DARAP
DATA REPOSITORY AND ADVOCACY FOR POLICY

Policy Brief

Addressing Chemical Usage in Farming and Food Safety in Ghana

Key Issues

There has been an alarming increase in the use of synthetic chemicals of all types in farming (from land preparation to consumption) in Ghana and other parts of Africa.

Volumes of agricultural chemical residues have been found in soil, water, air, agricultural products, human blood and adipose tissues in many places across the world.
Pesticide contamination cause a lot of harm to non-target organisms ranging from beneficial soil microorganisms to insects, plants, fish, and birds and are thus very unfriendly to the environment.

Government policies, promotional activities of NGOs and agrochemical companies, and the overemphasis on crop yield are major drivers of the rapid increase in the use of synthetic chemicals.

Context

The use of synthetic chemicals in the chain of food production to consumption is a major problem in almost all parts of the world. Inorganic agrochemicals such as fertilizers, pesticides, and hormones have been used mainly to increase yields at the farm level, to preserve the quality of food during storage, for nutritional value addition, to improve texture and appearance, to extend the shelf life of food and to protect food from pathogens that can contaminate food. It has been argued that the use of pesticides in agriculture is more cost effective than the manual labor needed to control weeds, insects and diseases in food crops. Pesticides are also readily available and can be applied to large farm areas quickly.

The use of synthetic chemicals in food production,

preservation and consumption, however, has detrimental consequences ranging from the destruction of beneficial plant and animal species, soil and environmental contamination, to food poisoning. According to the World Health Organization (WHO), foods containing pathogenic microorganisms and toxic chemicals are unsafe and known to be responsible for more than 200 diseases. Furthermore, the destruction of beneficial insects resulting from the use of chemicals leads to increase in pest populations, and consequently an increase in the use of more pesticides over time. Synthetic pesticides kill natural plants that keep away insects, medicinal plants, other beneficial insects that help to get rid of harmful insects, and beneficial living organisms in the soil. The continued use of chemicals also results in pesticide resistance and ineffectiveness against the pests they are meant to control.

Food contamination can result in kidney and liver failure, brain and neural disorders as well as several non-communicable diseases such as cancer. It can also adversely affect reproductive health and the immune system. That is why Sustainable Development Goal (SDG) 3.9 aims at substantially reducing the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. SDG2 also aims at access to safe, nutritious, and sufficient food for all by 2030.

The purpose of this policy brief is to draw attention to the increasing risks of the use of synthetic chemicals in farming, and its harmful consequences to soil, animal and human health, and to propose actionable interventions to address the problem.

Objective and Methodology

This policy brief is informed by a study by Professor Saa Dittoh and Ms Naomi Kandawini of the University for Development Studies (UDS), Tamale. The aim was to analyze the types and levels of synthetic chemicals used in food production, preservation and consumption over time in Ghana, and to propose actionable interventions to address problems arising from their use. A qualitative research design consisting of systematic literature review of published and unpublished material, key informant interviews (KII), focus group discussions (FGDs) and field observations was used.

The main stakeholders targeted in the study included municipal and district agricultural personnel in Greater Accra, Eastern, Volta, Bono, Upper East and Upper West regions as well some staff of some directorates of the Ministry of Food and Agriculture and some research institutes and faculties of agriculture of universities. Discussions were also held with groups of men and women farmers as well as individual farmers in several of the districts. Farms, markets, hotels, restaurants and chop bars were also visited, and discussions held with appropriate persons.

Key Findings

- Even though there are high environmental and health risks associated with the use of fertilizers and pesticides in farming, they cannot be discarded or banned presently because of the need for continued increase in food production for the increasing population.

- Despite a global drive for food systems transformation and less use of synthetic chemicals in farming, the Government of Ghana, through its Planting for Food and Jobs intervention and other projects, continues to promote "agricultural modernization," which implies more use of synthetic chemicals.

- There is growing consciousness among farmers of the negative consequences of the use of synthetic chemicals in farming, thus often chemicals (including fertilizers), are not used on "plots where the produce is meant for home consumption."

- There is considerable indigenous or local knowledge on pests and disease control in farms, which provides opportunity for the development of more sustainable methods of controlling pests and diseases on farms to ensure that food produced is safe for humans and the environment.

Policy recommendations

- Safe and effective ways of applying various agrochemicals must be well understood by agricultural extension personnel, agrochemical sellers, and farmers. There is, thus, need for adequate training in plant protection for agricultural extension personnel, agrochemical sellers and farmers, as well as at the university level and in schools of agriculture.

- The food problem is not only about producing enough food and to earn income, it must be emphasized that food production should be done responsibly and sustainably, so that future generations can have access to resources for their survival.

- There should be public sensitization on the dangers of chemicals and pesticides in food production, storage and consumption as this has implications for the health and livelihoods of people.

- Educational institutions, from primary to tertiary level, must be sensitized on the use and dangers of synthetic chemicals in farming.

- Policy makers and the political elite, without whose buy-in little can be achieved, also need effective sensitization on the use and dangers of chemicals in farming.

- Agroecology, including agroforestry, and the use of local bio-fertilizers and bio-pesticides should be promoted at all levels.

- An anti-chemical use in farming movement should be formed to give voice and draw attention to the growing problem, and to advocate for change.

References

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This brief presents findings and policy recommendations on food waste outlined in a synthesis report developed by researchers engaged under the DARAP Project. The report, titled "Chemical Usage in Farming and Food Safety in Ghana" is accessible via the DARAP website, www.darap.isser.edu.gh. Opinions stated in this brief and the report it draws from are those of the author(s) and do not necessarily reflect the views of DARAP and its partners.

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The **Data Repository and Advocacy for Policy (DARAP)** project focuses on promoting the access and effective use of data and knowledge products to influence policymaking processes and outcomes. It contributes to evidence-led policymaking through data management services and capacity building in research data interpretation and usage, collaborating with civil society organisations and academics. DARAP is funded by The Open Society Institute and based at the Measurement, Learning, and Evaluation (MLE) Unit at the Institute of Statistical Social and Economic Research (ISSER), University of Ghana.

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