

Report of Pesticide Residue Levels in Fruits and Vegetables Analysed in February 2016

28 samples were collected from farm gate level by Extension Officers of FAREI. Out of which 12 samples have been analysed with both GCMSMS and LCMSMS and 16 samples have been analysed only by LCMSMS.

The 12 samples were analysed using Gas Chromatograph with Mass Spectrometry (GCMSMS) and Liquid Chromatograph with Mass Spectrometry (LCMSMS) for the detection of the following pesticides: azoxytrobin, boscalid, cyfluthrin, cypermethrin, chlorpyrifos, deltamethrin, difenoconazole, hexaconazole, indoxacarb, fenthion, fluopicolid, lambda cyhalothrin, lufenuron, malathion, metalaxyl, profenofos, pyraclostrobin, spiromesifen, spinosad, tebuconazole and vinclozolin.

Out of 12 samples analysed, in 58.3% of samples no pesticide residues were detected, in 33.3% presence of pesticide residues were below the Codex Maximum Residue Level (MRL) and 8.3% exceeded the Codex MRL. The results are shown in the following tables.

Table 1 showing pesticide residues in samples analysed

SN	Samples	No. of samples analysed	No. of samples having NO pesticide residues	No. of samples having pesticide residues BELOW MRL	No. of samples having pesticide residues ABOVE MRL
1	Asparagus beans (Voehm)	1	1	Nil	Nil
2	Brinjal	4	1	3	Nil
3	Bitter gourd	1	Nil	Nil	1
4	Calabash	1	1	Nil	Nil
5	Chilli	1	Nil	1	Nil
6	Okra	3	3	Nil	Nil
7	Root Vegetable (rave)	1	1	Nil	Nil
TOTAL		12	7	4	1
Percentage (%)		58.3	33.3	8.3

Table 2 showing pesticide residue levels detected in vegetables

Vegetables with insecticides above MRL	Pesticide detected	Amount Detected (mg/kg)	FAO CODEX MRL (mg/kg)
(i) Brinjal	Fenthion Pyraclostrobin	0.02,<0.01,<0.01 <0.01	N/A 0.3
(ii) Chilli	λ -cyhalothrin	0.15	N/A
(iii) Bittergourd	Cypermethrin	0.22	0.07

The 16 samples were analysed using Liquid Chromatograph with Mass Spectrometry (LCMSMS) for the detection of the following pesticides: azoxytrobin, boscalid, difenoconazole, hexaconazole, indoxacarb, fenthion, fluopicolid, lufenuron, malathion, metalaxyl, profenofos, pyraclostrobin, spiromesifen and spinosad.

Out of 16 samples analysed, in 62.5% of samples no pesticide residues were detected, in 37.5% presence of pesticide residues were below the Codex Maximum Residue Level (MRL) and 0% exceeded the Codex MRL. The results are shown in the following tables.

Table 1 showing pesticide residues in samples analysed

SN	Samples	No. of samples analysed	No. of samples having NO pesticide residues	No. of samples having pesticide residues BELOW MRL	No. of samples having pesticide residues ABOVE MRL
1	Asparagus beans (Voehm)	2	2	Nil	Nil
2	Bean	1	Nil	1	Nil
3	Brinjal	4	Nil	4	Nil
4	Calabash	1	1	Nil	Nil
5	Cucumber	1	1	Nil	Nil
6	Cucurbits(patole, pipen gaille, bittergourd)	4	4	Nil	Nil
7	lettuce	1	Nil	1	Nil
8.	Okra	2	2	Nil	Nil
TOTAL		16	10	6	0
Percentage (%)		62.5	37.5	0

Table 2 showing pesticide residue levels detected in vegetables

Vegetables with insecticides above MRL	Pesticide detected	Amount Detected (mg/kg)	FAO CODEX MRL (mg/kg)
(i) Bean	indoxacarb	<0.01	N/A
(ii) Brinjal	Fenthion (all samples)	<0.01	N/A
(iii) Lettuce	Metalaxyl	1.3	2.0
	Difenoconazole	0.19	2.0
	profenofos	<0.01	N/A