Farmers at the Hikone Shiga Prefecture in Japan are becoming popular because they use the smartphone apps to help monitor crops and control production costs while the rapid aging farmer population continues to dwindle.

According to an article by Yuko Fukaya of the Japan Times, software developers are interested in creating applications for agriculture because the threat perceived from the upcoming Trans-Pacific Partnership free trade pact is expected to encourage farmers to improve economies of scale and turn their farms into companies.

The Japan Times cited a certain Yoichiro Nagai, 34, an employee at Fukuhara farm, based in Hikone, Shiga Prefecture who uses his smartphone to send information about how much his rice had grown to an online data network called Nosho Navi.

Kyushu University developed the system and smartphone application with the aim of passing down the skills of veteran farmers to younger generations. Fukuhara Farm joined the project when its experimental business started in 2010. The farm is one of the largest agricultural entities in the Shiga Prefecture, with about 165 hectares of land, about 35 times that of the Tokyo Dome, and a workforce of about 15.

Based on the information gathered, Nosho Navi makes recommendations on how much water to give each paddy and when to start harvesting the rice. These are decisions which are often difficult to make especially to those inexperienced farmers.

Quoting the 59-year-old president of the farm, Shoichi Fukahara, he said that “information technologies facilitate operations for beginners and (effectively) raise manpower.”

Teruaki Nanseki, a professor at the Kyushu University, who heads the Nosho Navi project said that so much change is now taking place. According to Nanseki, “the number of farming firms has been rising over the past decade and the farming business, which has been largely dominated by family management, has been experiencing a major change in recent years.”

Nanseki further added that the Nosho Navi application helps farmers deal with climate change and other risks and make accurate calculations on costs. In fact, companies are also capitalizing on demand for farming support devices, which is expected to climb in the next few years.

Case in point is Fujitsu Ltd., which is taking part in the Nosho Navi project. It has recently launched a support service for farmers in 2012 that covers areas ranging from management to production and sales. Fujitsu officials said that it has already received more than a thousand inquiries and aims to have 20,000 clients by 2015.