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Agriculture occupations are very hazardous for all, but women face distinctive risks. Chemical exposure unduly impacts women workers due to their biological vulnerability and gendered labour positions. Women working in agriculture are often overlooked despite their contributions to feeding. Women on average make up about 43% of agricultural workers in low and middle income counties but get ignored in policy decisions and practice. From spraying pesticides, picking tea leaves, and thinning sprayed crops women are being exposed throughout these tasks. Hazardous substances like solvents, pesticides, endocrine disrupting chemicals (EDC), and persistent organic pollutants (POP) are all connected to cancers, hormone disruption, immune system impairments, reproductive issues and risks child development if pregnant. Men and women are exposed to different chemicals and also face different social determinants. With that being said, chemical safety should be addressed through a gender view for effective health protection, fair work and environmental justice in order for global sustainability.

Women work a variety of different roles in agriculture and may not know they are being exposed to hazardous chemicals during their workplace. This lack of chemical awareness roots from limited training, insufficient protective equipment, and regulatory oversight that fail to conduct safety. Particular tasks women do that can leave an exposure are picking fruit or vegetables, washing out pesticide containers or washing contaminated clothing, cotton picking, thinning spray crops, and weeding. For example, farmwomen who pick crops that have been

spayed herbicides that are classified as highly toxic and come to dermal contact to pesticide residues through the skin. Inhalation of herbicides can lead to respiratory disorders like chronic bronchitis and other obstructive pulmonary diseases. Dermal contact can be associated with skin irritations, hormonal destructions, reproductive health issues, cancers, and risks for fetal and child development. Over time these continuous tasks, even if it is low-level exposure can go long ways increasing the health risks in women. Not having access to the personal protective equipment (PPE) is often inadequate because many are designed for men, not designed for women's bodies leaving them vulnerable to preventable harm.

Women are differently affected by chemical exposure and the health outcomes than men, because of their biological and physiological makeup. Not only does the chemical exposure be different from gender related factors, but the impact of the exposure can also be different based on the biological sex. In "Women, Chemicals And The SDGs," published on IPEN (International Pollution Elimination Network), a website that works to strengthen national chemical policies internationally, Dr. Sara Brosche, science advisor at IPEN notes "Endocrine-disrupting chemicals may for example have adverse effects on the female hypothalamic-pituitary-ovarian axis that regulates female reproductive hormones and female reproductive tissues" (Brosche 66).

These disruptions can compound to infertility, menopause, and increased risks of hormone related cancers. Understanding these gender specific health effects are essential for the developments of safety policies that protect women's health in agricultural communities.

Despite women's contributions to agriculture they continue to face persistent financial and social barriers. On average, women earn about 20% less than a man for similar work labor, creating wider economic inequalities. Lower income women have to balance two burdens: a job

and their household, while also having limited access to healthcare and social support. Although women hold much potential in playing a bigger part in their families and their community, they do not get the opportunity. In policy making women are often excluded from policymaking and underrepresented, leaving women without a voice. As a result, many women bear the unsafe working conditions and receive inadequate pay, perpetuating cycles of vulnerability and inequity.

All agriculture workers regardless of gender identity, should all deserve equal opportunities, responsibilities and a voice in decisions that affect their lives. But yet women's efforts in feeding the world are still kept in the shadows when it comes to policy discussions keeping them from achieving their best. Acknowledging the important roles women perform in agriculture is essential to dismantling the systemic barriers they face. These obstacles are not just disappointing but perpetuate poverty in women who already juggle demanding household and work responsibilities. From not having the proper protective equipment that fits women, and being underinformed about the hazardous chemicals they will work with. These persistent issues among women workers in agriculture require urgent policy attention and should be taken into account. Ensuring women have equal ability to participate and have a say in chemical management is vital, not just for their own health but to promote safety and fairness for all workers. Prioritizing women's protective equipment from chemical exposure is a necessity to move forward to a true environmental and social justice.

Efforts in the agriculture community, development organizations and government need to be done to ensure that women also have an effective participation, and equal opportunities in decision making roles across economic, political and public life. Enhancing women's roles in agriculture goes beyond supporting gender equality, but increases agriculture activity that lifts communities out of hunger. We all live where chemicals exist and pose a threat to our human health, collaborative action to minimize these health risks are key for improving the well being of entire populations.

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