



การศึกษาห่วงโซ่คุณค่าการผลิตปุ๋ยอินทรีย์ จากวัสดุเหลือใช้ทางการเกษตร: กรณีศึกษาฟางข้าวในพื้นที่ภาคเหนือ

The Study on the Organic Fertilizer Value Chain from Agricultural Waste:
A Case Study of Rice Straw in the Northern Region



สำนักวิจัยเศรษฐกิจการเกษตร
สำนักงานเศรษฐกิจการเกษตร
กระทรวงเกษตรและสหกรณ์
เอกสารวิจัยเศรษฐกิจการเกษตร เลขที่ 135
พฤศจิกายน 2566

BUREAU OF AGRICULTURAL ECONOMIC RESEARCH
OFFICE OF AGRICULTURAL ECONOMICS
MINISTRY OF AGRICULTURE AND COOPERATIVES
AGRICULTURAL ECONOMIC RESEARCH NO. 135
NOVEMBER 2023



Abstract

The Organic Fertilizer Value Chain from Agricultural Waste: A Case Study of Rice Straw in the Northern Region was investigated. The study aimed to examine and add value to the production of organic fertilizer from rice straw, utilizing farmer interviews for data collection. All interviewed farmers had participated in the organic fertilizer production project of the Land Development Department (LDD) in 2022 from three provinces: Chiang Rai, Chiang Mai, and Tak.

The findings revealed the value chain of organic fertilizer from rice straw, comprising five primary activities. The first activity was inbound logistics, involving raw materials for fertilizer production, such as rice straw, manure, plant materials, Microbial Activator Super LDD1 and LDD2, and bio-fermented liquid. The second activity was operations, encompassing the fermentation process of the fertilizer using the LDD method. The third activity was outbound logistics, where the organic fertilizer was packed in approximately 25 kilograms per sack and transferred to producers' warehouses. The fourth activity was marketing and sales, with the organic fertilizer priced at 137.50 baht per sack, with sales promotions such as buy 20 get 1 free. The final primary activity was service, offering customers fertilizer delivery and recommendations. In addition to these primary activities, the findings demonstrated four supporting activities: organizational infrastructure, human resources, research and development, and procurement. Specifically, the fertilizer production site was located near water resources and raw materials. Furthermore, the fertilizer producers received training from LDD. Moreover, the fertilizer contained Microbial Activator Super LDD1 and LDD2, and bio-fermented liquid. Finally, the raw materials were sufficient for fertilizer production.

The study also indicated that the organic fertilizer cost 3,281.27 baht per ton, with 99.73 percent for variable costs and 0.27 percent for fixed costs. The average selling price of the fertilizer was 5,500 baht per ton; therefore, the return for the farmer producers was 2,269.20 baht per ton. Farmers applying organic fertilizers along with chemical fertilizers for farming could reduce chemical fertilizer costs by approximately 209.59 baht per rai.

The results led to policy recommendations that farmers should seek funding to purchase machinery for crushing materials and turning compost piles. Additionally, the Ministry of Agriculture and Cooperative should support machinery through groups of potential farmers and provide training courses for young, smart farmers on producing fertilizer.

Keywords: Organic Fertilizer, Value Chain.