PESTICIDE ATLAS KOREAN EDITION

PESTICIDE ATLAS KOREAN EDITION 2023

SOUTH KOREA

PESTICIDE POLICY: PAST AND PRESENT

South Korea’s use of pesticides began with its forced conversion to the Japanese agricultural regime during Japanese occupation in the early 20th Century. Behind rapid industrialisation in the post-1960s, there were problems of environmental pollution and pesticide poisoning due to the world’s highest pesticide use. With authorities leaving control to agrochemical companies, and the companies only interested in selling pesticides, a pesticide policy for nature and people is a long way off.

A few years ago, reports surfaced in the media about South Korea’s pesticide use being 10 times higher than other developed countries. Is South Korea’s pesticide use really so serious as to reach 10 times that of developed countries?

Korea’s use of pesticides in agriculture began in 1906, during the Japanese occupation, when the country’s agricultural structure was forcibly converted to the Japanese agrarian model, and the establishment of the Kwounumphubujang (農業試験場, Agricultural Exemplary Testing Station). The serious use of pesticides began in 1930, when a pesticide producer called Chonun Samgong opened its doors in Yeongdeungpo-gu (永登浦区, now called Yeongdeungpo-gu). Since there was no regulatory system for pesticides until the 1950s, anyone could establish a pesticide company with government-issued licenses. Products that were not adequately regulated were pesticides, or “unlicensed pesticides”. As a result, pesticides became a commodity that could only be manufactured by companies with government-issued licenses. Products that have been distributed or used by individuals became illegal and the corporate monopolies took over the sector. Therefore, the enactment of the Pesticide Management Act of 1957 can be seen as an impetus to reorganising the pesticide market around the corporates, rather than a way to prevent the harmful effects of pesticides in the first place.

After the enactment of the Pesticide Management Act, domestic production of pesticides began to replace imported ones, and pesticide use began to increase in line with that trend. In addition, as regulations on pesticide production tightened, small pesticide manufacturers closed their doors, leaving only 15 in the 1970s and 10 by the mid-1970s.

Pesticide use in South Korea began to increase significantly in the mid-1960s, when the country began pursuing a full-scale economic growth policy, starting with the First Five-Year Economic Development Plan in 1962. To this end, industrialisation was expanded and large numbers of industrial workers were created through policies that facilitated a rural exodus. Starting in the 1970s, when the Saemaul movement began, the actual amount of pesticides used increased steeply. As farmers left the countryside, the use of agricultural machinery, pesticides, and chemical fertilisers were expanded to compensate for the shortage of labour.

The issue of pesticide use has been raised since the late 1980s. Of course, even before that, there were often cases of pesticide poisoning, highlighting the necessity for a system to regulate pesticide use. However, problems related to pesticide use only came to the attention of the Korean public in 1987, when the country, pressured by the United States to open up the agricultural market, began importing agricultural products.

As a result, in 1988, 30 years after the enactment of the Pesticide Management Act, pesticide residue standards to manage the amount of pesticide used were created for the first time. It is worth noting that in 1981, the entire Pesticide Management Act was revised to deregulate pesticide inspection by the government and to allow for self-inspection by the companies. While the need for pesticide management grew as the amount used increased significantly, was the opposite of regulating pesticide use.

The influx of foreign agricultural products, came a change in consumer attitudes. Previously, imports were meant to temporally fill production shortfalls; however, following the pressure to open up to U.S. agricultural imports in 1987, it became a matter of importing what the U.S. wanted to export as an exporter, and not what South Korea needed. It was also at this time that attention began to be paid to the issue of pesticide residues, which eventually led to the establishment of a pesticide residue standard in 1988 and to the interest in eco-friendly agriculture that we see today.

But not everything went as expected. While the Rio Declaration of 1992 (United Nations Conference on Environment and Development) raised environmental and ecological concerns, the creation of the World Trade Organization (WTO) in 1995 opened up a whole new world. The Uruguay Round discussed full market liberalisation to resolve the crisis under the General Agreement on Tariffs and Trade (GATT), but failed to achieve it. Instead, the Uruguay Round resulted in the Agreement on Trade-Related Aspects of Intellectual Property Rights, which greatly expanded the scope of monopolies on living things, including seeds.

Accordingly, in 1995, the Pesticide Management Act was completely revised to protect the intellectual property rights of pesticide companies, and the pesticide companies became the authority for almost everything related to pesticide manufacturing. The process of changing the Pesticide Management Act was akin to making the use of pesticides a matter of course for the sake of increasing production and increasing food self-sufficiency.

DDT was banned globally in the 1970s and prohibited in Korea in 1979. But there was an incident where the DDT was detected in eggs from eco-friendly farms in 2017, raising awareness about pesticide residue in the soil.

Agrinex is another word for pesticide. Pesticide contamination affects farmers who use pesticides as well as those who don’t, and it travels from agricultural fields to rivers and oceans.

In 2019, the government introduced the Positive List System (PLS) for pesticides. This system manages pesticides by allowing the use of permitted pesticides except for pesticides that have set residue limits. However, it only prevents the use of unregistered pesticides and does not solve the fundamental problem of using pesticides.

In the end, it regulates farmers rather than pesticide manufacturers. The government has been revising pesticide management laws for decades to benefit pesticide companies, but there is still no system in place to manage pesticide use to protect the environment, ecosystems, and people’s health.

Despite this fact, pesticide use has been gradually decreasing since the Environmental Agriculture Fosterage Act of 1997 (now known as the Environment-Friendly Agriculture and Fisheries Act) was implemented in December 1998. This means, not only among farmers but also among the public, that awareness has risen. In particular, pesticide residues in agricultural products have come into the spotlight as a number of chemicals have been identified as the main cause of children suffering from various diseases, including atopic diseases.

What surprising is the fact that one of the first products to appear in response to this trend was genetically modified seeds, which were created by pesticide manufacturers through the acquisition of seed companies. Although these products were advertised as reducing pesticide use, they only served to reinforce the monopolisation of seeds and pesticides. Agricultural corporations are thriving from the collaboration between seeds and pesticides, with little regard for public safety.

Are there alternative possibilities? There are. There remains a tradition of farming with indigenous seeds passed down from generation to generation and using natural products and minerals instead of chemical pesticides. There are also a growing number of farmers who succeeds the tradition. What’s unfortunate is that the value of this tradition is still not adequately recognised.
Environmentally friendly agriculture in South Korea began in the mid-1960s as a bio-agriculture (or life-agriculture) movement by farmers who recognised the order of the cycle of life and the value of coexistence in the face of ecological destruction and environmental pollution. At the time, the government promoted the “Green Revolution”, which called for massively injecting new varieties, chemical fertilisers and pesticides into agricultural fields to increase productivity. However, this became dependent on chemical fertilisers and pesticides. Farmlands were polluted, and the health of the farmers and the safety of agricultural products deteriorated significantly.

With the Uruguay Round (UR) negotiations in 1986, Korea agriculture was placed under a regime of opened agricultural imports. In 1989, carcinogenic pesticides were detected and reported from the United States, raising concerns over the safety of imported agricultural products. The government promptly became increasingly interested in eco-friendly agriculture. The Ministry of Agriculture formed the Organic Agriculture Development Planning Team in 1991. It defined organic agriculture as farming that does not use chemical fertilisers, synthetic pesticides (pesticides, growth regulators, herbicides), or livestock feed additives, but only organic matter, natural minerals and macronutrients.

In 1991, organic agriculture was prohibited from being labelled or marketed. Farmers and consumers should seek redress, but if the farm certification system is approved, the farm should be removed from the list of certified farms. In South Korea, the certification system has been a direction that values low-input, internal cycle, and natural processes. Farmers, consumers, and the government should work together to promote eco-friendly agriculture.

In 2012, the Environment-Friendly Agriculture Certification and Fishery Certification and the Environment-Friendly Agriculture Certification for Agricultural Products and processes foods into an eco-friendly agricultural food certification system. In 2019, the importance of production processes that maintain healthy ecosystems was included in the definition of environment-friendly agriculture. It also includes promoting biodiversity, promoting biological cycles and activities in the soil, and preserving healthy agricultural and fishery ecosystems. However, since the revised law is more firmly based on management and regulation based on the environment and the area under cultivation has stagnated, the policy so that non-certified, eco-friendly agricultural products can be addressed.

The primary aspect of the certification for eco-friendly agricultural products is the detection of pesticide residues in the final product or soil. There is no requirement to evaluate the farming process. Consumers are also not adequately informed about the ecological and environmental conservation factors for eco-friendly agricultural products. In South Korea, the certification is “no detection” basis. Since environmental agriculture aims to improve and restore the ecosystem and deteriorating soil and water conditions, certification should not be solely based on text analysis and inspection results. Instead, it should focus on farming processes (farming operations, producers’ qualities, and physical environments) and management methods that preserve and protect the environment.

Recently, the South Korean government has been pushing to improve the approach to administrative penalties for unintentional pesticide contamination. The system has been changed to require the certification body to re-examine the case if a re-examination is requested with proof. This has given innocent farmers a chance to seek redress, but if the farmers cannot prove it themselves, the results won’t change. In addition, if farmers grow according to the certification standards, their certification is often revoked following the detection of pesticide residues coming from pesticide spraying at nearby agricultural fields, flooding and inflow of agricultural water, residue in soil, and other unavoidable pollution.

Since 2000, South Korea’s environment-friendly agriculture program has grown, with 2015 to 2018 in cultivated area and 20 times in production. As of 2020, about 834 thousand hectares/ha were cultivated, contributing to environmental conservation.

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After 22 years, the environment-friendly agricultural certification program has grown in size, but it is stagnating. It is difficult for new farmers to enter, and numerous tests are required for farmers to prove themselves. This pesticide has maintained a high external-input approach. The fundamental value of eco-friendly agriculture, which emphasizes circularity, has gradually faded, and the relational aspect has also been weakened. Furthermore, eco-friendly farmers are facing a lack of sales channels and income instability, resulting in the stagnation of eco-friendly agriculture.

In the U.S., the organic label can still be used on the product if it is detected in less than the allowable level, taking into consideration unavoidable contamination where the producer does not use pesticides. In South Korea, on the other hand, the certification is “no detection” basis. Since environmental agriculture aims to improve and restore the deteriorating soil and water conditions, certification should not be solely based on text analysis and inspection results. Instead, it should focus on farming processes (farming operations, producers’ qualities, and physical environments) and management methods that preserve and protect the environment.

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