

中国半乾燥地酪農小規模層に対する有機野菜栽培導入の経営的効果

The effectiveness of introducing organic vegetable cultivation to the small-sized dairy farms in the semi-arid regions, China

中国半乾燥地域の酪農小規模層においては、近年、飼料穀物価格の高騰によって、経営の持続性が困難になりつつあるが、発酵熱等、牛ふんを多面的に活用した、低コスト型の有機野菜栽培システムを導入することが、その問題に対処するための有効な方法となり得る。

内蒙古自治区の荒漠草原地帯に位置する蘇尼特右旗で、ミニカボチャ(品種名:貝貝(坊ちゃん))を生産した場合、このシステム導入によって得られる期待収益額は1021.4元/aと試算され、有機野菜栽培の導入が小規模酪農層の経営状況を改善させることができる。

The cost of feed grains had risen precipitously in recent years; it resulted in a critical situation for the viability of the small-sized dairy farms in the semi-arid regions, China. It is an effective way for this problem to introduce a low cost multifunctional system for cultivating organic vegetables utilizing regional resources; for example, heat released from fermenting manure to promote germination of vegetable seeds. In case of producing organic mini pumpkins in Suniteyouqi, Inner Mongolia, the income derived from this system can be evaluated as 1021.4RMB/100m².

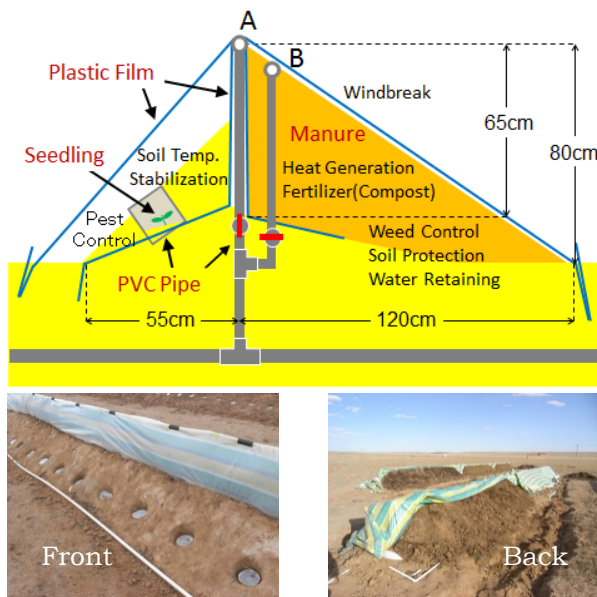


図1 牛ふんの発酵熱等を利用した有機栽培システム
Fig. 1. Multifunctional vegetable cultivation system utilizing dairy manure

* Vegetable plants will be supplied fresh water when the valve of pipe A is opened, and will be applied liquid fertilizer through fermented manure when the valve of pipe B is opened.

表1 ミニカボチャを導入した場合の生産・販売コスト

Table 1. Production and selling cost of mini pumpkins

	RMB/100m ²	Ratio
Materials cost	734.1	34.0
Seed	166.2	7.7
Fertilizer	0.0	0.0
Pesticide	0.0	0.0
Energy	47.3	2.2
Supply	482.9	22.4
Machine rental	37.6	1.7
Land rent	61.9	2.9
Labor cost	209.9	9.7
Transportation cost	514.5	23.9
Selling cost (estimated)	635.8	29.5
Total	2156.2	100.0

* 68% of consumers in Beijing (41 samples) are willing to pay more than 16.0RMB/kg for organic mini pumpkins produced in Suniteyouqi.

* Expected earnings (RMB/100m²) can be calculated as (Expected selling price × Quantity - Total cost);
16.0RMB/kg × 198.6kg/100m² - 2156.2RMB/100m²
=1021.4RMB/100m².



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