## Background of being born in a rural area and learning engineering

As an instructor of the Japan International Cooperation Center (JICE), I was involved in the "Country-focused Group Training Course on Vegetable and Upland Crops Cultivation for the Republic of Tajikistan" in 2000. After joining Appropriate Agriculture International Co., Ltd. (AAI) in 2001, I was in charge of management and technical instruction work for 21 training courses on vegetable and field crop cultivation at JICA Tsukuba until the end of 2018.

AAI started an activity in a field specialized in technology related to dryland agriculture, but now the training activities for the participants to acquire and disseminate technologies including cultivation of vegetable, field crops and rice, seed production, irrigation, market-oriented farming, etc. has become just one pillar of the company. The trigger of this was that AAI contracted, as the first private sector partner, the training on vegetable cultivation techniques which had been conducted by JICA Tsukuba. I have been involved in the direct instruction practice on vegetable cultivation in which AAI and myself had no experience at that time. I retired two years ago, so I will try to sort out what I have done in the meantime.

Situated in the foothills of Mt. Ninouji, the Iide Mountain Range, where the Kaji River flows is Shibata City, my hometown. It is a typical rural village centered on rice cultivation. I remember walking straight to school in the frozen rice fields in the middle of winter, and, in the Spring, the flower of milk vetch for improving soil fertility was beautiful. When the snow disappeared, smoke of rice husk charcoal rose from here and there, and semi-irrigated rice nursery began in the rice fields, and the seed paddy was soaked in a bath for several days and sprouted and was sown. It was natural for the children there to help their homes during the Spring and Autumn farming seasons when there were no rice transplanters nor rice harvesters. At the time of rice planting, the work proceeded at once with the help of the relatives and mothers from distant areas doing temporary work. When school was off, I threw 20 cm long bundled seedlings to the adults in the rice field while running along the ridges. After I had grown up, I was counted as one full labourer and helped rice planting until my back hurt. On autumn holidays, I helped with "Hazakake" and "Rice down" to dry the rice in the sun, and it was an unpleasant task because fine rice straw pierces

stung and scratched my neck. It was a good feeling to ascend the three-meter-tall bamboo platforms with their bundles of rice ears to see the surrounding scenery and the Sea of Japan.

Although the number of houses had shrunk, most of the farmers in the area kept dairy cows for stable income. My family had at most 7 or 8 milking cows, so it was my daily routine to prepare milk for the calves, cut the straw for the litter, which is important to prevent mastitis, and to clean the bedding. At that time, litter mixed with manure was piled up in a corner of the rice field to make compost and was applied every year. Mowing the grass early in the morning and keeping a cow without a break all year round is a difficult task, but at home, we enjoyed eating "milk tofu" prepared by dripping vinegar on the milk that was not shipped immediately after giving birth. I have one nostalgic memory of being immersed in a bath to which about 20 liters of milk had been added.

Efforts to improve livelihoods continued for many years during my grandmother's time. In addition to rice cultivation, they tried sericulture, cultivation of figs and cherries for canning, and tofu and fried tofu making. In this last case, soymilk preparation using stone mills in the middle of winter is said to have been difficult. In my father's time, dairy was the major activity, but we tried various other activities such as vegetable seed production, and sweet corn, turnips, and asparagus cultivation. My brother had a daily routine of taking care of dairy cows such as milking, but it was my role to help ship sweet corn and turnips to the Niigata Central Wholesale Market.



Rice fields spreading at the foot of Mt. Ninouji in the Iide mountain range in late autumn

The environment in which I was born and raised was a place rich in nature where I could feel how to grow crops and raise livestock. However, I strongly felt that it would be difficult to live in agriculture, so I did not choose agriculture as my future course.