

Israel has been using crop dusters to spray chemicals along the separation fence with Gaza, causing economic harm to farmers and the agricultural sector, and putting the environment and public health at serious risk

Background

Following a joint legal intervention by Gisha, Adalah and Al Mezan, Israel admitted carrying out aerial spraying of chemicals along the Gaza-Israel separation fence about 30 times between 2014 and 2018.

- Spraying is carried out without prior warning using chemicals with unknown grace period.
- Although spraying is carried out on the Israeli side of the separation fence, it only takes place when winds are blowing inland to Gaza.
- The crop dusters used for spraying fly at very low altitudes along the separation fence with the Gaza Strip. The westward-blowing winds carry the spraying between 700 and 1,200 meters into the Gaza Strip.
- The damage incurred since 2014 is estimated to have affected 7,620 dunams of arable land.
- Spraying operations occurred at regular intervals, usually during two periods of the year, with spraying activities conducted in December/January, seemingly targeting winter crops, and then conducted in April, seemingly targeting summer crops.
- The spraying deforms some crops and visibly changes their color. This is easily observable on leafy plants, such as spinach, parsley, chard and arugula. Equally so, the dry soil and beehives in which some farmers keep bees for honey production and plant insemination easily absorbs the chemicals, altering the composition of the soil, and potentially causing additional damage to the cultivation of crops in the future.

Effects of the spraying on health and the environment

- In 2017, a sample of sprayed chard tested in the laboratory of the Ministry of Agriculture in Gaza showed high levels of a chemical substance known as Oxygal. Oxygal, composed primarily of oxyfluorfen, is an herbicide that suppresses the growth of certain plants. The guidelines issued by the Israeli manufacturer of Oxygal indicate that the substance can cause severe irritation if it comes in contact with the skin or eyes and lists a toxicity degree of level four, —dangerous. Oxygal is of a representative field half-life of about 30 to 40 days, making it moderately persistent in most soil environments and thus decreasing the quality of the soil for this period of time.
- A document obtained by health authorities in Gaza and shared with Al Mezan showed laboratory findings for tests performed on samples of sprayed plants on the fifth day after the spraying. The findings revealed the presence of about 0.08 mg/kg of Oxyfluorfen. It was reported that the absorption of this amount of the substance affects both plants and humans. Consuming large amounts of contaminated plants, especially by sheep, can have long-term negative effects on animals, and indirectly on humans who consume the meat.
- A response submitted by the Israeli Ministry of Defense to a Freedom of Information petition filed by Gisha in 2016 revealed that the chemical agents used in the spraying include glyphosate (“Roundup”), which had been declared a probable carcinogen by the World Health Organization.



- One of the affected farmers suspects that the consumption of grass sprayed with chemicals might have a strong impact on the reproductive health of sheep, making the sprayed areas where the animals dwell and eat dangerous. He gave the example of an ewe that gave birth to deformed lambs, some of which later died.

Impact on the right to work and economic development

- The losses that farmers sustain from aerial spraying make it difficult to maintain production in the affected areas. Farmers have become very reluctant to continue cultivating their lands and are reducing the number of workers they hire.
- In order to avoid destruction of their property and produce, farmers affirmed that the destructive activities of the Israeli army in the border areas have forced them to plant crops no taller than 40 centimeters.
- In addition, the aerial spraying has decreased the vegetation cover in grazing areas, which results in increased expenditure for cattle owners who are forced to buy alternative feed.
- The destruction of crops also undermines international and local organizations’ projects aimed at helping farmers increase agricultural productivity.

The Israeli army’s regular incursions in the area to destroy weeds in order to increase visibility raises the question of whether additional spraying is necessary, considering that the bulldozers already flatten the area. This puts forward the serious question as to whether the aim of the aerial spraying is to undermine the viability of the agricultural sector and damage the environment as part of the punitive blockade

measures, and to add pressure on Gaza's population. The consequences of these actions cause economic harm to farmers and the agricultural sector, and also severely damage the environment and public health, both of which are already in a critical state due to the prolonged blockade of the Gaza Strip.

International law

According to the Geneva Convention relative to the Protection of Civilian Persons in Time of War of 12 August 1949 and its two Additional Protocols of 1977, parties to a conflict shall protect civilians and their properties including by refraining from targeting civilian objects such as arable land. Israel's actions constitute a breach of the following:

- Article 55 of the Fourth Geneva Convention, relevant to food security, which dictates: "To the fullest extent of the means available to it, the Occupying Power has the duty of ensuring the food and medical supplies of the population; it should, in particular, bring in the necessary foodstuffs, medical stores and other articles if the resources of the occupied territory are inadequate."
- Article 54 of the First Additional Protocol to the Fourth Geneva Convention which prohibits attacking, destroying, removing or rendering useless any object indispensable to the survival of civilians, including foodstuffs, agricultural areas and water supplies.

Israel's actions pose a serious threat to the civilian population's right to life and adequate standards of living enshrined in both the International Covenant on Civil and Political Right and the International Covenant on Economic, Social and Cultural Rights.



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Effects of Aerial Spraying on Farmlands in the Gaza Strip