

Check Q1, Q2

weed [wi:d]

bend [bend]



determined [di'tɜ:mɪnd]

release(d) [rɪ'li:s(ə)]
mercury [mɜ:kjʊəri]
poison(ed) [pɔɪzən(d)]

seriously [sɪəriə'si:li]
illness [ɪl'nɪs]
disease [di:zɪz]

suffered) [sʌfə(r)d]

spray(ed) [sprɛi(d)]

Vietnamese [vi:etna:mɪz, -nə-]
soldier(s) [səʊldjə(r)]
hide [haɪd]
harm(ed) [hɑ:m(d)]

1 Fukunaga Daigo is a farmer who grows rice in Kagoshima Prefecture. Many years ago, he farmed a small rice field of 10 ares without using weed killer. He and his mother would bend down and pull weeds by hand. It was heavy work, and his mother said, "If you used weed killer, we would not need to pull weeds." However, he would not change his mind.

Why was Fukunaga so determined?

In the 1960s, a chemical plant in Minamata, Kumamoto Prefecture, released mercury into the sea. This poisoned the fish living there, and people who ate the fish became seriously ill. The illness was called Minamata disease. It is thought that over 2,200 people suffered from it.

Around that time, the Vietnam War was taking place. The American fighter planes sprayed chemicals to kill the trees so that Vietnamese soldiers could not hide there. These chemicals harmed a large number of Vietnamese people. After the war, as many as 150,000 children were born with serious disabilities.

If these tragedies had not happened, Fukunaga would probably have used weed killer or other chemicals.

tragedies [trædʒədiz]
< tragedy [trædʒədɪ]

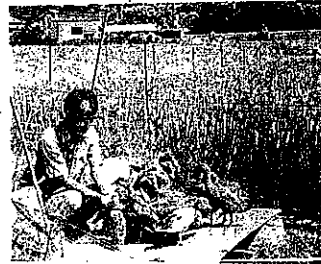
2 One day in 1990, Fukunaga saw a story about the *aigamo* method of growing rice in the newspaper. On reading it, he thought, "This is it! I may be able to grow organic rice by this method."

Check Q1, Q2

Aigamo are a cross between wild ducks and domestic ones. They were originally bred for their tasty meat.

domestic [də'mestɪk]

originally [ə'rɪdʒənəli]
bred [brɛd]
< breed [brɪd]



▲アィガモにエサを与える農家の様子

harmful [hɑ:mfʊl]
insect(s) [ɪn'sekt(s)]

behavior [bɪ'heɪvjə]

stir [stɜ:]

supply [səplɪ]
oxygen [ɒksɪ'dʒən] [ɒk-]

fertilizer [fɜ:rɪ'lɪzə]

In rice fields, they eat harmful insects and weeds, but they do not eat the rice plants. Some farmers take advantage of this behavior by releasing the birds into their rice fields. In this way, they are able to grow rice safely — without using any chemicals. The ducks stir up the mud in the fields with their feet while swimming around in the rice fields. This increases the supply of oxygen to the mud and helps the rice plants grow. What's more, the ducks' waste is a natural fertilizer.

Soon, Fukunaga tried the *aigamo* method and improved it. It seemed that his dream was coming true.

Check Q1, Q2

3 The following are some important points in the *aigamo* method:

First, farmers should release young *aigamo* into the fields a few weeks after planting their rice seedlings. If

seedling(s) [si:dliŋ(s)]



they release the ducks later, the weeds will be too big for them to eat.

Second, *aigamo* should be one to four weeks old when they are released. The reason is that older and larger ducks may damage the newly planted rice.

Third, about 15 birds is a suitable number for a field of 10 ares. If there are too few, they cannot eat enough weeds. If there are too many, they produce too much waste. Rice plants do not grow well if the field has too much fertilizer.

Fourth, it is necessary to keep away dogs, crows, and other animals from the *aigamo*. Farmers should put up a net around their fields. They should also build a shelter to protect the ducks at night.

Last, just before the ears of rice form, farmers should take the ducks out of the fields. If they don't, the ducks will eat the rice.

damage [dæmɪdʒ]

suitable [sɪ:təbl̩] [sɪ'teɪ-]

necessary [nɛ'sesəri] [nɛ'sɪ-]
crows [kraʊz]

shelter [ʃɛltə]

2/12 (F) 15/16



▲ミャンマーの田舎風景

Check Q1, Q2

profitable [prɒfɪ'təbl̩] [prɒf-]
yield [ji:ld]

genuinely [dʒenju:ni:li]
addition [ə'dɪʃən]
harvest [hɑ:vɪst]

consumer(s) [kən'sʊmə(r)] [sɜ:tmə-]



4 The *aigamo* method is more profitable than you may think. The yield of rice is about 90 percent of that of normal rice. However, it sells for a 30 percent higher price than normal rice, because it is genuinely grown without chemicals. In addition, the ducks can be sold for their meat after the rice harvest.

Above all, the *aigamo* method is safe for both producers and consumers. It is an organic farming method that Japan may well be proud of. Today, if you go to Korea, China, Vietnam, and several other Asian countries, you can also see the ducks swimming around in the rice fields.

Six years after introducing *aigamo*, Fukunaga increased his area of chemical-free rice fields to 80 ares. "There is great joy in organic farming," he says. "But without the support of consumers, my efforts would have failed. The ducks are cute, and I am happy that my work is healthy."

Check Q1

chemical-free [kɛ'mɪkəl frɪ]

support [səpə'tɜ:]
efforts [ɛfə'ts]
failed) [feɪl(d)]



Fireflies have come back to the fields where the ducks are released. In summer, school children from big cities come to observe the ducks and the rice. There they can be in touch with a rich natural environment.

fireflies [faɪə'flaɪz]
< firefly [faɪə'flaɪ]

environment [ɪn'vaɪrənmənt]

All this would not have happened if Fukunaga had not read a newspaper story about the *aigamo* method in 1990.



