

## **IOIA Asia Pacific Committee POSITION ON CHEMICAL RESIDUE TESTING IN CERTIFIED ORGANIC PRODUCTION SYSTEMS**

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As a result of issues occurring in our region the APC (Asia Pacific Committee) of the IOIA (International Organic Inspectors Association) has created a position paper addressing risks of over-reliance on soil and product testing in organic certification. The IOIA APC position acknowledges that intentional violations in use of prohibited inputs should continue to be strictly controlled and penalized. The IOIA APC also recognises customer and consumer perceptions regarding what is “clean” food. The concerns of IOIA APC relate to potentially unfair pressure and mandatory decertification’s which may result if the accreditations system and/or Certification body relies primarily on soil and product test results to determine allowance for and continuation of organic certification.

Organic agriculture supports environmental sustainability, soil conservation, protection of natural resources and biodiversity. By extension Organic farming supports healthy environment & healthy community. Organic farming generally excludes the practices that rely on synthetic chemical inputs. Allowed inputs are applied based on identified need. Allowed inputs are approved if they have nil or low impact on the environment. Organic farming is based on agroecosystem health, systems and practices which include crops, livestock, and human beings existing in harmony with the natural environment. It is widely acknowledged in the international organic industry that “Organic agriculture practices cannot ensure that products are completely free of residues, due to general environmental pollution. The aim is to minimize pollution of air, soil and water” (Codex Alimentarius Commission. GL32-1999). Persistent chemicals such as DDT, dieldrin, Chlordane etc may have been banned decades ago but remain present in today’s environment and in the soils we farm. Contemporary persistent chemicals such as glyphosate, bifenthrin and permethrin are increasingly present in the environment. Commercial scale compost production systems continually struggle to limit the presence of such residues in finished product, especially compost made from municipal collection household waste.

IOIA APC suggest that our organic farmers are our “frontline defence” against this insidious environmental contamination. Organic certification is primarily based on the evaluation of the producers’ ability to farm, handle, and process products in a sustainable system, not the evaluation of products themselves. Annual inspection by the Certifying body (CB) verifies the system & practices aligned to organic integrity. The inspector observes crops, animals, surroundings, soil, compost, inputs, seeds, feeds, seedlings, water, facilities, machinery and other factors which may affect organic integrity. The inspector interviews relevant people in the production system to confirm compliance in

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operation and reviews operational records to confirm compliant practices and to confirm capacity against output. CB's may collect samples of soil, plant tissue, or other material as one tool in the certification process. Laboratory tests may be conducted to be to confirm soil health, produce health or to confirm the lack of chemical residues in the system. The CB may reference the index of soil organic matter, pH, CEC, micro and macro nutrients to evaluate the effectiveness of organic farming. In any international Organic Certification system, when an inspection raises a suspicion of fraud, a sample may be collected, and a laboratory test conducted. These tests are only one factor of evidence in a complete assessment of a certified operation. The CB reviewer/s should take into account all related objective evidence and consider circumstantial/subjective evidence. IOIA APC note that chemical residue testing is currently utilised by international Organic CB's is usually seen as one element (one tool) in the total organic certification risk management process.

Risk- monitoring residue testing requirements vary per country. The USDA National Organic Program (NOP) includes tolerance levels and set procedures when residues of chemicals prohibited under USDA NOP are detected. For example, if residue is detected at or below EPA (Environment Protection Authority) tolerance level, the certifying agent notifies the certified operation of the test results and assesses why the residue is present. If residues are not a result of the application of prohibited pesticides, the product may be sold as organic. Samples are collected from 5% of certified operators annually to be tested for USDA National Organic Program, or if a complaint is raised (NPP 2023 IOIA APC Seminar).

The EU applies a process based methodology based on identification of level of risk and management of identified risks. The risk management approach of the EU requires additional inspection for operators who have parallel production i.e. a higher level of risk requires an additional surveillance. Certifying bodies must randomly sample and test a percentage of operators annually. Percentages are determined by risk analysis for regions, specific products and issues raised case by case. (REGULATION (EU) 2018/848). As reported in The Organic Standard (TOS) 187 April 2023 p13 the EU supports precautionary measures at operator level and does not expect residue free products."

In Japan organic certification system JAS, where chemical residue is detected (Regardless of whether it is above general food safety standards or not) when samples taken by authority, CB is required to investigate the reason of detection. Generally, the certification body will publicly report the result of analysis and explains about operator's corrective actions. The lot of detected products are required to

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delete the label of organic, but the farmer does not lose certification if the contamination is not deliberate. Organic agriculture is based on minimizing the use of external inputs, avoiding the use of synthetic fertilizers and pesticides. Organic agriculture practices cannot ensure that products are completely free of residues, due to general environmental pollution. However, methods are used to minimize pollution of air, soil and water with cultivation management methods so as to reduce the load from agricultural production on the environment as much as possible, such as making judgments on materials whose use is unavoidable in accordance with the Codex Guidelines. (JAS Q&A 15-1).

India National Program for Organic Production (NPOP) requires 5% of the total number of operators under its control to be sampled and tested annually in a process based system which requires the accredited Certification Bodies shall have documented policies and procedures on residue testing. Australia National Standard for organic and Biodynamic production (NS) expects residue level limits at least one decimal point lower than conventional limits for FSANZ (Food Safety Australia New Zealand). The Standards says soil, water & production inputs should not pose a risk to the certified product however the Australian certification system is primarily centred around risk identification, management and monitoring.

Taiwan requires all certified farmers to undertake at least product sample annually. Residue detection results in certification being cancelled. Almost 100% of operations are required to be tested in South Korea annually. A positive result detecting prohibited residues may result in the farmer being decertified permanently. Most farms where chemicals were detected by lab test had their organic certification revoked. They lost markets and suffered critical economic damages. Many of these farmers are blamed by society, affecting their pride as sustainable activists & identity in life. Even farmers who have not been found to have used chemicals are doubted as well. They are anxious that chemicals may be detected on their farm someday.

IFOAM Organics Europe position paper on Management of pesticide residues in organic products 2023 supports a process based approach with risk based precautionary measures and case by case investigation of potential risk.

International norms for certification are process based, not reliant on finished product testing to determine certification. A product which is tested and confirmed as chemical free does not confirm sustainable production methods, improved nutritional value of organic production methods and/or farming methods which support and improve the total environment and community. If the lab test is only checking for chemical residue, we must understand that the result of the lab test does not always

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correspond with the production process or to the farmers practices and inputs. Over-dependence on the lab tests may create unfair punishment to innocent producers and possibly, may allow impunity to a few farmers who wilfully violate due to a lack of monitoring of the total farming system and method. Inspectors are trained to conduct organic certification inspections including methods to collect samples ensuring no contamination in the sampling process, and that the sample collected represents the production system. The testing laboratory must have accreditation of the scope in which it performs the testing. There is a cost to this procedure. The organic farmer pays this cost to prove that they are doing the right thing!

Our choices for chemical free farming land are very limited. Do we clear virgin forest? Or will we apply positive farming techniques to maintain and improve current farming land? The second option will improve biodiversity, water and soil quality for the total community. Organic farmers do this for us every day. They clean up our land, they protect our water sources, they encourage native plants, birds and animals to co-exist with their farmlands. If these farmers are impacted by practices of conventional farmers or environmental contamination, they should be thanked for being our “frontline defence” not penalised for a chemical residue found in one product. IOIA APC is concerned that if we discourage organic farmers by basing Organic Certification on chemical free products, we lose our front line defence against environmental contamination. If harsh and unfair penalties are applied to farmers when they are the victim of overspray from neighbours or environmental contamination, we will lose experienced best practice organic farmers. New farmers will not join the organic industry.

We do not say chemical residues in food products is not a problem. We say we need more organic farmers to continue to mitigate the problem of worldwide environmental contamination. If impossible targets of zero contamination and harsh penalties discourage people from becoming organic farmers, then chemical farming/increased contamination will be the only option for food production.

Our position remains that Organic certification should be decided by the practices and processes to minimize contamination not by the detection of contaminants. Organic farmers should be rewarded for good practice NOT punished for incidence of contamination in their products which is out of their control.

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## REFERENCES

Codex Alimentarius Commission. GL32-1999. GUIDELINES FOR THE PRODUCTION, PROCESSING, LABELLING AND MARKETING OF ORGANICALLY PRODUCED FOODS

IFOAM position paper Management of pesticide residues in organic products 2023 supports a Process based approach with risk based precautionary measures and case by case investigation of potential risk

Isidor Yu, Kathe Purvis, Mutsumi Sakuyoshi, Nathaniel Powell Palm, Sandeep Bhargava, Vitoon Panyakul - IOIA APC Seminar Organic Certification & Lab Test Presentation 17 Jan 2023

Japan Agriculture System (JAS) Q & A

REGULATION (EU) 2018/848 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 May 2018 on organic production and labelling of organic products (OJ L 150, 14.6.2018, p. 1) Version 02018R0848 — EN — 01.01.2022 — 002.004 — 8

National Standard for Organic and Bio-Dynamic Produce <https://www.agriculture.gov.au/biosecurity-trade/export/controlled-goods/organic-bio-dynamic/national-standard>

NATIONAL PROGRAMME FOR ORGANIC PRODUCTION (NPOP)  
<https://apeda.gov.in/apedawebsite/organic/index.htm>

The Organic standard (TOS) 187 April 2023