

# Apples & People

## (1) How they went about developing the Fuji apple

In general the method of propagating a new variety of fruit tree, starts by introducing the pollen from a stamen onto the pistil of a different kind [Crossing], the seed taken from a fruit produced from crossing is planted, which grows into a seedling. The fruit resulting from the seedling is tested for taste, shape, color, storage characteristics, the nature of the tree, resistance to disease, and ease of cultivation in order to select a candidate [Selection]. The selected one goes through to test growing and checking for many years, and finally a name is given [Naming] and registered as a variety [Variety Registration].

The Agriculture and Forestry Ministry's Horticultural Experimental station, Tohoku branch was established in Fujisaki-machi, in Aomori prefecture in March, 1938. The research task was to develop a fruiter and a vegetable, in which the apple would play a primary role. The main varieties of apple in Japan at that time were "Kokkoh" (Ralls Janet) and "Kohgyoku" (Jonathan), and these two kinds accounted for 80% of apple production. Most varieties apart from "Indo" were introduced from the USA after the Meiji period and didn't meet consumer taste sufficiently. Therefore, the main aim was to develop a variety which suited Japanese environmental conditions.

During the three years from 1939 in the Tohoku branch, 4,656 apple seedlings were obtained by crossing (out of 20 pro-kinds, 64 combinations, and 13,775 individual seedlings). However, the war years made it difficult to plant crossed seedlings permanently, and development was suspended. There were several crises during the development of "Fuji", but this was the first. When the war intensified, the call went out for increased grain production, and the development of fruiters was seen as unnecessary and non-urgent. Nevertheless, thanks to the effort of the staff and help from local people, by some miracle the seedlings survived.

When the war ended, staff returned to the branch and breeding resumed. From 1947 the 643 seedlings planted permanently and 596 seedlings began to bear fruit which became the basis of the "selection" from the crossed seedlings. But from putting it in the selection, it was difficult to obtain an individual with the target characteristics that were better than Kokkoh. In 1951, "Ro-628" (the mark Ro indicates a Delicious pollen combination with Kokkoh) bore fruit for the first time and was selected as "a promising individual".

In the Autumn of 1955, the person in charge of breeding was convinced that one individual amongst the seedlings planted in the cultivation field was outstanding in quality and storage characteristics and asked Mr. Hideo Mori, the

branch chief of the experimental station. Mr. Hideo Mori, noticing its excellent quality, directed the person in charge to pay special attention to this individual. Although every person in charge was convinced it was promising, that particular individual was just green, and was also somewhat unstable in its coloring, year on year. Therefore, coloring and storage capability had to be considered continuously, and it was finally announced as "Tohoku (North Eastern region of Japan) number 7" in 1958 at Japanese Society for Horticultural Science spring meeting. Soon after the announcement, the branches used for a cutting and grafting were distributed to ten regional (provincial) agricultural experiment stations in northern Japan for adaptability tests of strains.

Later, Mr. Hideo Mori, the branch chief of the experimental station handed its cuttings to enthusiastic farmers in Aomori, Iwate and Nagano prefectures for trial, including Mr. Masami Saito in Aomori prefecture who came to be known as Fuji's foster parent.

This apple was registered as Fuji (Apple No. 1 of agriculture and forestry) in 1962.

\*Chronological Details of Operation for Cross Pollination of Kokkoh x Delicious

Preparation of pollens	May 9 – 12, 1939	Flowers and cuttings of Delicious received from Aomori-ken Apple examination station.
Crossing	May 23, 1939	Cross pollination of Kokkoh x Delicious carried out with (1) flower bundle (2) flowers using 237 flower bundles. Kokkoh used was a tree growing in Field No. 1 outside the Branch office.
Harvesting	Nov. 2, 1939	274 cross-bred fruits harvested and stored.
Sorting seeds	April 8, 1940	2,004 cross-bred seeds obtained and sorted.
Seeding	April 16, 1940	Cross-bred seeds sowed on seed bed of 60 cm wide, 15 cm apart.
Germination check	July 28, 1940	Germination of 979 seedlings confirmed.
Seedlings check	Nov. 22, 1940	968 seedlings obtained.
Temporary planting	Spring 1941	Obtained seedlings are planted on 1 m wide bed, 30 cm apart.

(2) How they named the Fuji apple

It is said that there were many discussions in the laboratory focusing on the name Fuji. Mr. Shogo Ishizuka, a technician of the laboratory, proposed the

name at the selection stage of the best candidate for this apple. The name suggested a world-class apple that would spread widely like the foothills at the base of Mt. Fuji, the highest mountain in Japan, and a symbol of the country. There was also a request to represent the name of the town of "Fujisaki" where this apple was grown. Another opinion was that it would remind people of the actress Ms. Fujiko Yamamoto, a peerless beauty and former Miss Japan. Although various opinions were expressed, no-one opposed the name.

It was said that the name Lucky (from the "lucky number 7" of the name "Tohoku 7") was also proposed by Mr. Yoshimasa Saito, president of a famous fruit store in Tokyo, Ginza "Senbiki-ya", but finally, Mr. Hideo Mori decided to express the name Fuji in hiragana (phonetic Japanese alphabet) to incorporate these various meanings.