

Service to Efficiently Support Direct Farmers' Markets, which Directly Connect Producers with Consumers

Masahiro Seo, Seiji Igarashi, and Kuniyasu Shirotō

Abstract

At NTT EAST, we are providing an application service provider (ASP)-type direct farmers' market system called *Sanchoku*. Offering this system as an ASP-type service enables us to introduce it to direct farmers' markets easily and at low cost. It streamlines the tasks of producers and managers at these markets. This article introduces the features of the system and the effects of its introduction.

Keywords: direct farmers' market, POS system, application service provider

1. Introduction

Here, we describe the ways in which farmers can sell directly to consumers, focusing in particular on direct farmers' markets.

1.1 Background of direct farmers' markets

Direct sales of agricultural products occur in different forms and on varying scales. Producers, that is, farmers, may sell what they have harvested right in front of their homes or fields. Some farmers sell certain products such as raw eggs or flowers in vending machines. Farmers may also bring their crops to direct farmers' markets run by the JA (Japan Agricultural Co-operative) Group or other agricultural organizations.

Direct farmers' markets are gaining in popularity for a number of reasons. Roadside stations, which usually include a farmers' market, are increasing in number as they become popular resting places for people traveling by car. People are also becoming more and more interested in food, particularly in the *locavore* movement focusing on local production for local consumption. Not only local consumers but also visitors from cities flock to direct farmers' markets, where they can buy locally harvested fresh agricultural products at reasonable prices and get to know who the producers are.

1.2 Features of direct farmers' markets

Since local production for local consumption is now a favored concept, a majority of products sold at direct farmers' markets are locally harvested fresh crops. The name and photo of the producer is included on the packaging of each item so that shoppers can see who produced the item.

In contrast to retailing at supermarkets, producers bring their crops directly to farmers' markets. The markets receive a commission for each item sold, and the remaining revenue goes to the farmers. Consigned sales and deduction of commissions by the market are major features of these markets (**Fig. 1**).

2. Direct farmers' market system: Sanchoku

The Sanchoku system is described in detail in this section.

2.1 Features of the system

The direct farmers' market system known as Sanchoku is designed to solve problems encountered by staff members of direct farmers' markets and also by producers. For example, market staff may require a lot of time and labor to manage the deduction of commissions, and producers may have difficulty knowing exactly what vegetables are in demand at a particular time. In addition to improving the efficiency of business

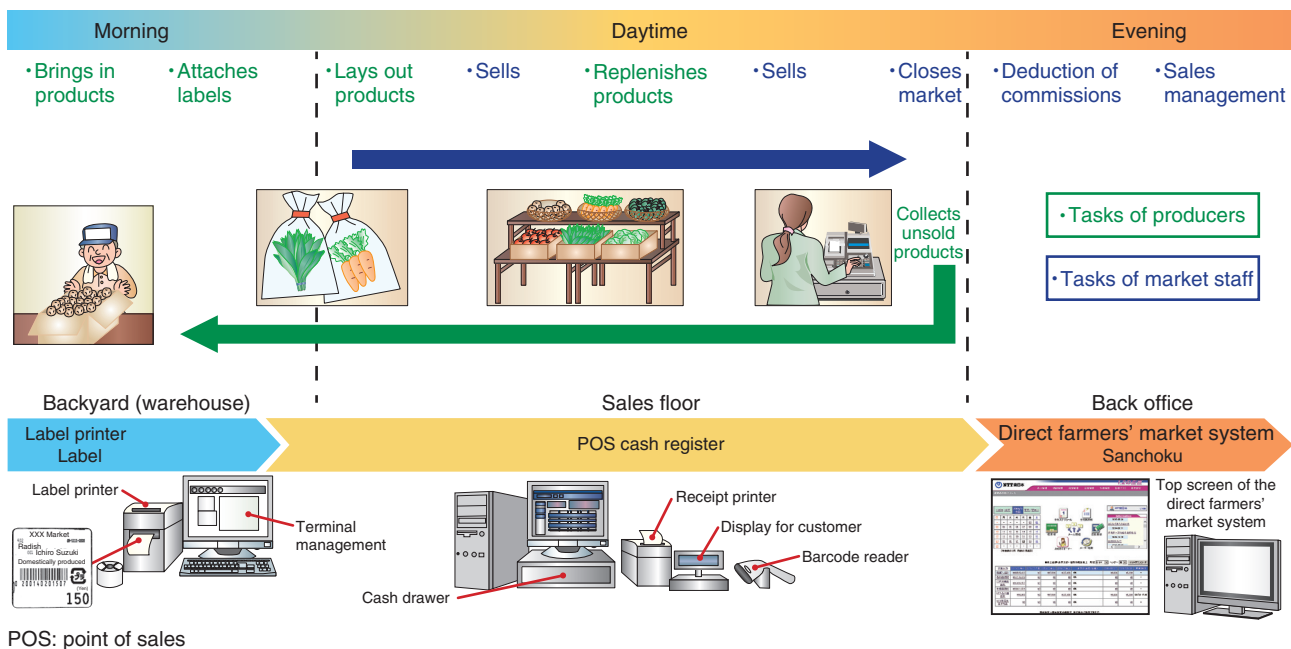


Fig. 1. Agricultural solutions that support a series of tasks at a direct farmers' market.

management, the system provides a variety of functions that support the operation of direct markets such as quick sales reporting and sales analysis.

Sales data are sent to a datacenter via the Internet using a system such as FLET'S HIKARI NEXT optical access and centrally managed there. The series of tasks carried out at a direct market are linked to point of sales (POS)^{*1} cash registers and the Sanchoku system, making it possible to analyze collected sales data from different perspectives and provide quick sales reports to producers (Fig. 2). A major feature of this system is that it is provided in the form of an application service provider (ASP)^{*2,3} service. This is beneficial to all three parties concerned: direct farmers' market managers, producers, and consumers [1]. The main features of the system are described below:

- 1) Since the system is provided as an ASP-type solution, it can be introduced easily and at low cost to direct markets that cannot afford to invest in a more complicated system or hire engineers.
- 2) Commissions can be deducted quickly.
- 3) Producers can receive information about the sales of their own products.
- 4) If a number of direct markets are run by a single body, they can be linked via the Internet and managed and operated in an integrated manner.
- 5) Sales can be analyzed from different perspectives

such as monthly sales, sales of each type of product, and sales at different times of the day.

- 6) The master formats of data used by different devices, for example, POS cash registers and label printers, are all managed and provided by the system.

2.2 Functions provided by the system

(1) Deduction of commissions

This function calculates the commissions and labeling fee for each producer and generates transfer data that are compliant with the format specified by the Japan Bankers Association. This function reduces the workload of transferring the accounts payable to producers.

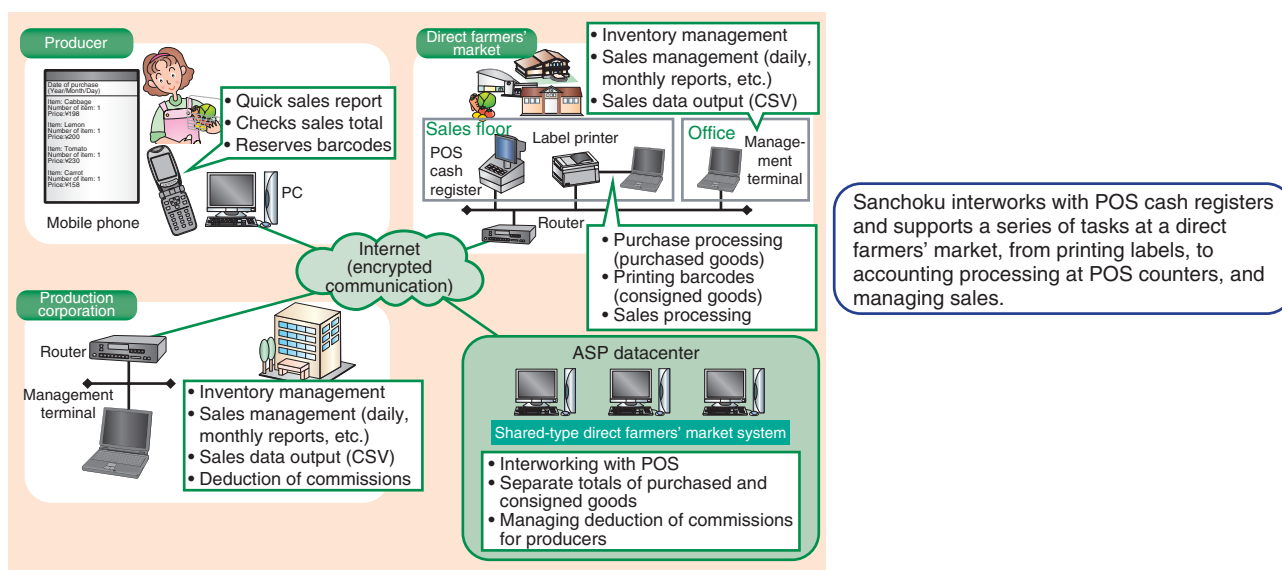
(2) Sales management

The direct market management can use data on the sales of each type of product, the sales at each market, and hourly, daily, and monthly sales to improve the

*1 POS: A system that records and aggregates information on sales at the exact time a product is purchased. The functions for recording and aggregating data as well as managing and analyzing aggregated data are generally referred to simply as POS, POS cash register, or POS system.

*2 ASP: An enterprise that has application functions and business software in its server and provides capabilities to customers via the Internet.

*3 This ASP-type service is operated by BUSICOM.



CSV: comma separated values

Fig. 2. Framework of the direct farmers' market system, Sanchoku.

operation of their markets. Direct markets and producers' organizations can work together to analyze the optimal time to carry out sowing and cropping, as well as the harvest yield from the volume of products delivered by individual producers. This enables them to provide advice and guidance on effective farm management to producers.

(3) Quick sales reporting

Producers can obtain information on the sales of their products via the Internet on their mobile phones, smartphones, or computers. This enables them to refill products at direct markets in a timely manner. The markets can increase their sales by avoiding lost sales opportunities as a result of their shelves being empty.

(4) Label printing

The label printers can print labels to be attached to products.

(5) Delivery of quick sales reports by email (optional)

This service delivers information about the total sales of the market to producers by email up to five times a day. The delivery time can be set by the market manager.

3. Effects of the introduction of the system

The Sanchoku system has been offered since 2004, and as of January 2016, it was in use at 76 direct

farmers' markets throughout the country.

(1) Effects on direct farmers' market managers

The introduction of the system has improved the efficiency of store operation, including the management of sales and deduction of commissions. The ability to analyze sales data from various perspectives yields information that is useful for planning cultivation cycles. In addition, the centralized management of a number of direct markets makes it easy to adjust the quantities of products delivered to individual markets.

(2) Effects on producers

Producers can check their sales on their mobile phones, smartphones, or computers in a timely manner. This enables them to adjust how much they will deliver the following day. In addition, having knowledge of their daily sales may boost their motivation to increase production and consequently increase their sales.

(3) Effect on consumers

Consumers benefit by being able to buy fresh, local farm products and having access to information about their origin.

4. Future development

Sanchoku can be linked to other services provided by NTT EAST such as Giga-raku Wi-Fi and Giga-raku Signage, and further linked to information and

communication technology solutions provided by other NTT Group companies. This will help to make markets more attractive and by extension, revitalize local economies. We are hopeful that our efforts will succeed in meeting various needs related to the sales and distribution of farm products and help to improve the efficiency of direct farmers' market operation and

boost sales, thereby increasing the income of producers.

Reference

- [1] Website of NTT EAST, ASP-type direct farmers' market system (in Japanese).
http://www.ntt-east.co.jp/business/solution/direct_agri



Masahiro Seo

Deputy Sales Manager, Agricultural Regional Development Business Section, Private Sector Sales Division, Corporate Sales Promotion Headquarters, NTT EAST.

He joined NTT in 1999. He is currently in charge of wholesale business for the agriculture domain.



Kuniyasu Shioto

Assistant Section Chief, Agricultural Regional Development Business Section, Private Sector Sales Division, Corporate Sales Promotion Headquarters, NTT EAST.

He joined NTT in 1999. He is currently involved in wholesale business for the agriculture domain.



Seiji Igarashi

Assistant Section Chief, Agricultural Regional Development Business Section, Private Sector Sales Division, Corporate Sales Promotion Headquarters, NTT EAST.

He joined NTT in 1999. He is currently working in the area of wholesale business for the agriculture domain.