	10	1.70	10	1.20	10	1.40	10	0.50	10	0.60	3	0.09	7	0.14	7	0.56	9	1.35	9	0.81	3	0.33	8.68	High
9. My Thanh Bac Commune	8	1.36	9	1.08	9	1.26	7	0.35	7	0.42	2	0.06	6	0.12	8	0.64	7	1.05	8	0.72	3	0.33	7.39	High
10. My Thanh Dong Commune	10	1.70	10	1.20	10	1.40	10	0.50	10	0.60	3	0.09	5	0.10	3	0.24	10	1.50	9	0.81	4	0.44	8.58	High
11. My Thanh Tay Commune	10	1.70	10	1.20	10	1.40	9	0.45	9	0.54	2	0.06	5	0.10	7	0.56	9	1.35	8	0.72	2	0.22	8.30	High

S: Score; WS: Weighted score; TWS: Total weighted score

Table 23. Straw management adoption capacity of Duc Hue district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Dong Thanh Townlet	10	1.70	8	0.96	8	1.12	1	0.05	2	0.12	1	0.03	5	0.10	9	0.72	8	1.20	8	0.72	3	0.33	7.05	High
2. Binh Hoa Bac Commune	10	1.70	10	1.20	10	1.40	2	0.10	2	0.12	2	0.06	6	0.12	8	0.64	9	1.35	9	0.81	4	0.44	7.94	High
3. Binh Hoa Hung Commune	10	1.70	9	1.08	9	1.26	1	0.05	2	0.12	1	0.03	6	0.12	9	0.72	8	1.20	8	0.72	3	0.33	7.33	High
4. Binh Hoa Nam Commune	10	1.70	8	0.96	8	1.12	1	0.05	2	0.12	1	0.03	7	0.14	8	0.64	7	1.05	8	0.72	3	0.33	6.86	Medium
5. Binh Thanh Commune	10	1.70	10	1.20	10	1.40	2	0.10	3	0.18	2	0.06	5	0.10	9	0.72	9	1.35	9	0.81	3	0.33	7.95	High
6. My Binh Commune	8	1.36	8	0.96	9	1.26	1	0.05	3	0.18	1	0.03	6	0.12	9	0.72	8	1.20	8	0.72	4	0.44	7.04	High
7. My Quy Dong Commune	9	1.53	10	1.20	10	1.40	3	0.15	2	0.12	2	0.06	6	0.12	7	0.56	9	1.35	9	0.81	2	0.22	7.52	High
8. My Quy Tay Commune	10	1.70	10	1.20	10	1.40	3	0.15	3	0.18	3	0.09	7	0.14	7	0.56	9	1.35	9	0.81	3	0.33	7.91	High
9. My Thanh Bac Commune	8	1.36	9	1.08	9	1.26	2	0.10	2	0.12	2	0.06	6	0.12	8	0.64	7	1.05	8	0.72	3	0.33	6.84	Medium
10. My Thanh Dong Commune	10	1.70	10	1.20	10	1.40	3	0.15	3	0.18	3	0.09	5	0.10	3	0.24	10	1.50	9	0.81	4	0.44	7.81	High
11. My Thanh Tay Commune	10	1.70	10	1.20	10	1.40	2	0.10	2	0.12	2	0.06	5	0.10	7	0.56	9	1.35	8	0.72	2	0.22	7.53	High

S: Score; WS: Weighted score; TWS: Total weighted score

Table 24. Straw management adoption capacity of Duc Hue district in Autumn-Winter season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Dong Thanh Townlet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Binh Hoa Bac Commune	10	1.70	10	1.20	10	1.40	5	0.25	5	0.30	3	0.09	6	0.12	8	0.64	9	1.35	9	0.81	4	0.44	8.30	High
3. Binh Hoa Hung Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Binh Hoa Nam Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Binh Thanh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6. My Binh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7. My Quy Dong Commune	9	1.53	10	1.20	10	1.40	3	0.15	5	0.30	2	0.06	6	0.12	7	0.56	9	1.35	9	0.81	2	0.22	7.70	High
8. My Quy Tay Commune	10	1.70	10	1.20	10	1.40	3	0.15	6	0.36	3	0.09	7	0.14	7	0.56	9	1.35	9	0.81	3	0.33	8.09	High
9. My Thanh Bac Commune	8	1.36	9	1.08	9	1.26	2	0.10	2	0.12	2	0.06	6	0.12	8	0.64	7	1.05	8	0.72	3	0.33	6.84	Medium
10. My Thanh Dong Commune	10	1.70	10	1.20	10	1.40	3	0.15	7	0.42	3	0.09	5	0.10	3	0.24	10	1.50	9	0.81	4	0.44	8.05	High
11. My Thanh Tay Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

-: Not planted

S: Score; WS: Weighted score; TWS: Total weighted score

3.9. Straw management adoption capacity in Duc Hoa district

In the Winter-Spring season, communes in Duc Hoa district had low and medium adoption capacity for straw removal management. Only four communes, Duc Hoa townlet, Duc Hoa Ha commune, My Hanh Bac commune, and My Hanh Nam commune, had a low adoption capacity for straw removal management. In contrast, other communes had a medium adoption capacity for straw removal management. Half of the communes in Duc Hoa district had a medium score for baling equipment availability, while others had a low score for this factor. Only five communes, Hiep Hoa commune, Hoa Khanh Dong commune, Hoa Khanh Nam commune, Hoa Thanh Tay commune, and Loc Giang commune, had a high score for farmers' interest factor, while other communes had low and medium scores for this factor. Over half of the communes had a low score for the straw buyer factor, whereas others had a medium score. Besides, 60% of communes had a medium score for labor availability, local government, and farmers' organization factors, while others had a low score for these factors. In addition, 60% of communes had a high score for the time between seasons. In contrast, other communes had a medium score for this factor. The score of straw management adoption capacity of Duc Hoa district in the Winter-Spring season was presented in Table 25.

In the Summer-Autumn season, communes in Duc Hoa district had low and medium adoption capacity for straw removal management. Only six communes and townlets, Hau Nghia townlet, Duc Hoa townlet, Duc Hoa Ha commune, Huu Thanh commune, My Hanh Bac commune, and My Hanh Nam commune, had a low adoption capacity for straw removal management. In contrast, other communes had a medium adoption capacity for straw removal management. Most communes in this season had a medium score for farmers' interest factor, except for Duc Lap Thuong commune and Huu Thanh commune. Half of the communes in this season also had a medium score for baling equipment availability, while others had a low score for this factor.

Moreover, 60% of communes in the Summer-Autumn season also had a medium score for labor availability, local government, and farmers' organization factors, while others had a low score. Only 40% of communes had a medium score for the straw buyer factor, whereas others had a low score. The majority of communes in this season had a medium score for the time between seasons. The score of straw management adoption capacity of Duc Hoa district in the Summer-Autumn season was presented in Table 26.

In the Autumn-Winter season, communes in Duc Hoa district had low and medium adoption capacity for straw removal management. Only five communes, Hau Nghia townlet, Duc Hoa townlet, Duc Hoa Ha commune, Huu Thanh commune, My Hanh Bac

commune, and My Hanh Nam commune, had a low adoption capacity for straw removal management. In contrast, other communes had a medium adoption capacity for straw removal management. In this season, Hiep Hoa commune had the highest total weighted score, with 6.21, whereas Duc Hoa Ha commune had the lowest total weighted score, with 2.98. Half of the communes in this season also had a medium score for baling equipment availability, while others had a low score for this factor. Most communes in this season had a medium score for farmers' interest factor, except for Duc Lap Thuong commune and Huu Thanh commune.

In addition, 60% of communes in the Autumn-Winter season also had a medium score for labor availability, local government, and farmers' organization factors, while others had a low score. Only 40% of communes had a medium score for the straw buyer factor. In contrast, other communes had a low score for this factor. Besides, only two communes, Hau Nghia townlet and Duc Hoa Thuong commune, had a high score for the time between seasons, while others had a medium score for this factor. The score of straw management adoption capacity of Duc Hoa district in the Autumn-Winter season was presented in Table 27.

Table 25. Straw management adoption capacity of Duc Hoa district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Hau Nghia Townlet	3	0.51	2	0.24	4	0.56	8	0.40	5	0.30	7	0.21	5	0.10	8	0.64	7	1.05	2	0.18	2	0.22	4.41	Medium
2. Duc Hoa Townlet	1	0.17	2	0.24	2	0.28	8	0.40	2	0.12	2	0.06	4	0.08	8	0.64	7	1.05	1	0.09	1	0.11	3.24	Low
3. Hiep Hoa Townlet	7	1.19	7	0.84	6	0.84	8	0.40	2	0.12	4	0.12	5	0.10	6	0.48	7	1.05	5	0.45	5	0.55	6.14	Medium
4. An Ninh Dong Commune	6	1.02	5	0.60	5	0.70	8	0.40	4	0.24	3	0.09	4	0.08	7	0.56	7	1.05	5	0.45	5	0.55	5.74	Medium
5. An Ninh Tay Commune	6	1.02	5	0.60	5	0.70	8	0.40	4	0.24	4	0.12	5	0.10	7	0.56	7	1.05	5	0.45	5	0.55	5.79	Medium
6. Duc Hoa Dong Commune	3	0.51	2	0.24	3	0.42	7	0.35	6	0.36	5	0.15	4	0.08	8	0.64	6	0.90	5	0.45	5	0.55	4.65	Medium
7. Duc Hoa Ha Commune	1	0.17	2	0.24	2	0.28	6	0.30	4	0.24	3	0.09	3	0.06	8	0.64	5	0.75	2	0.18	2	0.22	3.17	Low
8. Duc Hoa Thuong Commune	4	0.68	3	0.36	4	0.56	8	0.40	5	0.30	7	0.21	5	0.10	10	0.80	6	0.90	5	0.45	5	0.55	5.31	Medium
9. Duc Lap Ha Commune	3	0.51	4	0.48	4	0.56	7	0.35	5	0.30	7	0.21	5	0.10	7	0.56	5	0.75	5	0.45	5	0.55	4.82	Medium
10. Duc Lap Thuong Commune	4	0.68	4	0.48	4	0.56	7	0.35	6	0.36	7	0.21	6	0.12	7	0.56	4	0.60	5	0.45	5	0.55	4.92	Medium
11. Hiep Hoa Commune	7	1.19	6	0.72	6	0.84	8	0.40	6	0.36	5	0.15	6	0.12	7	0.56	8	1.20	5	0.45	5	0.55	6.54	Medium
12. Hoa Khanh Dong Commune	5	0.85	5	0.60	6	0.84	8	0.40	6	0.36	7	0.21	6	0.12	7	0.56	8	1.20	6	0.54	6	0.66	6.34	Medium
13. Hoa Khanh Nam Commune	5	0.85	5	0.60	5	0.70	7	0.35	6	0.36	7	0.21	6	0.12	8	0.64	8	1.20	6	0.54	6	0.66	6.23	Medium
14. Hoa Khanh Tay Commune	7	1.19	6	0.72	5	0.70	7	0.35	2	0.12	5	0.15	5	0.10	8	0.64	8	1.20	5	0.45	5	0.55	6.17	Medium
15. Huu Thanh Commune	4	0.68	5	0.60	4	0.56	6	0.30	5	0.30	3	0.09	3	0.06	8	0.64	5	0.75	1	0.09	1	0.11	4.18	Medium
16. Loc Giang Commune	6	1.02	5	0.60	6	0.84	7	0.35	6	0.36	5	0.15	4	0.08	8	0.64	8	1.20	2	0.18	2	0.22	5.64	Medium

17. My Hanh Bac Commune	2	0.34	6	0.72	2	0.28	7	0.35	3	0.18	3	0.09	3	0.06	8	0.64	5	0.75	2	0.18	2	0.22	3.81	Low
18. My Hanh Nam Commune	2	0.34	3	0.36	2	0.28	7	0.35	5	0.30	2	0.06	3	0.06	8	0.64	5	0.75	2	0.18	2	0.22	3.54	Low
19. Tan My Commune	6	1.02	5	0.60	4	0.56	7	0.35	5	0.30	6	0.18	4	0.08	8	0.64	7	1.05	4	0.36	4	0.44	5.58	Medium
20. Tan Phu Commune	6	1.02	7	0.84	5	0.70	8	0.40	5	0.30	4	0.12	5	0.10	6	0.48	7	1.05	5	0.45	5	0.55	6.01	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

Table 26. Straw management adoption capacity of Duc Hoa district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Hau Nghia Townlet	3	0.51	2	0.24	2	0.28	6	0.30	5	0.30	7	0.21	5	0.10	7	0.56	7	1.05	2	0.18	2	0.22	3.95	Low
2. Duc Hoa Townlet	1	0.17	2	0.24	2	0.28	6	0.30	2	0.12	2	0.06	4	0.08	7	0.56	7	1.05	1	0.09	1	0.11	3.06	Low
3. Hiep Hoa Townlet	7	1.19	7	0.84	6	0.84	6	0.30	3	0.18	4	0.12	3	0.06	4	0.32	7	1.05	5	0.45	5	0.55	5.90	Medium
4. An Ninh Dong Commune	6	1.02	6	0.72	5	0.70	6	0.30	4	0.24	3	0.09	4	0.08	6	0.48	7	1.05	5	0.45	5	0.55	5.68	Medium
5. An Ninh Tay Commune	6	1.02	6	0.72	5	0.70	5	0.25	4	0.24	3	0.09	4	0.08	6	0.48	5	0.75	5	0.45	5	0.55	5.33	Medium
6. Duc Hoa Dong Commune	3	0.51	2	0.24	3	0.42	6	0.30	6	0.36	5	0.15	6	0.12	5	0.40	6	0.90	5	0.45	5	0.55	4.40	Medium
7. Duc Hoa Ha Commune	1	0.17	2	0.24	2	0.28	5	0.25	4	0.24	3	0.09	6	0.12	6	0.48	5	0.75	2	0.18	2	0.22	3.02	Low
8. Duc Hoa Thuong Commune	4	0.68	4	0.48	4	0.56	6	0.30	5	0.30	7	0.21	5	0.10	6	0.48	6	0.90	5	0.45	5	0.55	5.01	Medium
9. Duc Lap Ha Commune	3	0.51	4	0.48	4	0.56	6	0.30	5	0.30	7	0.21	5	0.10	7	0.56	5	0.75	5	0.45	5	0.55	4.77	Medium
10. Duc Lap Thuong Commune	4	0.68	4	0.48	4	0.56	6	0.30	6	0.36	7	0.21	6	0.12	7	0.56	4	0.60	5	0.45	5	0.55	4.87	Medium
11. Hiep Hoa Commune	7	1.19	7	0.84	6	0.84	6	0.30	6	0.36	5	0.15	5	0.10	6	0.48	5	0.75	5	0.45	5	0.55	6.01	Medium
12. Hoa Khanh Dong Commune	5	0.85	6	0.72	6	0.84	7	0.35	6	0.36	7	0.21	5	0.10	7	0.56	6	0.90	6	0.54	6	0.66	6.09	Medium
13. Hoa Khanh Nam Commune	5	0.85	5	0.60	5	0.70	6	0.30	6	0.36	7	0.21	5	0.10	7	0.56	6	0.90	6	0.54	6	0.66	5.78	Medium
14. Hoa Khanh Tay Commune	7	1.19	6	0.72	5	0.70	6	0.30	2	0.12	5	0.15	5	0.10	6	0.48	5	0.75	5	0.45	5	0.55	5.51	Medium
15. Huu Thanh Commune	4	0.68	6	0.72	4	0.56	4	0.20	5	0.30	3	0.09	1	0.02	4	0.32	3	0.45	1	0.09	1	0.11	3.54	Low
16. Loc Giang Commune	6	1.02	5	0.60	4	0.56	6	0.30	5	0.30	5	0.15	4	0.08	7	0.56	6	0.90	2	0.18	2	0.22	4.87	Medium

17. My Hanh Bac Commune	2	0.34	6	0.72	2	0.28	6	0.30	3	0.18	3	0.09	3	0.06	7	0.56	5	0.75	2	0.18	2	0.22	3.68	Low
18. My Hanh Nam Commune	2	0.34	3	0.36	2	0.28	6	0.30	3	0.18	2	0.06	3	0.06	7	0.56	5	0.75	2	0.18	2	0.22	3.29	Low
19. Tan My Commune	6	1.02	5	0.60	4	0.56	5	0.25	5	0.30	3	0.09	4	0.08	7	0.56	6	0.90	4	0.36	4	0.44	5.16	Medium
20. Tan Phu Commune	6	1.02	7	0.84	5	0.70	6	0.30	5	0.30	3	0.09	3	0.06	4	0.32	5	0.75	5	0.45	5	0.55	5.38	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

Table 27. Straw management adoption capacity of Duc Hoa district in Autumn-Winter season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Hau Nghia Townlet	3	0.51	2	0.24	2	0.28	7	0.35	5	0.30	7	0.21	5	0.10	8	0.64	7	1.05	2	0.18	2	0.22	4.08	Medium
2. Duc Hoa Townlet	1	0.17	2	0.24	2	0.28	7	0.35	2	0.12	2	0.06	4	0.08	7	0.56	7	1.05	1	0.09	1	0.11	3.11	Low
3. Hiep Hoa Townlet	7	1.19	7	0.84	6	0.84	7	0.35	2	0.12	4	0.12	5	0.10	5	0.40	7	1.05	5	0.45	5	0.55	6.01	Medium
4. An Ninh Dong Commune	6	1.02	5	0.60	5	0.70	7	0.35	4	0.24	3	0.09	4	0.08	6	0.48	7	1.05	5	0.45	5	0.55	5.61	Medium
5. An Ninh Tay Commune	6	1.02	5	0.60	5	0.70	6	0.30	4	0.24	3	0.09	5	0.10	6	0.48	6	0.90	5	0.45	5	0.55	5.43	Medium
6. Duc Hoa Dong Commune	3	0.51	2	0.24	3	0.42	6	0.30	6	0.36	5	0.15	4	0.08	6	0.48	6	0.90	5	0.45	5	0.55	4.44	Medium
7. Duc Hoa Ha Commune	1	0.17	2	0.24	2	0.28	6	0.30	4	0.24	2	0.06	3	0.06	6	0.48	5	0.75	2	0.18	2	0.22	2.98	Low
8. Duc Hoa Thuong Commune	4	0.68	4	0.48	4	0.56	7	0.35	5	0.30	7	0.21	5	0.10	8	0.64	6	0.90	5	0.45	5	0.55	5.22	Medium
9. Duc Lap Ha Commune	3	0.51	4	0.48	4	0.56	6	0.30	5	0.30	7	0.21	5	0.10	7	0.56	6	0.90	5	0.45	5	0.55	4.92	Medium
10. Duc Lap Thuong Commune	4	0.68	4	0.48	4	0.56	6	0.30	6	0.36	7	0.21	6	0.12	7	0.56	4	0.60	5	0.45	5	0.55	4.87	Medium
11. Hiep Hoa Commune	7	1.19	7	0.84	6	0.84	7	0.35	6	0.36	5	0.15	5	0.10	6	0.48	6	0.90	5	0.45	5	0.55	6.21	Medium
12. Hoa Khanh Dong Commune	5	0.85	6	0.72	6	0.84	7	0.35	6	0.36	7	0.21	5	0.10	7	0.56	6	0.90	6	0.54	6	0.66	6.09	Medium
13. Hoa Khanh Nam Commune	5	0.85	5	0.60	5	0.70	7	0.35	6	0.36	7	0.21	5	0.10	7	0.56	6	0.90	6	0.54	6	0.66	5.83	Medium
14. Hoa Khanh Tay Commune	7	1.19	6	0.72	5	0.70	7	0.35	2	0.12	5	0.15	4	0.08	6	0.48	6	0.90	5	0.45	5	0.55	5.69	Medium
15. Huu Thanh Commune	4	0.68	6	0.72	4	0.56	6	0.30	5	0.30	3	0.09	4	0.08	5	0.40	4	0.60	1	0.09	1	0.11	3.93	Low
16. Loc Giang Commune	6	1.02	5	0.60	4	0.56	6	0.30	6	0.36	5	0.15	4	0.08	7	0.56	7	1.05	2	0.18	2	0.22	5.08	Medium

17. My Hanh Bac Commune	2	0.34	5	0.60	2	0.28	7	0.35	3	0.18	3	0.09	3	0.06	7	0.56	5	0.75	2	0.18	2	0.22	3.61	Low
18. My Hanh Nam Commune	2	0.34	3	0.36	2	0.28	7	0.35	3	0.18	2	0.06	3	0.06	7	0.56	5	0.75	2	0.18	2	0.22	3.34	Low
19. Tan My Commune	6	1.02	5	0.60	4	0.56	7	0.35	5	0.30	5	0.15	4	0.08	7	0.56	7	1.05	4	0.36	4	0.44	5.47	Medium
20. Tan Phu Commune	6	1.02	7	0.84	5	0.70	7	0.35	5	0.30	4	0.12	5	0.10	5	0.40	6	0.90	5	0.45	5	0.55	5.73	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

3.10. Straw management adoption capacity in Ben Luc district

Ben Luc district has 15 communes, but only 10 communes have rice cultivation. In the Winter-Spring season, communes in Ben Luc district had medium and high adoption capacity for straw removal management. Long Hiep commune, My Yen commune, Nhut Chanh commune, Phuoc Loi commune, and Thanh Phu commune had a high adoption capacity for straw removal management. In contrast, other communes had a medium adoption capacity for straw removal management. In this season, My Yen commune had the highest total weighted score, with 7.74, whereas Tan Hoa commune had the lowest total weighted score, with 5.54. My Yen commune, Nhut Chanh commune, Phuoc Loi commune, Tan Buu commune, Thanh Duc commune, and Thanh Phu commune had a high score for baling equipment availability. Half of the communes had a high score for farmers' interest, while others had a medium score for this factor. This was because farmers in Long Hiep commune, My Yen commune, Nhut Chanh commune, and Phuoc Loi commune used rice straw for mushroom cultivation. Most communes in Ben Luc district had a high score for straw buyer and labor availability factors. All communes had a medium score for local government, whereas they had a low score for farmers' organization. The local government had only training farmers about the harmful effect of burning rice straw and the benefits of removing rice straw. Farmers' organizations in this district did not provide much support to farmers for the removal of rice straw. Besides, all communes had a high score for the time between seasons. It should be noted that all communes in Ben Luc district only cultivated two cropping seasons (Winter-Spring and Summer-Autumn season). Thus, farmers in these communes had enough time to remove rice straw. The score of straw management adoption capacity of Ben Luc district in the Winter-Spring season was presented in Table 28.

In the Summer-Autumn season, communes in Ben Luc district had medium and high adoption capacity for straw removal management. Only four communes, My Yen commune, Nhut Chanh commune, Phuoc Loi commune, and Thanh Phu commune had a high adoption capacity for straw removal management. In contrast, other communes had a medium adoption capacity for straw removal management. In this season, My Yen commune had the highest total weighted score, with 7.46, whereas Tan Hoa commune had the lowest total weighted score, with 5.26. 60% of communes in this season had a high score for baling equipment availability, whereas other communes had low and medium scores for this factor. Half of the communes, Long Hiep commune, My Yen commune, Nhut Chanh commune, Phuoc Loi commune, and Thanh Phu commune, had a high score for farmers' interest. All communes in this season had a medium score for straw buyer and local government factors, while they had a high score for labor availability and time between seasons. However, they had a low score for farmers' organization. The score of straw management adoption capacity of Ben Luc district in the Summer-Autumn season was presented in Table 29.

Table 28. Straw management adoption capacity of Ben Luc district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Ben Luc Townlet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. An Thanh Commune	6	1.02	9	1.08	9	1.26	6	0.30	8	0.48	3	0.09	2	0.04	9	0.72	6	0.90	3	0.27	5	0.55	6.71	Medium
3. Binh Duc Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Long Hiep Commune	5	0.85	9	1.08	9	1.26	4	0.20	8	0.48	6	0.18	6	0.12	9	0.72	9	1.35	3	0.27	5	0.55	7.06	High
5. Luong Binh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6. Luong Hoa Commune	3	0.51	9	1.08	9	1.26	3	0.15	6	0.36	2	0.06	2	0.04	9	0.72	5	0.75	3	0.27	5	0.55	5.75	Medium
7. My Yen Commune	9	1.53	9	1.08	9	1.26	4	0.20	8	0.48	6	0.18	6	0.12	9	0.72	9	1.35	3	0.27	5	0.55	7.74	High
8. Nhut Chanh Commune	9	1.53	9	1.08	9	1.26	5	0.25	8	0.48	5	0.15	3	0.06	9	0.72	9	1.35	3	0.27	5	0.55	7.70	High
9. Phuoc Loi Commune	8	1.36	9	1.08	9	1.26	3	0.15	9	0.54	6	0.18	6	0.12	9	0.72	9	1.35	3	0.27	5	0.55	7.58	High
10. Tan Buu Commune	8	1.36	9	1.08	9	1.26	4	0.20	6	0.36	3	0.09	3	0.06	9	0.72	6	0.90	3	0.27	5	0.55	6.85	Medium
11. Tan Hoa Commune	3	0.51	7	0.84	9	1.26	3	0.15	6	0.36	3	0.09	2	0.04	9	0.72	5	0.75	3	0.27	5	0.55	5.54	Medium
12. Thanh Duc Commune	8	1.36	9	1.08	9	1.26	6	0.30	8	0.48	2	0.06	3	0.06	9	0.72	6	0.90	3	0.27	5	0.55	7.04	High
13. Thanh Hoa Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14. Thanh Loi Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15. Thanh Phu Commune	9	1.53	9	1.08	9	1.26	6	0.30	9	0.54	3	0.09	3	0.06	9	0.72	8	1.20	3	0.27	5	0.55	7.60	High

-: Not planted

S: Score; WS: Weighted score; TWS: Total weighted score

Table 29. Straw management adoption capacity of Ben Luc district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Ben Luc Townlet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. An Thanh Commune	6	1.02	9	1.08	7	0.98	6	0.30	8	0.48	3	0.09	2	0.04	9	0.72	6	0.90	3	0.27	5	0.55	6.43	Medium
3. Binh Duc Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Long Hiep Commune	5	0.85	9	1.08	7	0.98	4	0.20	8	0.48	6	0.18	6	0.12	9	0.72	9	1.35	3	0.27	5	0.55	6.78	Medium
5. Luong Binh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6. Luong Hoa Commune	3	0.51	9	1.08	7	0.98	3	0.15	6	0.36	2	0.06	2	0.04	9	0.72	5	0.75	3	0.27	5	0.55	5.47	Medium
7. My Yen Commune	9	1.53	9	1.08	7	0.98	4	0.20	8	0.48	6	0.18	6	0.12	9	0.72	9	1.35	3	0.27	5	0.55	7.46	High
8. Nhut Chanh Commune	9	1.53	9	1.08	7	0.98	5	0.25	8	0.48	5	0.15	3	0.06	9	0.72	9	1.35	3	0.27	5	0.55	7.42	High
9. Phuoc Loi Commune	8	1.36	9	1.08	7	0.98	3	0.15	9	0.54	6	0.18	6	0.12	9	0.72	9	1.35	3	0.27	5	0.55	7.30	High
10. Tan Buu Commune	8	1.36	9	1.08	7	0.98	4	0.20	6	0.36	3	0.09	3	0.06	9	0.72	6	0.90	3	0.27	5	0.55	6.57	Medium
11. Tan Hoa Commune	3	0.51	7	0.84	7	0.98	3	0.15	6	0.36	3	0.09	2	0.04	9	0.72	5	0.75	3	0.27	5	0.55	5.26	Medium
12. Thanh Duc Commune	8	1.36	9	1.08	7	0.98	6	0.30	8	0.48	2	0.06	3	0.06	9	0.72	6	0.90	3	0.27	5	0.55	6.76	Medium
13. Thanh Hoa Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14. Thanh Loi Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15. Thanh Phu Commune	9	1.53	9	1.08	7	0.98	6	0.30	9	0.54	3	0.09	3	0.06	9	0.72	8	1.20	3	0.27	5	0.55	7.32	High

-: Not planted

S: Score; WS: Weighted score; TWS: Total weighted score

3.11. Straw management adoption capacity in Thu Thua district

In the Winter-Spring season, all communes in Thu Thua district had a medium adoption capacity for straw removal management. In this season, My An commune had the highest total weighted score, with 6.78, whereas Thu Thua townlet had the lowest total weighted score, with 5.87. Only three communes, Thu Thua townlet, Binh An commune, and Binh Thanh commune, had a medium score for baling equipment availability. In contrast, other communes had a high score for this factor. All communes in Thu Thua district had a high score for farmers' interest. Farmers in this district were aware that burning rice straw in the field was not good for rice cultivation, and the sale of rice straw can be contributed to increasing income for their households. Over half of the communes had a low score for the straw buyer factor, whereas other communes had a medium score. Only two communes, Long Thanh commune, and Long Thuan commune, had a high score for labor availability. Besides, all communes had a low score for local government. However, they had a high score for the time between seasons. Nearly 60% of communes in this district had a medium score for farmers' organization, while others had a high score for this factor. The score of straw management adoption capacity of Thu Thua district in the Winter-Spring season was presented in Table 30.

In the Summer-Autumn season, all communes in Thu Thua district had a medium adoption capacity for straw removal management. In this season, My An commune had the highest total weighted score, with 6.20, whereas Thu Thua townlet had the lowest total weighted score, with 5.01. Approximately 70% of the communes in this season had a high score for baling equipment availability. In contrast, other communes had a medium score for this factor. Only four communes, Long Thanh commune, Long Thuan commune, Tan Long commune, and Tan Thanh commune, had a high score for farmers' interest. Besides, this season, 75% of communes had a low score for straw buyers, while other communes had a medium score for this factor. Only two communes, Long Thanh commune and Long Thuan commune, had a high score for labor availability.

Moreover, all communes in the Summer-Autumn season had a low score for local government. Only My An commune had a high score for farmers' organization, whereas other communes had a medium score for this factor. The majority of communes in this season had a low score for the time between seasons, except for Tan Long commune and Tan Thanh commune. The score of straw management adoption capacity of Thu Thua district in the Summer-Autumn season was presented in Table 31.

In the Autumn-Winter season, only eight communes had rice cultivation. All communes who cultivated in this season had a medium adoption capacity for straw removal

management. In this season, My An commune had the highest total weighted score, with 6.40, whereas Thu Thua townlet had the lowest total weighted score, with 5.47. Only three communes, My An commune, My Phu commune, and Nhi Thanh commune, had a high score for baling equipment availability. All communes who cultivated in this season had a high score for farmers' interest. Only two communes, My An commune and Nhi Thanh commune, had a medium score for straw buyers, while others had a low score for this factor. In addition, all communes cultivated in this season had a medium score for labor availability and farmers' organization factors, while they had a low score for local government. The score of straw management adoption capacity of Thu Thua district in the Autumn-Winter season was presented in Table 32.

Table 30. Straw management adoption capacity of Thu Thua district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Thu Thua Townlet	6	1.02	6	0.72	5	0.70	8	0.40	4	0.24	2	0.06	2	0.04	8	0.64	8	1.20	7	0.63	2	0.22	5.87	Medium
2. Binh An Commune	7	1.19	7	0.84	5	0.70	6	0.30	4	0.24	2	0.06	1	0.02	8	0.64	8	1.20	7	0.63	4	0.44	6.26	Medium
3. Binh Thanh Commune	7	1.19	7	0.84	4	0.56	6	0.30	6	0.36	2	0.06	1	0.02	8	0.64	8	1.20	7	0.63	3	0.33	6.13	Medium
4. Long Thanh Commune	9	1.53	8	0.96	3	0.42	5	0.25	5	0.30	1	0.03	1	0.02	8	0.64	8	1.20	8	0.72	3	0.33	6.40	Medium
5. Long Thuan Commune	9	1.53	8	0.96	3	0.42	5	0.25	5	0.30	1	0.03	1	0.02	8	0.64	8	1.20	8	0.72	3	0.33	6.40	Medium
6. My An Commune	8	1.36	7	0.84	6	0.84	8	0.40	4	0.24	2	0.06	2	0.04	8	0.64	8	1.20	8	0.72	4	0.44	6.78	Medium
7. My Lac Commune	8	1.36	7	0.84	4	0.56	6	0.30	5	0.30	2	0.06	1	0.02	8	0.64	8	1.20	6	0.54	4	0.44	6.26	Medium
8. My Phu Commune	8	1.36	7	0.84	4	0.56	8	0.40	5	0.30	2	0.06	1	0.02	8	0.64	8	1.20	8	0.72	4	0.44	6.54	Medium
9. My Thanh Commune	8	1.36	7	0.84	3	0.42	6	0.30	4	0.24	2	0.06	1	0.02	8	0.64	8	1.20	7	0.63	4	0.44	6.15	Medium
10. Nhi Thanh Commune	8	1.36	6	0.72	7	0.98	6	0.30	4	0.24	2	0.06	2	0.04	8	0.64	8	1.20	8	0.72	3	0.33	6.59	Medium
11. Tan Long Commune	9	1.53	6	0.72	3	0.42	5	0.25	5	0.30	1	0.03	1	0.02	8	0.64	8	1.20	7	0.63	3	0.33	6.07	Medium
12. Tan Thanh Commune	8	1.36	5	0.60	5	0.70	6	0.30	5	0.30	2	0.06	1	0.02	8	0.64	8	1.20	7	0.63	3	0.33	6.14	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

Table 31. Straw management adoption capacity of Thu Thua district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Thu Thua Townlet	6	1.02	6	0.72	3	0.42	7	0.35	3	0.18	2	0.06	2	0.04	4	0.32	7	1.05	7	0.63	2	0.22	5.01	Medium
2. Binh An Commune	7	1.19	7	0.84	3	0.42	5	0.25	3	0.18	2	0.06	1	0.02	4	0.32	7	1.05	7	0.63	4	0.44	5.40	Medium
3. Binh Thanh Commune	7	1.19	7	0.84	4	0.56	5	0.25	5	0.30	2	0.06	1	0.02	4	0.32	7	1.05	7	0.63	3	0.33	5.55	Medium
4. Long Thanh Commune	9	1.53	8	0.96	3	0.42	4	0.20	4	0.24	1	0.03	1	0.02	4	0.32	8	1.20	7	0.63	3	0.33	5.88	Medium
5. Long Thuan Commune	9	1.53	8	0.96	3	0.42	4	0.20	4	0.24	1	0.03	1	0.02	4	0.32	8	1.20	5	0.45	3	0.33	5.70	Medium
6. My An Commune	8	1.36	7	0.84	6	0.84	7	0.35	3	0.18	2	0.06	2	0.04	4	0.32	7	1.05	8	0.72	4	0.44	6.20	Medium
7. My Lac Commune	7	1.19	7	0.84	4	0.56	5	0.25	4	0.24	2	0.06	1	0.02	4	0.32	7	1.05	6	0.54	4	0.44	5.51	Medium
8. My Phu Commune	8	1.36	7	0.84	4	0.56	7	0.35	4	0.24	2	0.06	1	0.02	4	0.32	7	1.05	7	0.63	4	0.44	5.87	Medium
9. My Thanh Commune	8	1.36	7	0.84	3	0.42	5	0.25	3	0.18	2	0.06	1	0.02	4	0.32	7	1.05	6	0.54	4	0.44	5.48	Medium
10. Nhi Thanh Commune	8	1.36	6	0.72	7	0.98	5	0.25	3	0.18	2	0.06	2	0.04	4	0.32	7	1.05	7	0.63	2	0.22	5.81	Medium
11. Tan Long Commune	9	1.53	6	0.72	3	0.42	4	0.20	3	0.18	1	0.03	1	0.02	6	0.48	8	1.20	6	0.54	3	0.33	5.65	Medium
12. Tan Thanh Commune	8	1.36	5	0.60	5	0.70	5	0.25	2	0.12	2	0.06	1	0.02	6	0.48	8	1.20	6	0.54	2	0.22	5.55	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

Table 32. Straw management adoption capacity of Thu Thua District in Autumn-Winter season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Thu Thua Townlet	6	1.02	6	0.72	4	0.56	8	0.40	4	0.24	2	0.06	1	0.02	5	0.40	8	1.20	7	0.63	2	0.22	5.47	Medium
2. Binh An Commune	7	1.19	7	0.84	4	0.56	6	0.30	4	0.24	2	0.06	1	0.02	5	0.40	8	1.20	7	0.63	4	0.44	5.88	Medium
3. Binh Thanh Commune	7	1.19	7	0.84	3	0.42	6	0.30	5	0.30	2	0.06	1	0.02	5	0.40	8	1.20	7	0.63	3	0.33	5.69	Medium
4. Long Thanh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Long Thuan Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6. My An Commune	8	1.36	7	0.84	6	0.84	7	0.35	4	0.24	2	0.06	2	0.04	5	0.40	8	1.20	7	0.63	4	0.44	6.40	Medium
7. My Lac Commune	6	1.02	7	0.84	3	0.42	6	0.30	5	0.30	2	0.06	1	0.02	5	0.40	8	1.20	6	0.54	4	0.44	5.54	Medium
8. My Phu Commune	8	1.36	7	0.84	4	0.56	8	0.40	5	0.30	2	0.06	1	0.02	5	0.40	8	1.20	5	0.45	4	0.44	6.03	Medium
9. My Thanh Commune	7	1.19	6	0.72	3	0.42	6	0.30	4	0.24	2	0.06	1	0.02	5	0.40	8	1.20	6	0.54	4	0.44	5.53	Medium
10. Nhi Thanh Commune	8	1.36	6	0.72	6	0.84	6	0.30	4	0.24	2	0.06	1	0.02	5	0.40	8	1.20	6	0.54	3	0.33	6.01	Medium
11. Tan Long Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12. Tan Thanh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

-: Not planted

S: Score; WS: Weighted score; TWS: Total weighted score

3.12. Straw management adoption capacity in Tan Tru district

In the Winter-Spring season, all communes in Tan Tru district had a high adoption capacity for straw removal management. In this season, Lac Tan commune and Que My Thanh commune had the highest total weighted score, with 8.64, whereas Nhut Ninh commune had the lowest total weighted score, with 7.23. All communes in Tan Tru district had a high score for baling equipment availability and farmers' interest factors. Binh Trinh Dong commune, Duc Tan commune, Nhut Ninh commune, and Tan Phuoc Tay commune had a medium score for straw buyer and labor availability. In contrast, other communes had a high score for these factors. Besides, most communes had a high score for local government and farmers' organization. Only three communes, Lac Tan commune, Que My Thanh commune, and Tan Binh commune, had a high score for the time between seasons, while other communes had a medium score for this factor. In addition, most communes had a high score for a net gain to the farmer. It should be noted that rice straw in the Winter-Spring season was drier and better than other seasons; thus, farmers could quickly sell rice straw in this season. The score of straw management adoption capacity of Tan Tru district in the Winter-Spring season was presented in Table 33.

In the Summer-Autumn season, communes in Tan Tru district had medium and high adoption capacity for straw removal management. Half of the communes had a high adoption capacity for straw removal management. In contrast, other communes had a medium adoption capacity for straw removal management. In this season, Que My Thanh commune had the highest total weighted score, with 7.24, whereas Nhut Ninh commune had the lowest total weighted score, with 6.06. All communes in this season had a medium score for baling equipment availability, while they had a high score for farmers' interest. Most communes in this season had a medium score for straw buyer and labor availability, except for Tan Binh commune, with a high score. It should be noted that there was much rain in this season leading to flooding in the field. Thus, there was a lack of baling equipment and labor to collect rice straw in this season. Besides, most communes had a high score for local government and farmers' organization. However, all communes had a low score for the time between seasons. Farmers did not have enough time to remove rice straw since they had to make the land for seeding for the next cropping season. The score of straw management adoption capacity of Tan Tru district in the Summer-Autumn season was presented in Table 34.

In the Autumn-Winter season, communes in Lai Vung district had medium and high adoption capacity for straw removal management. This season, Dinh Hoa commune, Long Thang commune, and Vinh Thoi commune also had a high adoption capacity for straw removal management. In contrast, others had a medium adoption capacity for

straw removal management. Only three communes, Dinh Hoa commune, Long Thang commune, and Vinh Thoi commune, had a high score for baling equipment availability. In contrast, others had a meager score for this factor. All communes in this season had a high score for straw buyers, labor availability, and farmers' interest, whereas they had a medium score for local government and farmers' organization. Besides, all communes had a high score for the time between seasons. There were straw balers in Dinh Hoa commune and Long Thang commune; thus, farmers could quickly remove rice straw. Most communes in this season had a high score for transportation, except for Long Hau commune and Tan Phuoc commune, with a medium score. In addition, all communes had a low score for the net gain to the farmer. The quality rice straw in the Summer-Autumn season and Autumn-Winter season was poorer than the Winter-Spring season. Thus, the price of rice straw in the Summer-Autumn season and Autumn-Winter season was lower than that of the Winter-Spring season. The score of straw management adoption capacity of Lai Vung district in the Autumn-Winter season was presented in Table 34.

Table 33. Straw management adoption capacity of Tan Tru district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Tan Tru Townlet	9	1.53	8	0.96	8	1.12	9	0.45	9	0.54	1	0.03	1	0.02	7	0.56	9	1.35	8	0.72	9	0.99	8.27	High
2. Binh Lang Commune	10	1.70	8	0.96	8	1.12	9	0.45	9	0.54	1	0.03	1	0.02	7	0.56	9	1.35	8	0.72	9	0.99	8.44	High
3. Binh Tinh Commune	10	1.70	8	0.96	8	1.12	9	0.45	9	0.54	1	0.03	1	0.02	7	0.56	9	1.35	8	0.72	9	0.99	8.44	High
4. Binh Trinh Dong Commune	9	1.53	7	0.84	7	0.98	8	0.40	9	0.54	1	0.03	1	0.02	7	0.56	9	1.35	8	0.72	9	0.99	7.96	High
5. Duc Tan Commune	9	1.53	6	0.72	7	0.98	8	0.40	8	0.48	1	0.03	1	0.02	7	0.56	9	1.35	8	0.72	9	0.99	7.78	High
6. Lac Tan Commune	10	1.70	9	1.08	8	1.12	9	0.45	9	0.54	1	0.03	1	0.02	8	0.64	9	1.35	8	0.72	9	0.99	8.64	High
7. Nhut Ninh Commune	9	1.53	6	0.72	6	0.84	8	0.40	7	0.42	1	0.03	1	0.02	7	0.56	8	1.20	7	0.63	8	0.88	7.23	High
8. Que My Thanh Commune	10	1.70	9	1.08	8	1.12	9	0.45	9	0.54	1	0.03	1	0.02	8	0.64	9	1.35	8	0.72	9	0.99	8.64	High
9. Tan Binh Commune	9	1.53	9	1.08	9	1.26	9	0.45	9	0.54	1	0.03	1	0.02	8	0.64	9	1.35	8	0.72	9	0.99	8.61	High
10. Tan Phuoc Tay Commune	9	1.53	6	0.72	7	0.98	8	0.40	8	0.48	1	0.03	1	0.02	7	0.56	9	1.35	8	0.72	8	0.88	7.67	High

S: Score; WS: Weighted score; TWS: Total weighted score

Table 34. Straw management adoption capacity of Tan Tru district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Tan Tru Townlet	6	1.02	6	0.72	7	0.98	8	0.40	8	0.48	1	0.03	1	0.02	3	0.24	9	1.35	8	0.72	8	0.88	6.84	Medium
2. Binh Lang Commune	7	1.19	7	0.84	7	0.98	8	0.40	8	0.48	1	0.03	1	0.02	3	0.24	9	1.35	8	0.72	8	0.88	7.13	High
3. Binh Tinh Commune	7	1.19	7	0.84	7	0.98	8	0.40	8	0.48	1	0.03	1	0.02	3	0.24	9	1.35	8	0.72	8	0.88	7.13	High
4. Binh Trinh Dong Commune	5	0.85	5	0.60	6	0.84	7	0.35	8	0.48	1	0.03	1	0.02	3	0.24	9	1.35	8	0.72	8	0.88	6.36	Medium
5. Duc Tan Commune	5	0.85	5	0.60	6	0.84	7	0.35	7	0.42	1	0.03	1	0.02	3	0.24	9	1.35	8	0.72	8	0.88	6.30	Medium
6. Lac Tan Commune	7	1.19	7	0.84	7	0.98	8	0.40	8	0.48	1	0.03	1	0.02	3	0.24	9	1.35	8	0.72	8	0.88	7.13	High
7. Nhut Ninh Commune	5	0.85	5	0.60	6	0.84	7	0.35	7	0.42	1	0.03	1	0.02	3	0.24	8	1.20	7	0.63	8	0.88	6.06	Medium
8. Que My Thanh Commune	7	1.19	7	0.84	7	0.98	8	0.40	8	0.48	1	0.03	1	0.02	3	0.24	9	1.35	8	0.72	9	0.99	7.24	High
9. Tan Binh Commune	5	0.85	8	0.96	8	1.12	8	0.40	8	0.48	1	0.03	1	0.02	3	0.24	9	1.35	8	0.72	9	0.99	7.16	High
10. Tan Phuoc Tay Commune	5	0.85	5	0.60	7	0.98	7	0.35	7	0.42	1	0.03	1	0.02	3	0.24	9	1.35	8	0.72	8	0.88	6.44	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

Table 35. Straw management adoption capacity of Tan Tru district in Autumn-Winter season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Tan Tru Townlet	8	1.36	7	0.84	7	0.98	8	0.40	8	0.48	1	0.03	1	0.02	4	0.32	9	1.35	8	0.72	8	0.88	7.38	High
2. Binh Lang Commune	9	1.53	8	0.96	7	0.98	8	0.40	8	0.48	1	0.03	1	0.02	4	0.32	9	1.35	8	0.72	8	0.88	7.67	High
3. Binh Tinh Commune	8	1.36	8	0.96	7	0.98	8	0.40	8	0.48	1	0.03	1	0.02	4	0.32	9	1.35	8	0.72	8	0.88	7.50	High
4. Binh Trinh Dong Commune	7	1.19	6	0.72	6	0.84	7	0.35	8	0.48	1	0.03	1	0.02	4	0.32	9	1.35	8	0.72	8	0.88	6.90	Medium
5. Duc Tan Commune	7	1.19	6	0.72	6	0.84	7	0.35	7	0.42	1	0.03	1	0.02	4	0.32	9	1.35	8	0.72	8	0.88	6.84	Medium
6. Lac Tan Commune	9	1.53	8	0.96	7	0.98	8	0.40	8	0.48	1	0.03	1	0.02	4	0.32	9	1.35	8	0.72	8	0.88	7.67	High
7. Nhut Ninh Commune	7	1.19	6	0.72	6	0.84	7	0.35	7	0.42	1	0.03	1	0.02	4	0.32	8	1.20	7	0.63	8	0.88	6.60	Medium
8. Que My Thanh Commune	9	1.53	8	0.96	7	0.98	8	0.40	8	0.48	1	0.03	1	0.02	4	0.32	9	1.35	8	0.72	9	0.99	7.78	High
9. Tan Binh Commune	7	1.19	8	0.96	8	1.12	8	0.40	8	0.48	1	0.03	1	0.02	4	0.32	9	1.35	8	0.72	9	0.99	7.58	High
10. Tan Phuoc Tay Commune	7	1.19	6	0.72	7	0.98	7	0.35	7	0.42	1	0.03	1	0.02	4	0.32	9	1.35	8	0.72	8	0.88	6.98	Medium

S: Score; WS: Weighted score; TWS: Total weighted score

3.13. Straw management adoption capacity in Can Duoc district

Can Duoc district has 17 communes, and only Tan Chanh commune does not have rice cultivation. All communes in Can Duoc district had a medium adoption capacity for straw removal management in the winter-Spring season. All communes in Can Duoc district had a low score for baling equipment availability, straw buyer, and labor availability. It should be noted that straw buyers mainly came from outside of Can Duoc district. Thus, there was a lack of straw buyers in this district. However, all communes have a high score for farmers' interest. Farmers usually sold rice straw in the Winter-Spring season.

Moreover, all communes in the winter-Spring season had a medium score for local government and farmers' organization. Local government and farmers' organizations mainly propagated the harmful effect of burning rice straw through trainings and hamlet activities. In addition, they had a medium score for the time between seasons. They only cultivate two cropping seasons in the year (Winter-Spring and Summer-Autumn season). The score of straw management adoption capacity of Can Duoc district in the Winter-Spring season was presented in Table 36.

In the Summer-Autumn season, all communes in Can Duoc district had a low adoption capacity for straw removal management. All communes in Can Duoc district had a low score for baling equipment availability, straw buyer, and labor availability. Straw buyers mainly came from outside of Can Duoc district; thus, there was a lack of straw buyers. Besides, all communes in this season had a low score for farmers' interest. Farmers mainly practiced the incorporation of rice straw in this season. They also had a medium score for local government, farmers' organization, and the time between seasons in this season. The score of straw management adoption capacity of Can Duoc district in the Summer-Autumn season was presented in Table 37.

Table 36. Straw management adoption capacity of Can Duoc district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Can Duoc Townlet	1	0.17	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.14	Medium
2. Long Cang Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium
3. Long Dinh Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium
4. Long Hoa Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium
5. Long Huu Dong Commune	1	0.17	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.14	Medium
6. Long Huu Tay Commune	1	0.17	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.14	Medium
7. Long Khe Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium
8. Long Son Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium
9. Long Trach Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium
10. My Le Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium
11. Phuoc Dong Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium
12. Phuoc Tuy Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium
13. Phuoc Van Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium
14. Tan An Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium
15. Tan Chanh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16. Tan Lan Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium
17. Tan Trach Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	8	1.20	5	0.45	5	0.55	4.48	Medium

-: Not planted; S: Score; WS: Weighted score; TWS: Total weighted score

Table 37. Straw management adoption capacity of Can Duoc district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Can Duoc Townlet	1	0.17	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.39	Low
2. Long Cang Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low
3. Long Dinh Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low
4. Long Hoa Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low
5. Long Huu Dong Commune	1	0.17	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.39	Low
6. Long Huu Tay Commune	1	0.17	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.39	Low
7. Long Khe Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low
8. Long Son Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low
9. Long Trach Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low
10. My Le Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low
11. Phuoc Dong Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low
12. Phuoc Tuy Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low
13. Phuoc Van Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low
14. Tan An Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low
15. Tan Chanh Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16. Tan Lan Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low
17. Tan Trach Commune	3	0.51	4	0.48	2	0.28	2	0.10	5	0.30	1	0.03	1	0.02	7	0.56	3	0.45	5	0.45	5	0.55	3.73	Low

-: Not planted; S: Score; WS: Weighted score; TWS: Total weighted score

3.14. Straw management adoption capacity in Can Giuoc district

In the winter-Spring season, all communes in Can Giuoc district had a low adoption capacity for straw removal management. In this season, Tan Lap commune and Thuan Thanh commune had the highest total weighted score, with 3.42, whereas Can Giuoc townlet, Long Thuong commune, and Phuoc Lai commune had the lowest total weighted score, with 2.06. All communes in Can Giuoc district had a low score for baling equipment availability, straw buyer, and labor availability. It should be noted that straw buyers and baling equipment mainly came from outside of this district. Besides, all communes had a medium score for farmers' interest. However, they had a low score for local government and farmers' organization. Local government and farmers' organizations in this district did not provide much support to farmers for the removal of rice straw. In addition, all communes had a medium score for the time between seasons. They only cultivate two cropping seasons in the year (Winter-Spring and Summer-Autumn season). The score of straw management adoption capacity of Can Giuoc district in the Winter-Spring season was presented in Table 38.

In the Summer-Autumn season, all communes in Can Giuoc district had a low adoption capacity for straw removal management. In this season, Phuoc Lam commune had the highest total weighted score, with 2.54, whereas Can Giuoc townlet and Phuoc Lai commune had the lowest total weighted score, with 1.68. All communes in Can Giuoc district had a low score for baling equipment availability, straw buyer, and labor availability. This was because straw buyers and baling equipment mainly came from outside of this district. Besides, they also had a low score for farmers' interest. Most of the farmers practiced the incorporation of rice straw in this season. In addition, they also had a low score for local government and farmers' organization. Farmers in communes did not receive too much support from local government and farmers' organizations to remove rice straw. The score of straw management adoption capacity of Can Giuoc district in the Summer-Autumn season was presented in Table 39.

Table 38. Straw management adoption capacity of Can Giuoc district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Can Giuoc Townlet	1	0.17	2	0.24	1	0.14	1	0.05	1	0.06	1	0.03	1	0.02	5	0.40	5	0.75	1	0.09	1	0.11	2.06	Low
2. Dong Thanh Commune	1	0.17	2	0.24	1	0.14	1	0.05	2	0.12	1	0.03	1	0.02	5	0.40	5	0.75	2	0.18	1	0.11	2.21	Low
3. Long An Commune	1	0.17	3	0.36	3	0.42	2	0.10	3	0.18	2	0.06	2	0.04	5	0.40	5	0.75	2	0.18	1	0.11	2.77	Low
4. Long Hau Commune	1	0.17	2	0.24	1	0.14	2	0.10	1	0.06	2	0.06	2	0.04	5	0.40	5	0.75	2	0.18	1	0.11	2.25	Low
5. Long Phung Commune	3	0.51	3	0.36	1	0.14	2	0.10	2	0.12	1	0.03	1	0.02	5	0.40	5	0.75	1	0.09	1	0.11	2.63	Low
6. Long Thuong Commune	1	0.17	1	0.12	1	0.14	1	0.05	1	0.06	2	0.06	1	0.02	5	0.40	5	0.75	2	0.18	1	0.11	2.06	Low
7. My Loc Commune	1	0.17	2	0.24	1	0.14	1	0.05	1	0.06	2	0.06	1	0.02	5	0.40	5	0.75	2	0.18	1	0.11	2.18	Low
8. Phuoc Hau Commune	1	0.17	2	0.24	1	0.14	1	0.05	1	0.06	2	0.06	2	0.04	5	0.40	5	0.75	1	0.09	1	0.11	2.11	Low
9. Phuoc Lai Commune	1	0.17	2	0.24	1	0.14	1	0.05	1	0.06	1	0.03	1	0.02	5	0.40	5	0.75	1	0.09	1	0.11	2.06	Low
10. Phuoc Lam Commune	1	0.17	3	0.36	3	0.42	1	0.05	3	0.18	2	0.06	2	0.04	5	0.40	5	0.75	2	0.18	3	0.33	2.94	Low
11. Phuoc Ly Commune	1	0.17	2	0.24	1	0.14	1	0.05	1	0.06	1	0.03	1	0.02	5	0.40	5	0.75	1	0.09	2	0.22	2.17	Low
12. Phuoc Vinh Dong Commune	1	0.17	3	0.36	2	0.28	1	0.05	1	0.06	1	0.03	1	0.02	5	0.40	5	0.75	3	0.27	3	0.33	2.72	Low
13. Phuoc Vinh Tay Commune	1	0.17	3	0.36	2	0.28	2	0.10	3	0.18	2	0.06	2	0.04	5	0.40	5	0.75	3	0.27	3	0.33	2.94	Low
14. Tan Lap Commune	3	0.51	3	0.36	3	0.42	3	0.15	3	0.18	1	0.03	1	0.02	5	0.40	5	0.75	3	0.27	3	0.33	3.42	Low
15. Thuan Thanh Commune	3	0.51	3	0.36	3	0.42	3	0.15	3	0.18	1	0.03	1	0.02	5	0.40	5	0.75	3	0.27	3	0.33	3.42	Low

S: Score; WS: Weighted score; TWS: Total weighted score

Table 39. Straw management adoption capacity of Can Giuoc district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Can Giuoc Townlet	1	0.17	2	0.24	1	0.14	1	0.05	1	0.06	1	0.03	1	0.02	4	0.32	3	0.45	1	0.09	1	0.11	1.68	Low
2. Dong Thanh Commune	1	0.17	2	0.24	1	0.14	1	0.05	1	0.06	1	0.03	1	0.02	4	0.32	4	0.60	2	0.18	1	0.11	1.92	Low
3. Long An Commune	1	0.17	3	0.36	3	0.42	1	0.05	1	0.06	2	0.06	2	0.04	3	0.24	4	0.60	1	0.09	1	0.11	2.20	Low
4. Long Hau Commune	1	0.17	2	0.24	1	0.14	1	0.05	1	0.06	2	0.06	2	0.04	4	0.32	3	0.45	1	0.09	1	0.11	1.73	Low
5. Long Phung Commune	3	0.51	3	0.36	1	0.14	1	0.05	1	0.06	1	0.03	1	0.02	4	0.32	3	0.45	1	0.09	1	0.11	2.14	Low
6. Long Thuong Commune	1	0.17	1	0.12	1	0.14	1	0.05	1	0.06	1	0.03	1	0.02	3	0.24	4	0.60	2	0.18	1	0.11	1.72	Low
7. My Loc Commune	1	0.17	2	0.24	1	0.14	1	0.05	1	0.06	1	0.03	1	0.02	4	0.32	3	0.45	2	0.18	1	0.11	1.77	Low
8. Phuoc Hau Commune	1	0.17	2	0.24	1	0.14	1	0.05	1	0.06	1	0.03	2	0.04	4	0.32	3	0.45	1	0.09	1	0.11	1.70	Low
9. Phuoc Lai Commune	1	0.17	2	0.24	1	0.14	1	0.05	1	0.06	1	0.03	1	0.02	4	0.32	3	0.45	1	0.09	1	0.11	1.68	Low
10. Phuoc Lam Commune	1	0.17	3	0.36	3	0.42	1	0.05	2	0.12	2	0.06	2	0.04	4	0.32	4	0.60	2	0.18	2	0.22	2.54	Low
11. Phuoc Ly Commune	1	0.17	2	0.24	1	0.14	1	0.05	1	0.06	1	0.03	1	0.02	4	0.32	4	0.60	1	0.09	1	0.11	1.83	Low
12. Phuoc Vinh Dong Commune	1	0.17	3	0.36	2	0.28	1	0.05	1	0.06	1	0.03	1	0.02	2	0.16	4	0.60	1	0.09	1	0.11	1.93	Low
13. Phuoc Vinh Tay Commune	1	0.17	3	0.36	2	0.28	1	0.05	1	0.06	2	0.06	2	0.04	2	0.16	4	0.60	1	0.09	1	0.11	1.98	Low
14. Tan Lap Commune	1	0.17	3	0.36	3	0.42	1	0.05	1	0.06	1	0.03	1	0.02	2	0.16	2	0.30	1	0.09	1	0.11	1.77	Low
15. Thuan Thanh Commune	1	0.17	3	0.36	3	0.42	1	0.05	1	0.06	1	0.03	1	0.02	3	0.24	2	0.30	1	0.09	1	0.11	1.85	Low

S: Score; WS: Weighted score; TWS: Total weighted score

3.15. Straw management adoption capacity in Chau Thanh district

Chau Thanh district has a low rice planted area in Long An province since Chau Thanh district transformed from rice cultivation to dragon fruit cultivation. Only four communes, Binh Quoi commune, Hiep Thanh commune, Hoa Phu commune, and Thuan My commune, had rice cultivation in the Winter-Spring season. All communes cultivated in the Winter-Spring season had a low adoption capacity for straw removal management. In this season, Binh Quoi commune had the highest total weighted score, with 3.29, whereas Thuan My commune had the lowest total weighted score, with 3.12. All communes in Chau Thanh district had a low score for baling equipment availability, straw buyer, and farmers' interest. However, they had a medium score for labor availability. Besides, all communes cultivated in this season had a medium score for local government. Only Binh Quoi commune and Hiep Thanh commune had a medium score for farmers' organizations, while others had a low score for this factor. Only Thuan My commune had a medium score for the time between seasons. In contrast, others had a low score for this factor. This was because Thuan My commune only cultivated two cropping seasons (Winter-Spring and Summer-Autumn season). The score of straw management adoption capacity of Chau Thanh district in the Winter-Spring season was presented in Table 40.

Only four communes, Binh Quoi commune, Hiep Thanh commune, Hoa Phu commune, and Thuan My commune, had rice cultivation in the Summer-Autumn season. All communes cultivated in the Summer-Autumn season had a low adoption capacity for straw removal management. In this season, Binh Quoi commune and Thuan My commune had the highest total weighted score, with 3.05, whereas Hoa Phu commune had the lowest total weighted score, with 2.72. All communes cultivated in this season also had a low score for baling equipment availability, straw buyer, and farmers' interest. However, they had a medium score for labor availability. Only Hoa Phu commune had a low score for local government, whereas others had a medium score for this factor. In addition, Binh Quoi commune in this season also had a medium score for farmers' organization, while others had a low score for this factor. Besides, only Thuan My commune had a medium score for the time between seasons. In contrast, others had a low score for this factor. This was because Thuan My commune only cultivated two cropping seasons (Winter-Spring and Summer-Autumn season). The score of straw management adoption capacity of Chau Thanh district in the Summer-Autumn season was presented in Table 41.

Only three communes, Binh Quoi commune, Hiep Thanh commune, and Hoa Phu commune, had rice cultivation in the Autumn-Winter season. All communes cultivated in the Autumn-Winter season had a low adoption capacity for straw removal

management. In this season, Binh Quoi commune had the highest total weighted score, with 3.01, whereas Hoa Phu commune had the lowest total weighted score, with 2.66. All communes cultivated in this season also had a low score for baling equipment availability, straw buyer, and farmers' interest. However, they had a medium score for labor availability. Binh Quoi commune and Hiep Thanh commune had a medium score for local government, while Hoa Phu commune had a low score for this factor. All communes in this season had a low score for farmers' organization and time between seasons. These communes cultivated three cropping seasons; thus, farmers did not have enough time to remove rice straw. The score of straw management adoption capacity of Chau Thanh district in the Autumn-Winter season was presented in Table 42.

Table 40. Straw management adoption capacity of Chau Thanh district in Winter-Spring season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Tam Vu Townlet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. An Luc Long Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Binh Quoi Commune	1	0.17	6	0.72	1	0.14	2	0.10	3	0.18	2	0.06	2	0.04	4	0.32	3	0.45	5	0.45	6	0.66	3.29	Low
4. Duong Xuan Hoi Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Hiep Thanh Commune	1	0.17	5	0.60	1	0.14	2	0.10	3	0.18	2	0.06	2	0.04	3	0.24	4	0.60	5	0.45	5	0.55	3.13	Low
6. Hoa Phu Commune	1	0.17	6	0.72	1	0.14	2	0.10	3	0.18	2	0.06	3	0.06	3	0.24	4	0.60	4	0.36	5	0.55	3.18	Low
7. Long Tri Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8. Phu Ngai Tri Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9. Phuoc Tan Hung Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Thanh Phu Long Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Thanh Vinh Dong Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12. Thuan My Commune	1	0.17	5	0.60	1	0.14	1	0.05	2	0.12	3	0.09	2	0.04	5	0.40	4	0.60	4	0.36	5	0.55	3.12	Low
13. Vinh Cong Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

-: Not planted;

S: Score; WS: Weighted score; TWS: Total weighted score

Table 41. Straw management adoption capacity of Chau Thanh district in Summer-Autumn season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Tam Vu Townlet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. An Luc Long Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Binh Quoi Commune	1	0.17	6	0.72	1	0.14	1	0.05	3	0.18	2	0.06	2	0.04	3	0.24	3	0.45	5	0.45	5	0.55	3.05	Low
4. Duong Xuan Hoi Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Hiep Thanh Commune	1	0.17	5	0.60	1	0.14	1	0.05	3	0.18	2	0.06	2	0.04	2	0.16	3	0.45	4	0.36	5	0.55	2.76	Low
6. Hoa Phu Commune	1	0.17	5	0.60	1	0.14	2	0.10	3	0.18	2	0.06	3	0.06	2	0.16	3	0.45	4	0.36	4	0.44	2.72	Low
7. Long Tri Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8. Phu Ngai Tri Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9. Phuoc Tan Hung Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Thanh Phu Long Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Thanh Vinh Dong Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12. Thuan My Commune	1	0.17	5	0.60	1	0.14	1	0.05	2	0.12	2	0.06	2	0.04	5	0.40	3	0.45	4	0.36	6	0.66	3.05	Low
13. Vinh Cong Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

-: Not planted;

S: Score; WS: Weighted score; TWS: Total weighted score

Table 42. Straw management adoption capacity of Chau Thanh district in Autumn-Winter season

Commune	Baling equipment availability (0.17)		Labor availability (0.12)		Straw buyers (0.14)		Net gain to farmer (0.05)		Transportation (0.06)		Storage availability (0.03)		Storage affordability (0.02)		Time between seasons (0.08)		Farmers' interest (0.15)		Farmers' organization (0.09)		Local government (0.11)		TWS	Adoption Capacity
	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS	S	WS		
1. Tam Vu Townlet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. An Luc Long Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Binh Quoi Commune	1	0.17	6	0.72	1	0.14	2	0.10	3	0.18	2	0.06	2	0.04	3	0.24	3	0.45	4	0.36	5	0.55	3.01	Low
4. Duong Xuan Hoi Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. Hiep Thanh Commune	1	0.17	5	0.60	1	0.14	1	0.05	2	0.12	2	0.06	2	0.04	2	0.16	3	0.45	4	0.36	5	0.55	2.70	Low
6. Hoa Phu Commune	1	0.17	5	0.60	1	0.14	2	0.10	3	0.18	3	0.09	2	0.04	3	0.24	2	0.30	4	0.36	4	0.44	2.66	Low
7. Long Tri Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8. Phu Ngai Tri Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9. Phuoc Tan Hung Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10. Thanh Phu Long Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11. Thanh Vinh Dong Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12. Thuan My Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13. Vinh Cong Commune	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

-: Not planted;

S: Score; WS: Weighted score; TWS: Total weighted score

IV. Conclusion

The purpose of this study is to evaluate the straw management adoption capacity in Long An province. Key informant interview (KII) with fifteen district-level DARD officials in Long An province to determine the straw management adoption capacity in Winter-Spring, Summer-Autumn, and Autumn-Winter season. District-level DARD officials evaluated every commune in their district on the influencing factors related to straw removal. These factors included baling equipment availability, labor availability, straw buyers, the net gain to the farmer, transportation, storage availability, storage affordability, the time between seasons, farmers' interest, farmers' organization, and local government. The scale from 1-10 was used to evaluate the factors that influence the straw adoption capacity for each commune.

All communes in Duc Hue district and Tan Tru district had a high adoption capacity for straw removal management in the Winter-Spring season. Communes in Tan Hung district, Tan Thanh district, and Ben Luc district had medium and high adoption capacity for straw removal management. Besides, all communes in Tan An city, Kien Tuong town, Thanh Hoa district, Thu Thua district, and Can Duoc district had a medium adoption capacity for straw removal management. In contrast, communes in Vinh Hung district, Moc Hoa district, and Duc Hoa district had low and medium adoption capacity for straw removal management. However, all communes in Can Giuoc district and Chau Thanh district had low adoption capacity for straw removal management. Besides, Binh Hoa Bac commune in Duc Hue district had the highest total weighted score in Long An province, with 8.79. In contrast, three communes in Can Giuoc district, Can Giuoc townlet, Long Phuong commune, and Phuoc Lai commune, had the lowest total weighted score in Long An province, with 2.06.

In the Summer-Autumn season, most communes in Duc Hue district had a high adoption capacity for straw removal management. Communes in Tan Hung district, Ben Luc district, and Tan Tru district had medium and high adoption capacity for straw removal management. In addition, all communes in Tan An city, Kien Tuong town, Tan Thanh district, Thanh Hoa district, and Thu Thua district had a medium adoption capacity for straw removal management. In contrast, communes in Vinh Hung district, Moc Hoa district, and Duc Hoa district had low and medium adoption capacity for straw removal management. However, all communes in Can Duoc district, Can Giuoc district, and Chau Thanh district had low adoption capacity for straw removal management. Besides, Vinh Chau B commune in Tan Hung district had the highest total weighted score in Long An province, with 8.23. In contrast, Can Giuoc district's two communes, Can Giuoc townlet and Phuoc Lai commune, had the lowest total weighted score in Long An province, with 1.68.

Only 10 districts in Long An province had rice cultivation in the Autumn-Winter season. Most communes in Duc Hue district had a high adoption capacity for straw removal management in this season. In contrast, communes in Tan Tru district had medium and high adoption capacity for straw removal management, with 60% of communes at a high level. In addition, communes in Duc Hoa district had low and medium adoption capacity for straw removal management, with 75% of communes at a medium level. All communes in Tan An city, Tan Hung district, Tan Thanh district, Thanh Hoa district, and Thu Thua district had a medium adoption capacity for straw removal management. However, all communes in Moc Hoa district and Chau Thanh district had low adoption capacity for straw removal management. Besides, Binh Hoa Bac commune in Duc Hue district had the highest total weighted score in Long An province, with 8.30. In contrast, Hoa Phu commune in Chau Thanh district had the lowest total weighted score in Long An province, with 2.66.

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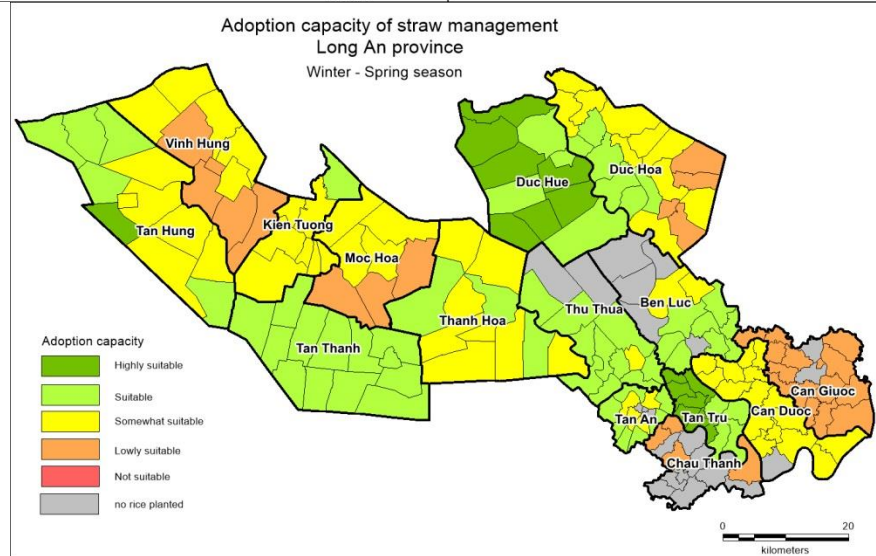
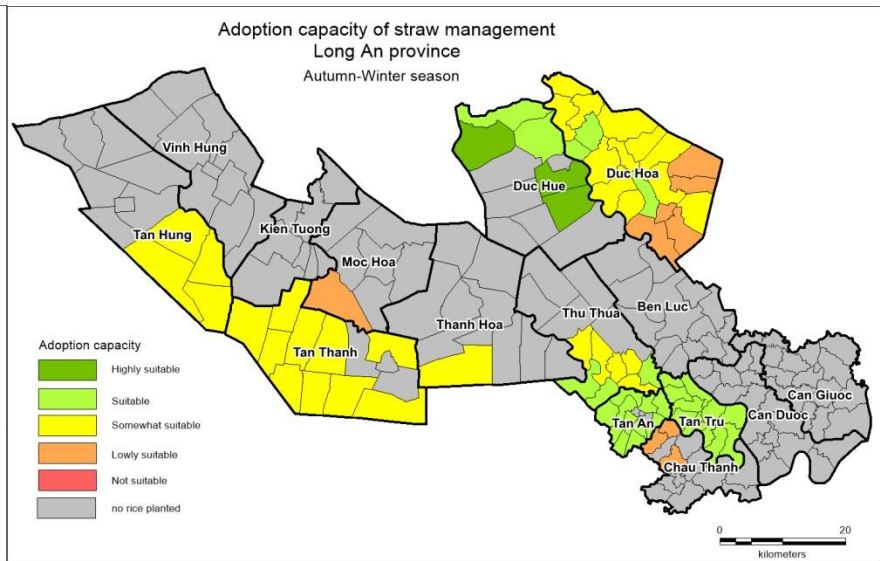
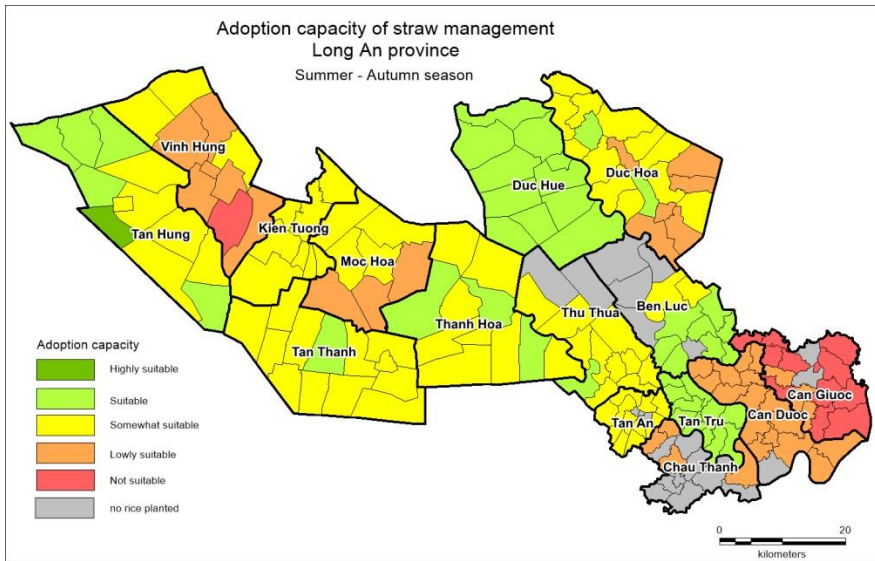
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Appendix 1: The adoption capacity for straw removal management by district, Long An province

No	District	Number of commune	Winter-Spring	Summer-Autumn	Autumn-Winter
1	Tan An City	14	11 Medium (5.90-6.07)	11 Medium (5.80-5.97)	11 Medium (6.02)
2	Kien Tuong Town	8	8 Medium (4.73-6.27)	8 Medium (4.45-5.78)	-
3	Tan Hung District	12	8 Medium, 4 High (4.41-8.23)	8 Medium, 4 High (4.41-8.23)	4 Medium (4.41-5.46)
4	Vinh Hung District	10	5 Low, 5 Medium (2.39-5.22)	7 Low, 3 Medium (1.88-4.18)	-
5	Moc Hoa District	7	3 Low, 4 Medium (3.68-4.83)	3 Low, 4 Medium (3.44-4.30)	1 Low (3.30)
6	Tan Thanh District	13	10 Medium, 3 High (6.22-7.07)	13 Medium (5.37-6.09)	10 Medium (4.04-4.29)
7	Thanh Hoa District	11	11 Medium (4.69-6.38)	11 Medium (4.69-6.38)	1 Medium (4.53)
8	Duc Hue District	11	11 High (7.39-8.79)	2 Medium, 9 High (6.84-7.95)	1 Medium, 4 High (6.84-8.30)
9	Duc Hoa District	20	4 Low, 16 Medium (3.17-6.54)	6 Low, 14 Medium (3.02-6.09)	5 Low, 15 Medium (2.98-6.21)
10	Ben Luc District	15	4 Medium, 6 High (5.54-7.74)	6 Medium, 4 High (5.26-7.46)	-
11	Thu Thua District	12	12 Medium (5.87-6.78)	12 Medium (5.01-6.20)	8 Medium (5.47-6.40)
12	Tan Tru District	10	10 High (7.23-8.64)	5 Medium, 5 High (6.06-7.24)	4 Medium, 6 High (6.60-7.78)
13	Can Duoc District	17	16 Medium (4.14-4.48)	16 Low (3.39-3.73)	-

14	Can Giuoc District	15	15 Low (2.06-3.42)	15 Low (1.68-2.54)	-
15	Chau Thanh District	13	4 Low (3.12-3.29)	4 Low (2.72-3.05)	3 Low (2.66-3.01)

-: Not planted



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