



**Summary**

In our school, we went fieldwork to Takahata town in Yamagata. We learned philosophies of organic farmers to grow their crops and nutritional value. Also, we visited the place called “Wagachanoma” where people in the community gather and interact. We ate home-made dishes made by elderly people and using organic vegetables. We learned how to cook rice and soup when a disaster happens. In this fieldwork, we considered how sustainable and important the soil in organic agriculture is. We would like you to know what we have learned.

**KUNORI high school**

**“Inquiry-based learning start from enjoyment”**

Kick off : Tasting of organic agriculture products.

We ate rice and carrots grown by organic farming and compared them with those from conventional farming. Actually eating them, we can experience the difference in taste and texture.

	Rice (organic farming)	Carrot (organic farming)
Texture	The grain is firm.	(same as conventional vegetables)
Taste	Taste sweet	Richer flavor
Appearance	(same as conventional rice)	Deeper in color

**Explore the value of Takahata town**

**Investigation① Fieldwork**

- Thinning experience of grapes grown without pesticides.
- Sample organic vegetable “Genkina” dishes.
- Lesson of Takahata stone.
- Making emergency food in the event of a disaster.
- Making compost for use in Genkina.

**Investigation② Inquiry-based learning**

During the fieldwork, our class divided our questions and groups want to realize their ideas, and they cooperated with organic farmers and teachers of the university of nutrition.

**Thinning experience**

【What did I notice?】

- Growing the crop needs manpower
- I learned how hard the work is
- Knowledge and passion (Take care of diversity) are required.

Mr.Togashi branded Takahata town and produces various organic vegetables. Because he wanted to produce good things in the world if I have to.

**【Takahata town’s “Genkina”】**

Genkina is healthy vegetable specially cultivated with Okawakame. It included more minerals such as magnesium, zinc and calcium than organic vegetables.



**Tasting of Organic vegetable “Genkina”**

	Before cooking (raw)	After cooking
Texture	Crunchy and sticky	It is softer and more stickier than before cooking.
Taste	• Bitter, unique taste	• Bitterness decreased
Appearance	• Bright green	• Deep green

Mr. Kikuchi , a producer is focus mineral shortage of modern soil. He adding insufficient minerals to the soil to make Genkina. The soil used for Genkina made by Mr.Kikuchi has the property of making the soil warm. So, it is resistant to cold damage and retains high nutrients.

**Takahata stone**

Takahata stone is harvested in Takahata town since the end of the 7<sup>th</sup> century. It strongly affects organic vegetables. That's because it's rich in minerals.

**【A place where Takahata stone is used】**

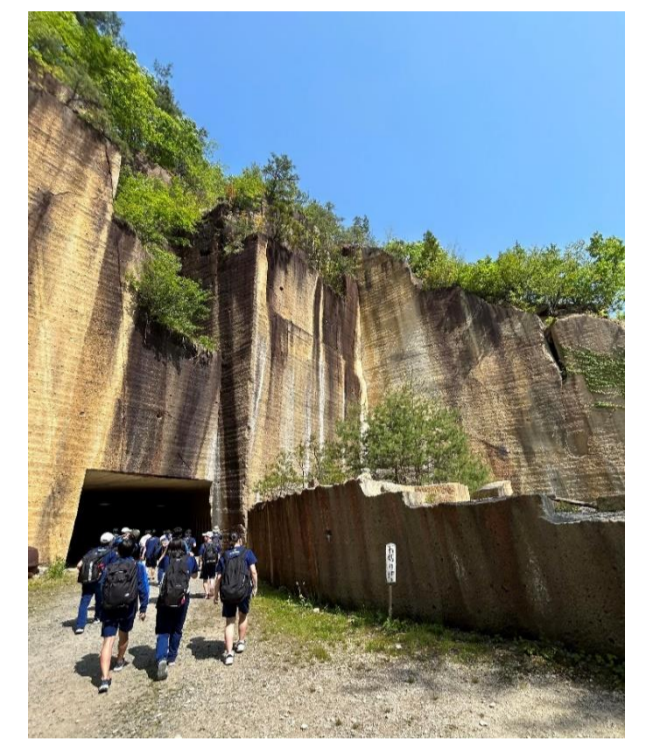
- Former Takahata Station Building→It has become sightseeing spot because it is unusual appearance.
- Uriwari stone garden park→This place is surrounded by very high and big stones so, it used for live performances and concerts.



↑Make emergency food



←Former Takahata Station Building



←Uriwari stone garden park

**A place of relaxation for the towns people “Wagachanoma”**

It holds one-coin cafeteria once a week and expand the community circle among the towns people. This place tries creating an environment where anyone can come. And the visitors regardless of age or gender can spend their free time.

**Fieldwork**

We cooked rice in a plastic bag and made soup. We were learned how to make emergency food and importance of food in the event of disaster.

**Experience making compost from the soil used at Genkina**

Compost is soil bacteria that softens the soil. Mr. kikuchi’s compost has an environment similar to the human intestinal environment.

{Soil+dried organic matter = compost}

Compost→Compost soaked in water for 18hour+dried compost  
Organic matter→rice bran, rapeseed meal, Egg shell, bone meal

**Fieldwork looking back**

- I found it interesting that compost contains many different types of nutrients.
- I learned why Genkina is not grown by farmers all over the country, and I thought I could use it in future research projects.



↑Crushing the soil



←Adding organic matter to the soil



**Inquiry-based learning**

**•TeamA 「How can we promote organic vegetables?」**

**Research motivation** : I learned the value of organic vegetables through fieldwork.

**Ideal** : I want people to eat organic vegetables instead of conventional ones.

**Research method** : Since there are few organic farmers, I decided to create an opportunity. So Mr. Kikuchi is thinking of holding workshops at elementary and junior high schools.

**•TeamB 「Getting Enzymes to the People Who Need Them」**

**Research motivation** : I’ve learned how necessary enzymes are for humans.

**Ideal** : I want people to eat organic vegetables to get enzymes.

**Research method** : I have designed recipes to make the nutrients in organic vegetables more efficient and tasty

