

2 ZERO HUNGER



SDG 2 / TWSDG 2

確保糧食安全

消除飢餓，促進永續農業

東台灣農藥殘留與毒物檢驗中心

伴隨著營養健康觀念的改變，新鮮蔬果逐漸取代精緻食物成為餐桌上的佳餚，但隨之而來的「農藥殘留」議題就成了很多人的擔憂，為盡維護農產品與食品安全之社會責任，東華設立「東台灣農藥殘留與毒物檢驗中心」，提供花蓮等地區高品質的檢驗技術服務，節省檢驗報告時間與成本。

雖然農藥於使用過程時，直接噴施在作物的根、莖、葉、果實表面或部分農藥會進入植物組織中，大部分農藥經過一段時間後都會分解消退，但是若在農藥尚未完全分解消退時即進行採收，就可能發生農藥殘留於農產品的情形。但在聯合國 17 項永續發展目標中，「SDG 2 消除飢餓」農藥就起到重要作用了，因為在實際耕作中，最主要的防治措施仍是使用農藥，其仍是目前可以達到保護作物、減少產量損失的重要方法。食用含有農藥殘留的農產品是否安全，取決於農藥的「殘留量、毒性和食用的量」，國內有依據上列考量制定農產品的「農藥殘留容許量標準」，並加強抽樣監管，以減少農藥殘留超標的農作物流入市面。

農檢中心配合政府進行市售農產品農藥殘留之把關，從 2019 年至 2021 年檢驗了農糧署計畫抽驗之各類農產品共 3,870 件，另配合政府於 2020 年推出之政策，引進藥毒所開發的質譜快檢技術，提供具環保、快速且精準的農藥殘留檢驗技術，至 2021 年累計檢驗 2,323 件市售抽驗農產品。

東台灣農藥殘留與毒物檢驗中心
農糧署補助檢驗農產品農藥殘留件數

年度	新鮮蔬果	稻米	茶葉	質譜快篩
2019	300	—	—	—
2020	1,521	210	—	1,350
2021	1,360	409	70	973
總計	3,181	619	70	2,323

▲ 東台灣農藥殘留與毒物檢驗中心 2019-2021 年經農糧署送驗之檢驗農產品

而 2019 年至 2021 年農檢中心總檢驗件數，檢出農藥比率為 34%，其中核果類為檢出率最高之類別，但需注意的是有農藥殘留並不等於農藥超標，還需再查詢國內農藥殘留容許量標準，方可以瞭解是否為合格與適量用藥，若殘留值在限量內，適量食用都是安全的。

農業一直都是關乎社會民生、經濟、政治能否穩定發展的基礎，人類餐桌上的食物必須生生不息，若預先提用下一代的資源來換取，未來勢必提前發生食物短缺，因此永續糧食生產與推廣無毒有機農業，也變得相當重要，依據農檢中心配合有機農產品進行農藥殘留檢驗結果發現，具有有機認證之農產品其農藥檢出率可以降至 1% 以下，表示有機標章推廣是具有成效的。未來也希望可以配合友善農業之農戶，進行農業殘留檢驗並提供相關的監控結果，持續為永續與食安扮演重要的守門員角色。



◀ 東台灣農藥殘留與毒物檢驗中心，提供花蓮地區高品質的檢驗技術服務

2 ZERO HUNGER



SDG 2 / TWSDG 2

Achieve Food Security

End Hunger and Promote Sustainable Agriculture

Eastern Taiwan Center for Pesticide and Toxic Substance Analysis

As our thinking toward nutrition and health changes, fruits and vegetables replace delicate food in our diet, and our concern about pesticide residues is expanding. As a result, one of our social responsibilities involves produce and food safety; therefore, the Eastern Taiwan Center for Pesticide and Toxic Substance Analysis was established to provide high-quality testing services for Hualien and the surrounding area, saving time and money for exam reports.

Pesticides are applied directly to root, stem, leaf, and fruit surfaces. While some may enter the plant, most of the pesticides will decompose. However, if plants are harvested before pesticides completely degrade, pesticide residues are remained on or in the plants. To fulfill the goal of eliminating hunger (SDG 2), pesticides may play an important role. In practice, use of pesticides is a major preventive measure to protecting produce and minimizing harvest loss. Whether consuming produce with residues is safe depends on the residue limit, toxicity, and amount consumed. Taiwan Food and Drug Administration has the Standards for Pesticide Residue Limits in Foods stipulated based on the above concerns, and sampling is carried out to reinforce such controls and reduce produce with excessive residues entering the market.

The Center works in line with central regulations and helps detect pesticide residues on marketable produce. In 2019-2021, a total of 3,870 produce items were examined under the Agriculture and Food Agency's

program. Furthermore, as required by the 2020 enacted central policy, we included the Rapid Screening Mass Spectrometry Technique, a method developed by the Agricultural Chemicals and Toxic Substances Research Institute, to expedite eco-friendly, fast, and precise examination for pesticide residues and have undertaken screening of 2,323 produce items as of 2021.

Eastern Taiwan Center for Pesticide and Toxic Substance Analysis No. of produce items with pesticide residual as examined under the Agriculture and Food Agency subsidy

Year	Fresh Fruits and Vegetables	Rice	Tea Lea	Rapid Screening Mass Spectrometry Technique
2019	300	—	—	—
2020	1,521	210	—	1,350
2021	1,360	409	70	973
Total	3,181	619	70	2,323

▲ 2019-2021 produce items delivered to the Eastern Taiwan Center for Pesticide and Toxic Substance Analysis by the Agriculture and Food Agency for examination

The tested samples from 2019 to 2021 were tested 34% positive for pesticide residues, and drupe topped the crops with the highest number of positive samples. It is worth noting that testing positive does not necessarily mean that an item is unqualified. The Pesticide Residue Limits in Foods must be referred to in order to verify whether the pesticide residues are over the limits. Products within the residue limits are regarded as safe to consume.

Agriculture has long been the foundation of the stable development of society, economy, and politics. Humans need food to survive and provide energy. When we expand future resources in exchange for food, food shortages will occur. Therefore, promoting sustainable food production and toxic-free organic farming is critical. Working together with organic producers, the Center noticed that, the detection of pesticide residues for certified organic products was less than 1%, indicating the effectivity of the promotion of organic labeling. In the future, we expect to test and monitor the pesticide residues of crops for farmers who work on eco-friendly farming. The testing data will ensure a more appropriate use of pesticides. The efforts shall demonstrate the center's strong commitment to safeguarding sustainability and food safety.



◀ Eastern Taiwan Center for Pesticide and Toxic Substance Analysis, providing quality service in the Hualien area