



## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9

Anand Agricultural University, Anand – 388 110, Gujarat (India)

### APPROVED AGRESCCO RECOMMENDATIONS

#### No. Approved AGRESCCO Recommendations Scientific / Farmers' Community

##### 1. Decontamination study of pesticides in okra (2023)

For dislodging of pesticide residues in okra fruits, any of the following household methods is used.

- Washing of okra fruits under running tap water for a minute followed by soaking in the 5% NaCl aqueous solution for 10 minutes and again washing under running tap water for a minute effectively dislodge the residues of flubendiamide (91.95%), lambda-cyhalothrin (82.02%), profenophos (79.53%), quinalphos (76.98%), acetamiprid (63.27%), imidacloprid (56.45%) and ethion (47.15%).

OR

- Washing of okra fruits under running tap water for a minute followed by soaking in 1% NaCl aqueous solution for 10 minutes and again washing under running tap water for a minute also found effective in dislodging residues of flubendiamide (86.21%), quinalphos (66.32%), lambda-cyhalothrin (56.74%), profenophos (49.61%), imidacloprid (41.94%), ethion (17.41%) and acetamiprid (11.22%).

OR

- Washing of okra fruits under running tap water for a minute followed by soaking the okra fruits in 5% NaHCO<sub>3</sub> and again washing under running tap water for a minute also found effective for dislodging the flubendiamide, lambda-cyhalothrin, profenophos, quinalphos, acetamiprid, imidacloprid and ethion in the range of 14 to 83%.

ભીંડામાં કીટનાશકનાં અવશેષો ઓછા કરવા માટે નીચે આપેલ પૈકી કોઈ પણ એક ઘરગથ્થુ પદ્ધતિ અપનાવવા ઉપભોગતા માટે ભલામણ કરવામાં આવે છે.

- ભીંડાને ચાલુ નળે એક મિનિટ સુધી ધોયા બાદ ૫% મીઠાના દ્રાવણમાં ૧૦ મિનિટ સુધી ડુબાડી રાખ્યા બાદ ફરીથી ચાલુ નળે એક મિનિટ સુધી ધોવાથી ફ્લ્યુબેંડીયામાઇડ, લેમ્બડા-સાયહાલોથ્રિન, પ્રોફેનોફોસ, ક્વિનાલ્ફોસ, એસીટામીપ્રીડ, ઈમીડાક્લોપ્રીડ અને ઇથિઓન જેવી કીટનાશકનાં અવશેષો અંદાજિત ૪૭-૮૧% સુધી ઓછા કરી શકાય છે.

અથવા

- ભીંડાને ચાલુ નળે એક મિનિટ સુધી ધોયા બાદ ૧% મીઠાના દ્રાવણમાં ૧૦ મિનિટ સુધી ડુબાડી રાખ્યા બાદ ફરીથી ચાલુ નળે એક મિનિટ સુધી ધોવાથી ફ્લ્યુબેંડીયામાઇડ, લેમ્બડા-સાયહાલોથ્રિન, પ્રોફેનોફોસ, ક્વિનાલ્ફોસ, એસીટામીપ્રીડ, ઈમીડાક્લોપ્રીડ અને ઇથિઓન જેવી કીટનાશકનાં અવશેષો અંદાજિત ૧૧-૮૬% સુધી ઓછા કરી શકાય છે.

અથવા

- ભીંડાને ચાલુ નળે એક મિનિટ સુધી ધોયા બાદ ૫% ખાવાના સોડાના દ્રાવણમાં ૧૦ મિનિટ સુધી ડુબાડી રાખ્યા બાદ ફરીથી ચાલુ નળે એક મિનિટ સુધી ધોવાથી ફ્લ્યુબેંડીયામાઇડ, લેમ્બડા-સાયહાલોથ્રિન, પ્રોફેનોફોસ, ક્વિનાલ્ફોસ, એસીટામીપ્રીડ, ઈમીડાક્લોપ્રીડ અને ઇથિઓન જેવી કીટનાશકનાં અવશેષો અંદાજિત ૧૪-૮૩% સુધી ઓછા કરી શકાય છે.



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- 2. Residues and persistence of fluoxapiprolin 30 g/L + flupicolide 200 g/L SC in potato (2023)**  
Three foliar sprays of the combi-product fluoxapiprolin 30 g/L + flupicolide 200 g/L SC to the potato crop at 18.75 + 125 g a.i./ha at 7 days interval starting 35 days prior to harvest of potato tubers, resulted in the residues of fluoxapiprolin and flupicolide in potato tubers at 21 days of last foliar spray were found below the LOQ of 0.01 mg/kg. Therefore, the PHI of 21 days can be suggested if fluoxapiprolin 30 g/L + flupicolide 200 g/L SC is recommended for use in potato crop.
  - 3. Residues and persistence of iprovalicarb 8.4% + copper oxychloride 40.6% WG in potato (2023)**  
Three foliar sprays of combi-product iprovalicarb 8.4% + copper oxychloride 40.6% WG to potato crop at 105 + 507.50 g a.i./ha at 7 days interval starting 35 days prior to harvest of potato tubers, resulted in the residues of iprovalicarb in potato tubers at 21 days after last foliar spray were found below the LOQ of 0.01 mg/kg. The residue of copper oxychloride as Cu (fresh weight basis) in potato tubers found below the FSSAI's MRL of 30 mg/kg. Therefore, the PHI of 21 days can be suggested if iprovalicarb 8.4% + copper oxychloride 40.6% WG is recommended for use in potato crop.
  - 4. Residues and persistence of spirotetramat 30 g/L + diafenthiuron 120 g/L SC in chilli (2023)**  
Three foliar sprays of combi-product spirotetramat 30 g/L + diafenthiuron 120 g/L SC to chilli crop at 75 + 300 g a.i./ha at 7 days interval starting from fruit development stage, resulted in the residues of spirotetramat and diafenthiuron in green chilli fruits at 21 days after last foliar spray were found below the FSSAI's MRLs of 0.8 and 0.05 mg/kg, respectively. Therefore, the PHI of 21 days can be suggested if the combiproduct spirotetramat 30 g/L + diafenthiuron 120 g/L SC is recommended for use in chilli crop.
  - 5. Residues and persistence of tetraniliprole 120 g/L + spirotetramat 240 g/L SC in cabbage (2023)**  
Three foliar sprays of combi-product tetraniliprole 120 g/L + spirotetramat 240 g/L SC to cabbage crop at 45 + 90 g a.i./ha at 7 days interval starting from head development stage, resulted in the residues of spirotetramat in the cabbage head after 2 h of the last foliar spray were found below the CODEX's MRL of 2.0 mg/kg. While the MRL for tetraniliprole residues can be estimated by considering the highest residues level after initial deposit for risk assessment.
  - 6. Residues and persistence of tetraniliprole 120 g/L + spirotetramat 240 g/L SC in chilli (2023)**  
Three foliar sprays of combi-product tetraniliprole 120 g/L + spirotetramat 240 g/L SC to chilli crop at 45 + 90 g a.i./ha at 7 days interval starting from fruit development stage, resulted in the residues of tetraniliprole and spirotetramat in green chilli fruits at 49 days after last foliar spray were found below the LOQ of 0.01 mg/kg. Therefore, the PHI of 49 days can be suggested if the combi-product tetraniliprole 120 g/L + spirotetramat 240 g/L SC is recommended for use in chilli crop.
  - 7. Residues and persistence of fluopyram 400 g/L SC in cucumber (through drip application) (2023)**  
Single application of fluopyram 400 g/L SC at 500 g a.i./ha through drip irrigation to cucumber crop (at 14 days after sowing) or two applications at 250 g a.i./ha (first at 14 days after sowing and another at 14 days after first application), resulted in the residues of fluopyram in cucumber fruits were found below the CODEX's MRL of 0.5 mg/kg for all the sampling intervals. Therefore, the PHI of 30 days can be suggested if fluopyram 400 g/L SC is recommended for use in cucumber crop.
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- 8. Residues and persistence of iprovalicarb 8.4% + Cu-oxychloride 40.6% WG in cucumber (2023)**  
Three foliar sprays of combi-product iprovalicarb 8.4% + copper oxychloride 40.6% WG to cucumber crop at 105 + 507.50 g a.i./ha at 7 days interval starting from fruit development stage, resulted in the residues of iprovalicarb in cucumber fruits at 7 days after the last foliar spray were found below the LOQ of 0.01 mg/kg. The residue of copper oxychloride as Cu (fresh weight basis) also found below the FSSAI's MRL of 30 mg/kg on 2 hrs. after the last spray. Therefore, the PHI of 7 days can be suggested if iprovalicarb 8.4% + copper oxychloride 40.6% WG is recommended for use in cucumber crop.
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- 9. Residues and persistence of fluopyram 400 g/L SC in pomegranate (drip application) (2023)**  
Single application of fluopyram 400 g/L SC at 500 g a.i./ha through drip irrigation to pomegranate tree (first drip irrigation after defoliation) or two applications at 250 g a.i./ha (first drip irrigation after defoliation and another at 45 days after first application), resulted in the residues of fluopyram in mature fruits at 197 days after last application were found below the LOQ of 0.01 mg/kg. Therefore, the PHI of 197 (for single application at 500 g a.i./ha) and 152 days (for two applications at 250 g a.i./ha) can be suggested, if fluopyram 400 g/L SC is recommended for use in pomegranate.
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- 10. Residues and persistence of spirotetramat 120 g/L + imidacloprid 120 g/L SC in potato (2023)**  
Three foliar sprays of combi-product spirotetramat 120 g/L + imidacloprid 120 g/L SC to potato crop at 75 + 75 g a.i./ha at 7 days interval starting from potato tuber formation stage, resulted in the residues of spirotetramat were found below the CODEX MRL of 0.8 mg /kg within 2 hrs. after the last application. However, the MRL for imidacloprid can be estimated by considering the highest residue level after initial deposit for risk assessment
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- 11. Residues and persistence of tetraniliprole 120 g/L + spirotetramat 240 g/L SC in tomato (2023)**  
Three foliar sprays of combi-product tetraniliprole 120 g/L + spirotetramat 240 g/L SC to tomato crop at 45 + 90 g a.i./ha at 7 days interval starting from fruit development stage, resulted in the residues of tetraniliprole and spirotetramat in the tomato fruits at 28 days after the last foliar spray were found below the LOQ of 0.01 mg/kg. Therefore, the PHI of 28 days can be suggested if the combi-product tetraniliprole 120 g/L + spirotetramat 240 g/L SC is recommended for use in tomato crop.
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- 12. Residues and persistence of fluoxapiprolin 30 g/L + fluopicolide 200 g/L SC in tomato (2023)**  
Three foliar sprays of the combi-product fluoxapiprolin 30 g/L + fluopicolide 200 g/L SC to tomato crop at 18.75 + 125 g a.i./ha at 7 days interval starting from fruit development stage, resulted in the residues of fluoxapiprolin and fluopicolide in tomato fruits at 21 days of last application were found below the LOQ of 0.01 mg/kg. Therefore, the PHI of 21 days can be suggested if the combi-product fluoxapiprolin 30 g/L + fluopicolide 200 g/L SC is recommended for use in tomato crop.
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- 13. Residues and persistence of tetraniliprole 120 g/L + thiacloprid 360 g/L SC in brinjal (2023)**  
Three foliar sprays of combi-product tetraniliprole 120 g/L + thiacloprid 360 g/L SC to brinjal crop at 45 + 135 g a.i./ha at 7 days interval starting from fruit development stage, resulted in the residues of thiacloprid in fruits immediately 2 h of last foliar spray were found below the FSSAI's MRL of 0.7 mg/kg. Whereas tetraniliprole residues were found below the LOQ of 0.01 mg/kg from 21 days after the last foliar spray. The MRL for tetraniliprole can be estimated by considering the highest residues level after initial deposit for risk assessment.
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### 14. Residues and persistence of tetraniliprole 200 g/L SC in brinjal (2023)

Three foliar sprays of tetraniliprole 200 g/L SC to brinjal crop at 50 g a.i./ha at 7 days interval starting from fruit development stage, resulted in the residues of tetraniliprole in fruits at 21 days after the last foliar spray were found below the LOQ of 0.01 mg/kg. Therefore, the PHI of 21 days can be suggested if tetraniliprole 200 g/L SC is recommended for use in brinjal crop.

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### 15. Residues and persistence of iprovalicarb 8.4% + copper oxychloride 40.6% WG in tomato (2023)

Three foliar sprays of a combi-product iprovalicarb 8.4% + copper oxychloride 40.6% WG to tomato crop at 105 + 507.5 g a.i./ha at 7 days interval starting from fruit development stage, resulted in the residues of iprovalicarb in tomato fruits at 21 days after the last foliar spray were found below the LOQ of 0.01 mg/kg. While the residues of copper oxychloride as Cu (fresh weight basis) in tomato fruits were found below the FSSAI's MRL of 30 mg/kg. Therefore, the PHI of 21 days can be suggested if iprovalicarb 8.4% + copper oxychloride 40.6% WG is recommended for use in tomato crop.

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### 16. Residues and persistence of mancozeb 75% WP in cumin (2023)

Three foliar sprays of mancozeb 75% WP at 1500 g a.i./ha to cumin crop at 15 days interval starting from appearance of blight disease, resulted in the residues of mancozeb (as CS<sub>2</sub>) in cumin leaves at 7 days after the last foliar spray were found below the FSSAI's MRL of 10 mg/kg. Further, residues in cumin seed collected 56 days after the last application were also found below the FSSAI's MRL of 10 mg/kg. Therefore, the PHI of 56 days can be suggested for mancozeb 75% WP use in cumin crop.

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### 17. Residues and persistence of propanil 60% + propyrisulfuron 2% WG in paddy (2023)

Application of combi-product propanil 60% + propyrisulfuron 2% WG to paddy field at 1550 g a.i./ha at post-emergence of weeds (i.e., 2-3 leaves stage), resulted in the residues of propanil and propyrisulfuron in paddy plant foliage at 15 days after application were found below the LOQ of 0.05 mg/kg. Moreover, the residues in paddy grain at 74 days after herbicide application were also found below the LOQ level. Therefore, the PHI of 74 days can be suggested if propanil 60% + propyrisulfuron 2% WG is recommended for use in paddy crop.

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### 18. Residue and persistence of tetraniliprole 240 g/L + fipronil 240 g/L SC in maize (2022)

Seed treatment of a ready-mix insecticide tetraniliprole 240 g/L + fipronil 240 g/L FS in maize @ 7.2 + 7.2 g a.i. /kg seeds did not result in their residues in maize leaves at 30 days after sowing, immature cob as well as mature grains and soil at harvest.

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### 19. Residue and persistence of fluxapyroxad 167 g/L + pyraclostrobin 333 g/L 500 SC in cumin (2022)

Foliar application of ready-mix fungicide fluxapyroxad 167 g/L + pyraclostrobin 333 g/L - 500 SC in cumin at flowering stage @ 150 g a.i. /ha resulted in 3.38 and 3.12 mg/kg of fluxapyroxad and pyraclostrobin residues, respectively in cumin seeds at harvest i.e., 28 days after last application.

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### 20. Residue and persistence of beta-cyfluthrin 90 g/L + imidacloprid 210 g/L OD in maize (2022)

Three foliar applications of ready-mix insecticide beta-cyfluthrin 90 g/L + imidacloprid 210 SC g/L OD in maize at 7-day interval @ 45 + 105 g a.i./ha at cob formation stage, resulted residue below the limit of quantitation of 0.05 mg /kg for beta-cyfluthrin and 0.01 mg/kg for imidacloprid in green cob and mature grains if harvested from 1 day after last spray. Therefore, PHI of 1-day can be suggested, if beta-cyfluthrin 90 g/L + imidacloprid 210 SC g/L OD is recommend in maize.

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### 21. Residue and persistence of tetraniliprole 200 g/L SC in chilli (2022)

Three foliar applications of tetraniliprole 200 SC g/L in chilli at 7-day interval @ 50 g a.i./ha at fruiting stage resulted in tetraniliprole residues 3.61 mg/kg in green chilli fruits if harvested from 3-day after the last application.

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### 22. Development and validation of quick multi-class method for the various antibiotics and veterinary drugs in milk by LC-MS/MS (2022)

An in-house multi-residues method has been developed to estimate chloramphenicol, albendazole, fenbendazole, metronidazole, ronidazole, phenylbutazone, chlortetracycline and oxytetracycline from different classes of phenicols, flukicides, nitroimidazoles, anti-inflammatories and tetracyclines from milk. The method was performed as per the EU guideline and followed SANTE 2019 criteria. The limit of quantitation ranged from 0.18 – 5.20 µg/L on whole milk basis.

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### 23. Residue and persistence of fluoxapiprolin 20 g/L SC in tomato (2022)

Three foliar applications of fluoxapiprolin 20 SC g/L @ 25 g a.i./ha in tomato at 7-day interval starting from fruit development stage resulted in residues below the limit of quantification of 0.01 mg/kg in tomato fruits on 14 days after the last application. Therefore, PHI of 14 days can be suggested, if fluoxapiprolin 20 SC g/L use as recommended dose in tomato.

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### 24. Residue and persistence of tetraniliprole 200 g/L SC in red gram (2022)

Three foliar applications of tetraniliprole 200 SC g/L @ 50 g a.i./ha at 7-day interval starting from pod formation stage in pigeon pea having no residues of tetraniliprole at or higher the limit of determination of 0.01 mg/kg in mature pods with seed, mature seeds (dry) and soil at harvest.

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### 25. Residue and persistence of spirotetramet 120 g/L + imidacloprid 120 g/L SC in cucumber (2022)

Three foliar applications of a ready-mix insecticide spirotetramet 120 g/L + imidacloprid 120 g/L SC @ 90 + 90 g a.i./ha at 7-day interval starting from fruiting stage in cucumber having no residues of either insecticides detected at or higher the limit of determination of 0.01 mg/kg in cucumber fruits immediately after last application.

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### 26. Residue and persistence of fluoxapiprolin 20 SC g/L in cucumber (2022)

Three foliar applications of fluoxapiprolin 20 SC g/L in cucumber @ 25 g a.i./ha at 7-day interval starting from fruit development stage resulted residues below the limit of quantification of 0.01 mg/kg in cucumber fruits at 5 days after last application. Therefore, PHI of 5 days can be suggested, if fluoxapiprolin 20 SC g/L is recommended in cucumber.

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### 27. Residue and persistence of cyantraniliprole 7.3 % + diafenthiuron 36.4 % SC in tomato (2022)

Two foliar applications of ready-mix insecticide cyantraniliprole 7.3 % + diafenthiuron 36.4 % w/w - 480 SC in tomato at 10 days interval @ 60 + 300 g a.i./ha at fruiting stage in tomato fruits having cyantraniliprole residues below the MRL of FSSAI 0.5 mg/kg on 3 days. However, diafenthiuron MRL can be worked out by considering the 3 days results for the risk assessment.

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- 28. Residue and persistence of cyantraniliprole 7.3% + diafenthiuron 36.4% SC in brinjal (2022)**  
Two foliar applications of ready-mix insecticide cyantraniliprole 7.3% + diafenthiuron 36.4% w/w - 480 SC in brinjal at 15-day interval @ 60 + 300 g a.i./ha at fruiting stage having residue below cyantraniliprole and diafenthiuron MRLs of FSSAI 0.06 and 1.0 mg/kg, respectively in brinjal fruits on the day of last application. Therefore, PHI of 1 day can be suggested, if cyantraniliprole 7.3% + diafenthiuron 36.4% w/w - 480 SC is recommended in brinjal.
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- 29. Residue and persistence of fluopyram 400 SC g/L in brinjal (Soil drench) (2022)**  
One application of fluopyram 400 SC g/L as soil drenching @ 500 g a.i./ha in brinjal at 3-day after transplanting and two applications of the fluopyram 400 SC g/L @ 250 g a.i./ha, first at 3-day after transplanting followed by second at 21 days after first application, having residues below the CODEX MRL of 0.5 mg/kg in brinjal fruits throughout the picking. Therefore, PHI of 59 days can be suggested, if fluopyram 400 SC is recommended in brinjal.
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- 30. Residue and persistence of tetraniliprole 120 g/L + spirotetramat 240 SC g/L in brinjal (2022)**  
Three foliar applications of a ready-mix insecticide tetraniliprole 120 g/L + spirotetramat 240 g/L SC at 7-day interval @ 45 + 90 g a.i./ha at fruiting stage in brinjal having 0.03 and 0.46 mg/kg residues for tetraniliprole and spirotetramat, respectively along with metabolites (spirotetramat-enol, spirotetramat-ketohydroxy, spirotetramat-monohydroxy and spirotetramat-enol glucoside) in brinjal fruits on the 3rd days after last application.
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- 31. Residue of trinexapac ethyl 25% EC in rice and soil (2022)**  
One application of trinexapac ethyl 25 EC @ 40 g a.i./ha in paddy at 50% panicle initiation stage resulted in residue below determination level of 0.01 mg/kg in grains, straw and soil at harvest.
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- 32. Residue and persistence of zineb 75% WP in chilli (2022)**  
Three foliar applications of zineb 75% WP in chilli, at 7-day interval @ 1500 g a.i./ha at fruiting stage resulted in residue of zineb below its MRL of 1 mg CS<sub>2</sub> /kg, if harvested on 7 days after last application. Therefore, minimum 7-day PHI is recommended for zineb 75 WP for green chilli. Red chilli (dry) having residues of zineb 75% WP at below determination level when harvested on 69 days after the last application. Therefore, minimum 69 days PHI is recommended for zineb 75% WP in red chilli.
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- 33. Residue and persistence of mancozeb 75% WP in paddy (2022)**  
Two foliar applications of mancozeb 75% WP in paddy as per the recommendation, at 7-day interval @ 1500 g a.i./ha at panicle initiation stage resulted residue below the limit of quantification of 0.05 mg/kg in unpolished rice, grain, husk, straw and soil when harvested on 56 days after the last application. Therefore, minimum 56 days PHI is recommended for mancozeb 75% WP in paddy.
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- 34. Residue and persistence of zineb 75% WP in potato (2022)**  
Three foliar applications of zineb 75% WP in potato, at 7-day interval @ 1500 g a.i./ha at tuber formation stage resulted in residue of zineb below its FSSAI MRL of 0.2 mg/kg, if harvested on 21 days after last application. Therefore, minimum 21 days PHI is recommended for zineb 75% WP in potato.
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### 35. Decontamination study of pesticides in green chilli (2021)

Dipping green chilli fruits in 5% aqueous solution of sodium bicarbonate for 10 minute effectively removed acephate (17.9%), cypermethrin (53.52%), acetamiprid (20.51%), imidacloprid (27.10%), thiamethoxam (30.49%), carbendazim (81.07%) and fipronil (92.71%). Even IHR product, Arka Herbiwash was found effective as dipping green chilli fruits for 15 seconds in 0.02% aqueous solution, followed by washing under running tap water for 1 minute removed cypermethrin (93.66%), acetamiprid (15.38%), profenophos (23.18%), chlorpyrifos (39.15%), carbendazim (90.85%) and fipronil (92.71%).

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### 36. Residues and persistence of fluopyram 250 g/L + trifloxystrobin 250 g/L SC in chilli (2021)

Two foliar applications of ready-mix fungicide fluopyram 250 g/L + trifloxystrobin 250 g/L SC in chilli @ 150 + 150 g a.i./ha starting at fruiting stage followed by 10 days resulted in the residues below the fluopyram MRL of 3.0 mg/kg (CODEX) in green chilli fruits 3rd day after the last spray. As MRL for trifloxystrobin in chilli fruits is 0.40 mg/kg (FSSAI) and 3rd day value of the last application is exceeding the MRL, the mixture cannot be recommended in chilli. However, residues of both the fungicides were below their MRLs in dry red chilli.

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### 37. Residues and persistence of fluopyram 400 g/L SC in chilli (2021)

Single soil drench application of fluopyram 400 g/L SC in chilli @ 500 g a.i./ha at 3 days after transplanting resulted residue below the Codex MRL (CODEX) of 3 mg/kg in chilli fruits if harvested 81 days after the last application. Therefore, PHI of 81 days could be suggested if fluopyram is registered in chilli.

OR

First soil drench application of fluopyram 400 g/L SC in chilli @ 250 g a.i./ha at 3 days after transplanting followed by 21 days after first application resulted residue below the Codex MRL (CODEX) of 3 mg/kg in chilli fruits if harvested 60 days after the last application. Therefore, PHI of 60 days could be suggested if fluopyram is registered in chilli.

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### 38. Residues and persistence of fosetyl-aluminium 80 WP in banana (2021)

Five applications of fosetyl-aluminum 80 WP as soil drenching in banana at one month interval starting from two months of planting @ 1.2 g/Liter water/plant resulted in its residue below the limit of quantitation of 0.05 mg/kg and/or EU MRL of 2 mg/kg in banana fruits if harvested from 67 days after the last application

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### 39. Residues and persistence of cyantraniliprole 7.3% + diafenthiuron 36.4% SC in okra (2021)

Two foliar applications of the ready-mix insecticide cyantraniliprole 7.3% + diafenthiuron 36.4% SC in okra at 10-day interval @ 60 + 300 g a.i./ha at fruiting stage resulted in cyantraniliprole and diafenthiuron residues below their MRLs (FSSAI) of 0.5 and 0.6 mg/kg in okra fruits if harvested one day after the last application. Therefore, PHI of 1-day could be proposed if cyantraniliprole 7.3% + diafenthiuron 36.4% SC is registered for okra.

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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9

Anand Agricultural University, Anand – 388 110, Gujarat (India)

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- 40. Residues and persistence of fluopyram 200 g/L + tebuconazole 200g/L SC in banana (2021)**  
Three foliar applications of the ready-mix fungicide fluopyram 200 g/L + tebuconazole 200g/L SC in banana at 10-day interval @ 120 + 120 g a.i./ha at fruit development stage resulted in its residue below the MRLs 0.8 (CODEX) and 1.5 (FSSAI) mg/kg in immature and mature banana as well as pulp of mature banana for fluopyram and tebuconazole, respectively, if harvested from the day of last application. Therefore, PHI of 1-day could be proposed if fluopyram 200 g/L + tebuconazole 200 g/L SC is registered for banana.
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- 41. Residues and persistence of fosetyl-aluminium 80% WP in/on chickpea (2021)**  
Two applications of fosetyl-aluminium 80% WP at 15 days interval as soil drenching @ 2400 g a.i./ha in chickpea one month after sowing resulted in the residues of fosetyl-aluminium and phosphonic acid below limit of quantification of 0.05 mg/kg in immature pods on the day of last application. The fosetyl-aluminium 80% WP application in chickpea 45 days after sowing as soil drench was found safe from residue point of view. Therefore, PHI of 45-day could be suggested if fosetylaluminium 80% WP is registered in chickpea.
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- 42. Residues and persistence of thiodicarb 75% WP in maize (2021)**  
Three foliar sprays of thiodicarb 75% WP in maize at 7 days interval @ 750 g a.i./ha starting from 50% cob formation stage resulted in its residue below the CODEX MRL of 0.02 mg/kg in maize from 1st day after the last application. Therefore, PHI of 1-day could be suggested if thiodicarb 75% WP is registered in maize.
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- 43. Residues and persistence of tetraniliprole 200 g/L SC in maize (2021)**  
Three foliar sprays of tetraniliprole 200 g/L SC in maize at 7 days interval @ 50 g a.i./ha starting from 50% cob formation stage resulted in its residue below the limit of quantitation of 0.01 mg/kg in maize cob from 1<sup>st</sup> day after the last application. Therefore, PHI of 1-day could be suggested if tetraniliprole 200 g/L SC is registered in maize.
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- 44. Residues and persistence of flubendiamide 90 g/L + deltamethrin 60 g/L SC in maize (2021)**  
Three foliar sprays of ready-mix insecticide flubendiamide 90 g/L + deltamethrin 60 g/L SC in maize at 7-day interval @ 36 + 24 g a.i./ha starting from 50% cob formation stage resulted their residues below the CODEX MRLs of 0.02 and 2 mg/kg for flubendiamide and deltamethrin, respectively, in maize cob from 1st day after the last application. Therefore, PHI of 1-day could be suggested if flubendiamide 90 g/L + deltamethrin 60 g/L SC is recommended in maize.
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- 45. Decontamination study of water by ozone treatment for about 100 pesticides (2020)**  
Ozone treatment to pond/river/ground water for 15 minutes @ 500 mg/h in 15 mL water can result in >70% degradation of the listed 99 pesticides. Out of these, 71 pesticides showed degradation >90%. Pesticides viz., thiacloprid, tricyclazole, phosphamidon, fenamiphossulfone, propoxure, finamiphos-sulfone, simazin, atrazine, chlorantraniliprole and fluopicolide did not degrade by ozone treatment. List of pesticide degraded more than 90% are metoxuron, diuron, demeton, azoxystrobin, malathion, dimethomorph, triazophos, fenamiphos, phenthoate, quinalphos, anilophos, fenthion, pyraclostrobin, phosalone, spinosyn A & D, emamectin B1a, buprofezin, pyriproxyfen, chlorpyrifos, spiromesifen, propargite, tridemorph, fenpyroximate, fenazaquin, carbosulfan, fipronil-sulfone, temephos, methiocarb, ethiofencarb, butocarboxim, chlorotoluron, chloroxuron, diethofencarb, forchlorfenuron,
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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9

Anand Agricultural University, Anand – 388 110, Gujarat (India)

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isoproturon, neburon, pirimicarb, siduron, butafenacil, cyprodinil, fenhexamid, flutolanil, furulaxyl, imazalil, mepanipyrim, mepronil, picoxystrobin, piperonyl-butoxide, prochloraz, pyracarbolid, pyrimethanil, rotenone, spiroxamine, bupirimate, carboxin, clethodim, ethiprole, fenamidone, methoprotiryne, prometryn, terbutryn, triflumizole, diniconazole, fenpropimorph, mexacarbate, aminocarb, pencycuron and fluazinam.

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### 46. Multi-residue analysis of 100 pesticides in water using QuEChERS method and detection by LC-MS/MS and/or GC-MS/MS (2020)

A new innovative QuEChERS method for multi-residue analysis of 130 pesticide compounds in water is developed with LOQ 0.5 ppb. This method can reduce the analysis time, use fewer reagents in small amounts and provide high recovery for routine monitoring of pesticides residue from water. The method can very well match the requirements for WHO and BIS standards for most pesticides

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### 47. Multi-residue analysis of 100 pesticides in cumin seeds using QuEChERS method and detection by LC-MS/MS and/or GC-MS/MS (2020)

Multiresidue analysis of cumin seeds by LC-MS/MS showed acceptable performance of 98 pesticides when fortified at 0.1 µg/g. List of pesticides showed acceptable performance are aldicarb, aldicarb-sulfone, aldicarbsulfoxide, anilofos, bendiocarb, carbaryl, carbofuran, cymoxanil, dichlorvos, diniconazole, edifenphos, etaconazole, fenamidone, fenamiphos, fenamiphos-sulfone, fenamiphossulfoxide, fenarimol, fenobucarb, fenthion, flonicamid, fluopicolide, flusilazole, indoxacarb, isoproturon, linuron, malaoxon, metoxuron, metribuzin, oxycarboxin, penconazole, pencycuron, pretilachlor, propanil, propaquizafop, propoxur, quizalofop- ethyl, simazine, demeton-S-methyl sulphoxide, demeton-S-methyl-sulfone, carboxin, demeton-O, demeton-S, triadimefon, fenpyroximate, abamectin, carbosulfan, acephate, acetamiprid, atrazine, azoxystrobin, buprofezin, carbendazim, carbofuran, carbofuran-3- hydroxy, carbofuran-3-keto, clothianidin, dimethoate, dimethomorph, diuron, fenazaquin, imidacloprid, iprobenfos, metalaxyl, methamidophos, methomyl, monocrotophos, myclobutanil, omethoate, phenthoate, phorate-sulfone, phorate-sulfoxide, phosalone, phosphamidon, profenofos, propargite, propiconazole, pyraclostrobin, pyriproxyfen, tebuconazole, thiacloprid, thiamethoxam, triazophos, chlorfenvinphos, chlorantraniliprole, difenoconazole, fipronil, fipronil-sulfide, fipronil-sulfone, thiophanate-methyl, malathion, tricyclazole, alachlor, chlorpyrifos, ethion, fenpropathrin, thiodicarb, trifloxystrobin, dicofol

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### 48. Establishment of processing factor for different pesticides in chilli fruits (2019)

Foliar application of acephate, chlorpyrifos, carbendazim, azoxystrobin and ethion in chilli at red chilli fruiting stage at double the recommended dose resulted in built up of residues in red chilli powder to the tune of 1.11, 3.45, 2.88, 1.46 and 3.26 times, respectively compared to fresh red chilli fruits. As no MRLs of these pesticides are available for red chilli powder, respective processing factors can be adopted in extrapolating MRLs from green chilli fruits to red chilli powder.

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### 49. Residue and persistence of lambda- cyhalothrin 5% EC in/on cucumber (2018)

Two foliar sprays of lambda-cyhalothrin 5% EC in cucumber at 10-day interval @ 15 g a.i./ha at fruiting stage resulted in its residue below the Codex MRL of 0.05 µg/g in cucumber fruits if harvested from 1st day after the last application. Therefore, PHI of 1-day could be suggested if lambda-cyhalothrin 5% EC recommended in cucumber.

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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9  
Anand Agricultural University, Anand – 388 110, Gujarat (India)

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### 50. Residue and persistence of acephate 75% SP in/on cucumber (2018)

Two foliar sprays of acephate 75% SP in cucumber at 10-day interval @ 560 g a.i./ha at fruiting stage resulted in its residue below the limit of quantitation of 0.05 µg/g in cucumber fruits if harvested from 20th day after the last application. Therefore, PHI of 20-day could be suggested if acephate 75% SP recommended in cucumber.

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### 51. Residue and persistence of imidacloprid 17.8% SL in/on cucumber (2018)

Two foliar sprays of imidacloprid 17.8% SL in cucumber at 10-day interval @ 20 g a.i./ha at fruiting stage resulted in its residue below the Codex MRL of 1 µg/g in cucumber fruits if harvested immediately after the last spray. Therefore, PHI of 1-day could be suggested if imidacloprid 17.8% SL recommended in cucumber

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### 52. Residue and persistence of spiromesifen 22.9% SC in/on cucumber (2018)

Two foliar sprays of spiromesifen 22.9% SC in cucumber at 10-day interval @ 96 g a.i./ha at fruiting stage resulted in its residue below the limit of quantitation of 0.05 µg/g in cucumber fruits if harvested from 10th day after the last application. Therefore, PHI of 10-day could be suggested if spiromesifen 22.9% SC recommended in cucumber

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### 53. Residue and persistence of lambda-cyhalothrin 5% EC in/on cauliflower (2018)

Two foliar sprays of lambda-cyhalothrin 5% EC in cauliflower at 10-day interval @ 15 g a.i./ha at curd formation resulted in its residue below the Codex MRL of 0.5 µg/g in cauliflower heads if harvested immediately after the last spray. Therefore, PHI of 1-day could be suggested if lambda-cyhalothrin 5% EC recommended in cauliflower.

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### 54. Residue and persistence of Imidacloprid 17.8% SL in/on cauliflower (2018)

Two foliar sprays of imidacloprid 17.8% SL in cauliflower at 10-day interval @ 20 g a.i./ha at curd formation resulted in its residue below the limit of quantitation of 0.05 µg/g in cauliflower curds if harvested from 7<sup>th</sup> day after the last application. Therefore, PHI of 7-day could be suggested if imidacloprid 17.8% SL recommended in cauliflower

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### 55. Residue and persistence of spiromesifen 22.9% SC in/on cauliflower (2018)

Two foliar sprays of spiromesifen 22.9% SC in cauliflower at 10-day interval @ 96 g a.i./ha at curd formation resulted in its residue below the limit of quantitation of 0.05 µg/g in cauliflower curds if harvested from 10<sup>th</sup> day after the last application. Therefore, PHI of 10-day could be suggested if spiromesifen 22.9% SC recommended in cauliflower.

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### 56. Residue and persistence of cypermethrin 25% EC in/on capsicum (2018)

Two foliar sprays of cypermethrin 25% EC in capsicum at 10-day interval @ 50 g a.i./ha at fruiting stage resulted in its residue below the Codex MRL of 0.10 µg/g in capsicum fruits if harvested from 15<sup>th</sup> day after the last application. Therefore, PHI of 15-day could be suggested if cypermethrin 25% EC recommended in capsicum.

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### 57. Residue and persistence of ethion 50% EC in/on capsicum (2018)

Two foliar sprays of ethion 50% EC in capsicum at 10-day interval @ 500 g a.i./ha at fruiting stage resulted in its residue below the FSSAI MRL of 1 µg/g in capsicum fruits if harvested from 1<sup>st</sup> day after the last application. Therefore, PHI of 1-day could be suggested if ethion 50% EC recommended in capsicum.

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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9  
Anand Agricultural University, Anand – 388 110, Gujarat (India)

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### 58. Residue and persistence of lambda-cyhalothrin 5% EC in/on capsicum (2018)

Two foliar sprays of lambda-cyhalothrin 5% EC in capsicum at 10-day interval @ 15 g a.i./ha at fruiting stage resulted in its residue below the Codex MRL of 0.30 µg/g in capsicum fruits if harvested immediately after the last spray. Therefore, PHI of 1-day could be suggested if lambda-cyhalothrin 5% EC recommended in capsicum.

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### 59. Residue and persistence of imidacloprid 17.8% SL in/on capsicum (2018)

Two foliar sprays of imidacloprid 17.8% SL in capsicum at 10-day interval @ 20 g a.i./ha at fruiting stage resulted in its residue below the limit of quantitation of 0.05 µg/g in capsicum fruits if harvested from 1<sup>st</sup> day after the spray. Therefore, PHI of 1-day could be suggested if imidacloprid 17.8% SL recommended in capsicum.

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### 60. Residue and persistence of spiromesifen 22.9% SC in/on capsicum (2018)

Two foliar sprays of spiromesifen 22.9% SC in capsicum at 10-day interval @ 96 g a.i./ha at fruiting stage resulted in its residue below the limit of quantitation of 0.05 µg/g in capsicum fruits if harvested from 15<sup>th</sup> day after the last application. Therefore, PHI of 15-day could be suggested if spiromesifen 22.9% SC recommended in capsicum.

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### 61. Residue and persistence of acephate 75% SP in/on tomato (2018)

Two foliar sprays of acephate 75% SP in tomato at 10-day interval @ 560 g a.i./ha at fruiting stage resulted in its residue below the Codex MRL of 1 µg/g in tomato fruits if harvested immediately after the last spray. Therefore, PHI of 1-day could be suggested if acephate 75% SP recommended in tomato.

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### 62. Residue and persistence of lambda-cyhalothrin 5% EC in/on cabbage (2018)

Two foliar sprays of lambda-cyhalothrin 5% EC in cabbage at 10-day interval @ 15 g a.i./ha at head formation resulted in its residue below the Codex MRL of 0.30 µg/g in cabbage heads if harvested immediately after the last spray. Therefore, PHI of 1-day could be suggested if lambda-cyhalothrin 5% EC recommended in cabbage.

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### 63. Residue and persistence of spiromesifen 22.9% SC in/on cabbage (2018)

Two foliar sprays of spiromesifen 22.9% SC in cabbage at 10-day interval @ 96 g a.i./ha at head formation resulted in its residue below the limit of quantitation of 0.05 µg/g in cabbage heads if harvested from 10<sup>th</sup> day after the last application. Therefore, PHI of 10-day could be suggested if spiromesifen 22.9% SC recommended in cabbage.

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### 64. Residue and persistence of imidacloprid 17.8% SL in/on cabbage (2018)

Two foliar sprays of imidacloprid 17.8% SL in cabbage at 10-day interval @ 20 g a.i./ha at head formation resulted in its residue below the Codex MRL of 0.50 µg/g in cabbage head if harvested immediately after the last spray. Therefore, PHI of 1-day could be suggested if imidacloprid 17.8% SL recommended in cabbage.

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### 65. Residue and persistence of acephate 75% SP in/on bitter gourd (2018)

Two foliar sprays of acephate 75% SP in bitter gourd at 10-day interval @ 560 g a.i./ha at fruiting stage resulted in its residue below the limit of quantitation of 0.05 µg/g in bitter gourd fruits if harvested from 15<sup>th</sup> day after the last application. Therefore, PHI of 15-day could be suggested if acephate 75% SP recommended in bitter gourd.

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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9

Anand Agricultural University, Anand – 388 110, Gujarat (India)

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- 66. Residue and persistence of lambda-cyhalothrin 5% EC in/on bitter gourd (2018)**  
Two foliar sprays of lambda-cyhalothrin in bitter gourd at 10-day interval @ 15 g a.i./ha at fruiting stage resulted in its residue below the Codex MRL of 0.3 µg/g in bitter gourd fruits if harvested immediately after the last application. Therefore, PHI of 1-day could be suggested if lambda-cyhalothrin recommended in bitter gourd.
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- 67. Residue and persistence of spiromesifen 22.9% SC in/on bitter gourd (2018)**  
Two foliar sprays of spiromesifen 22.9% SC in bitter gourd at 10-day interval @ 96 g a.i./ha at fruiting stage resulted in its residue below the limit of quantitation of 0.05 µg/g in bitter gourd fruits if harvested from 10th day after the last application. Therefore, PHI of 10-day could be suggested if spiromesifen recommended on bitter gourd with MRL of 0.05 µg/g
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- 68. Residues and persistence of triazophos 40% EC in/on cucumber (2017)**  
Two foliar sprays of triazophos 40% EC in cucumber at 10-day interval @ 300 g a.i./ha at fruiting stage resulted in its residue below the limit of quantitation of 0.05 µg/g in cucumber fruits if harvested from 10<sup>th</sup> day after the last application. Therefore, PHI of 10-day could be suggested if triazophos 40% EC is recommended in cucumber with MRL of 0.05 µg/g.
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- 69. Residues and persistence of chlorpyrifos 20% EC in/on cucumber (2017)**  
Two foliar sprays of chlorpyrifos 20% EC in cucumber at 10-day interval @ 300 g a.i./ha at fruiting stage resulted in its residue below the MRL 0.2 µg/g (by FSSAI) in cucumber fruits if harvested from 7<sup>th</sup> day after the last application. Therefore, PHI of 7-day could be suggested if chlorpyrifos 20% EC is recommended in cucumber
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- 70. Residues and persistence of quinalphos 25% EC in/on cucumber (2017)**  
Two foliar sprays of quinalphos 25% EC in cucumber at 10-day interval @ 300 g a.i./ha at fruiting stage resulted in its residue below the limit of quantitation of 0.05 µg/g in cucumber fruits if harvested from 7<sup>th</sup> day after the last application. Therefore, PHI of 7-day could be suggested if quinalphos 25% EC is recommended in cucumber with MRL of 0.05 µg/g.
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- 71. Residues and persistence of ethion 50% EC in/on cucumber (2017)**  
Two foliar sprays of ethion 50% EC in cucumber at 10-day interval @ 500 g a.i./ha at fruiting stage resulted in its residue below the MRL 1.0 µg/g (by FSSAI) in cucumber fruits if harvested from 1<sup>st</sup> day after the last application. Therefore, PHI of 1-day could be suggested if ethion 50% EC is recommended in cucumber.
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- 72. Residues and persistence carbendazim 50 %WP in/on cucumber (2017)**  
Two foliar sprays of carbendazim 50% WP in cucumber at 10-day interval @ 150 g a.i./ha at fruiting stage resulted in its residue below the MRL 0.5 µg/g (FSSAI) in cucumber fruits if harvested from 1<sup>st</sup> day after the last application. Therefore, PHI of 1-day could be suggested if carbendazim 50% WP is recommended in cucumber.
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- 73. Residues and persistence of profenophos 50% EC in/on cucumber (2017)**  
Two foliar sprays of profenophos 50% EC in cucumber at 10-day interval @ 500 g a.i./ha at fruiting stage resulted in its residue below the limit of quantitation of 0.05 µg/g in cucumber fruits if harvested from 10<sup>th</sup> day after the last application. Therefore, PHI of 10-day could be suggested if profenophos 50% EC is recommended in cucumber with MRL of 0.05 µg/g.
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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9

Anand Agricultural University, Anand – 388 110, Gujarat (India)

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### 74. Residues and persistence of cypermethrin 25% EC in/on cucumber (2017)

Two foliar sprays of cypermethrin 25% EC in cucumber at 10-day interval @ 50 g a.i./ha at fruiting stage resulted in its residue below the MRL 0.07 µg/g (by CODEX) in cucumber fruits if harvested from 3<sup>rd</sup> day after the last application. Therefore, PHI of 3-day could be suggested if cypermethrin 25% EC is recommended in cucumber.

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### 75. Residues and persistence of spiromesifen 22.9% SC in/on chilli (2017)

Two foliar sprays of spiromesifen 22.9% SC in chilli at 10-day interval @ 96 g a.i./ha at fruiting stage resulted in its residue below the MRL (0.50 µg/g by EU/UK & 0.45 µg/g by US) in chilli fruits if harvested from 15<sup>th</sup> day after the last application. Therefore, PHI of 15-day could be suggested if spiromesifen 22.9% SC is recommended in chilli

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### 76. Residues and persistence of lambda-cyhalothrin 5% EC in/on chilli (2017)

Two foliar sprays of lambda-cyhalothrin 5% EC in chilli at 10-day interval @ 15 g a.i./ha at fruiting stage resulted in its residue below the MRL (0.10 µg/g by EU/UK, 0.2 µg/g by US & 1.0 µg/g by Japan) in chilli fruits if harvested from 1<sup>st</sup> day after the last application. Therefore, PHI of 1-day could be suggested if lambda-cyhalothrin 5% EC is recommended in chilli.

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### 77. Residues and persistence of bifenthrin 10% EC in/on chilli (2017)

Two foliar sprays of bifenthrin 10% EC in chilli at 10-day interval @ 50 g a.i./ha at fruiting stage resulted in its residue below the MRL (0.50 µg/g by CODEX) in chilli fruits if harvested from 1<sup>st</sup> day after the last application. Therefore, PHI of 1-day could be suggested if bifenthrin 10% EC is recommended in chilli.

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### 78. Residues and persistence of triazophos 40% EC in/on bitter gourd (2017)

Two foliar sprays of triazophos 40% EC in bitter gourd at 10-day interval @ 300 g a.i./ha at fruiting stage resulted in its residue below the limit of quantitation of 0.05 µg/g in bitter gourd fruits if harvested from 7<sup>th</sup> day after the last application. Therefore, PHI of 7-day could be suggested if triazophos 40% EC is recommended in bitter gourd with MRL of 0.05 µg/g.

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### 79. Residues and persistence of profenophos 50% EC in/on bitter gourd (2017)

Two foliar sprays of profenophos 50% EC in bitter gourd at 10-day interval @ 500 g a.i./ha at fruiting stage resulted in its residue below the limit of quantitation of 0.05 µg/g in bitter gourd fruits if harvested from 7<sup>th</sup> day after the last application. Therefore, PHI of 7-day could be suggested if profenophos 50% EC is recommended in bitter gourd with MRL of 0.05 µg/g.

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### 80. Residues and persistence of ethion 50% EC in/on bitter gourd (2017)

Two foliar sprays of ethion 50% EC in bitter gourd at 10-day interval @ 500 g a.i./ha at fruiting stage resulted in its residue below the MRL 1 µg/g (by FSSAI) in bitter gourd fruits if harvested immediately after the last application. Therefore, PHI of 1-day could be suggested if ethion 50% EC is recommended in bitter gourd.

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### 81. Residues and persistence of cypermethrin 25% EC in/on bitter gourd (2017)

Two foliar sprays of cypermethrin 25% EC in bitter gourd at 10-day interval @ 50 g a.i./ha at fruiting stage resulted in its residue below the MRL (0.20 µg/g by EU & 2.0 µg/g by Japan) in bitter gourd immediately after the last application. Therefore, PHI of 1-day could be suggested if cypermethrin 25% EC is recommended in bitter gourd.

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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9  
Anand Agricultural University, Anand – 388 110, Gujarat (India)

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### 82. Residues and persistence of quinalphos 25% EC in/on bitter gourd (2017)

Two foliar sprays of quinalphos 25% EC in bitter gourd at 10-day interval @ 250 g a.i./ha at fruiting stage resulted in its residue below the limit of quantitation of 0.05 µg/g in bitter gourd fruits if harvested from 3rd day after the last application. Therefore, PHI of 3-day could be suggested if quinalphos 25% EC is recommended in bitter gourd with MRL of 0.05 µg/g.

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### 83. Residues and persistence of chlorpyrifos 20% EC in/on bitter gourd (2017)

Two foliar sprays of chlorpyrifos 20% EC in bitter gourd at 10-day interval @ 300 g a.i./ha at fruiting stage resulted in its residue below the MRL of 0.20 µg/g (by FSSAI) in bitter gourd from 3<sup>rd</sup> day after the last application. Therefore, PHI of 3- day could be suggested if chlorpyrifos 20% EC is recommended in bitter gourd.

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### 84. Residue and persistence of carbendazim 50% WP in/on bitter gourd (2017)

Two foliar sprays of carbendazim 50% WP in bitter gourd at 10-day interval @ 150 g a.i./ha at fruiting stage resulted in its residue below the MRL of 0.50 µg/g (by FSSAI) in bitter gourd from 3<sup>rd</sup> day after the last application. Therefore, PHI of 3- day could be suggested if carbendazim 50 WP is recommended in bitter gourd.

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### 85. Residues and persistence of imidacloprid 17.8% SL in/on bitter gourd (2017)

Two foliar sprays of imidacloprid 17.8% SL in bitter gourd at 10-day interval @ 20 g a.i./ha at fruiting stage resulted in its residue below the MRL (1 µg/g by EU, 0.40 µg/g by Japan and 0.50 µg/g by US) in bitter gourd immediately after the last application. Therefore, PHI of 1-day could be suggested if imidacloprid 17.8% SL is recommended in bitter gourd.

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### 86. Residue and persistence of ethion 50% EC in/on cabbage (2016)

Two foliar sprays of ethion 50% EC in cabbage at 10-day interval @ 500 g a.i./ ha starting from 50 per cent head formation resulted in its residue below the limit of quantitation of 0.05 µg/g in cabbage heads if harvested from 7<sup>th</sup> day after the last spray. Therefore, PHI of 7 days could be suggested if ethion 50% EC is recommended in cabbage with MRL of 0.05 µg/g.

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### 87. Residue and persistence of acephate 75% SP in/on cabbage (2016)

Two foliar sprays of acephate 75% SP in cabbage at 10 days interval @ 560 g a.i./ha starting from 50 per cent head formation resulted in cabbage head residue below the MRL 2 µg/g (CODEX) immediately after the last application. Therefore, PHI of 1 day could be suggested if acephate 75% SP is recommended in cabbage.

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### 88. Residue and persistence of triazophos 40% EC in/on cabbage (2016)

Two foliar sprays of triazophos 40% EC in cabbage at 10 days interval @ 500 g a.i./ha starting from 50 per cent head formation resulted in its residue below the limit of quantitation of 0.05 µg/g in cabbage heads if harvested from 10<sup>th</sup> day after the last spray. Therefore, PHI of 10 days could be suggested if triazophos 40% EC is recommended in cabbage with MRL of 0.05 µg/g.

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### 89. Residue and persistence of carbendazim 50% WP in/on cabbage (2016)

Two foliar sprays of carbendazim 50% WP in cabbage at 10 days interval @ 250 g a.i./ha starting from 50 per cent head formation resulted 0.70 µg/g residues even on the 15th day of the last application which being higher than limit of quantitation of 0.05 µg/g, label claim of carbendazim 50% WP can be considered for cabbage based on the risk assessment.

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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9  
Anand Agricultural University, Anand – 388 110, Gujarat (India)

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### 90. Residue and persistence of quinalphos 25% EC in/on cabbage (2016)

Two foliar sprays of quinalphos 25% EC in cabbage at 10 days interval @ 250 g a.i./ha starting from 50 per cent head formation resulted in its residue below the limit of quantitation of 0.05 µg/g in cabbage head if harvested from 5<sup>th</sup> day after the last spray. Therefore, PHI of 5 days could be suggested if quinalphos 25% EC is recommended on cabbage with MRL of 0.05 µg/g.

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### 91. Residue and persistence of ethion 50% EC in/on cauliflower (2016)

Two foliar sprays of ethion 50% EC in cauliflower at 10 days interval @ 500 g a.i./ha starting from 50 per cent curd formation resulted in its residue below the limit of quantitation of 0.05 µg/g in cauliflower curd if harvested from 15<sup>th</sup> day after the last spray. Therefore, PHI of 15 days could be suggested if ethion 50% EC is recommended on cauliflower with MRL of 0.05 µg/g.

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### 92. Residue and persistence of acephate 75% SP in/on cauliflower (2016)

Two foliar sprays of acephate 75% SP in cauliflower at 10 days interval @ 560 g a.i./ha starting from 50 per cent curd formation resulted in 0.12 µg/g residues even on the 15<sup>th</sup> day after the last application which being higher than the limit of quantitation of 0.05 µg/g, label claim of acephate 75% SP can be considered for cauliflower based on the risk assessment.

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### 93. Residue and persistence of carbendazim 50% WP in/on cauliflower (2016)

Two foliar sprays of carbendazim 50% WP in cauliflower at 10 days interval @ 250 g a.i./ha starting from 50% curd formation resulted in 0.16 µg/g residues even on the 15<sup>th</sup> day of the last application which being higher than limit of quantitation of 0.05 µg/g, label claim of carbendazim 50% WP can be considered for cauliflower based on the risk assessment.

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### 94. Residue and persistence of triazophos 40% EC in/on cauliflower (2016)

Two foliar sprays of triazophos 40% EC in cauliflower at 10 days interval @ 500 g a.i./ha starting from 50 per cent curd formation resulted in its residue below the limit of quantitation of 0.05 µg/g in cauliflower curd if harvested from 10<sup>th</sup> day after the last spray. Therefore, PHI of 10 days could be suggested if triazophos 40% EC is recommended in cauliflower with MRL of 0.05 µg/g.

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### 95. Residue and persistence of quinalphos 25% EC in/on cauliflower (2016)

Two foliar sprays of quinalphos 25% EC in cauliflower at 10 days interval @ 250 g a.i./ha starting from 50% curd formation resulted in its residue below its MRL of 0.1 µg/g in cauliflower curd if harvested from 7<sup>th</sup> day after the last spray. Therefore, PHI of 7 days could be suggested.

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### 96. Residue and persistence of quinalphos 25% EC in/on chilli (2016)

Two foliar sprays of quinalphos 25% EC in chilli at 10 days interval @ 250 g a.i./ha starting from fruiting stage resulted in its residue below its MRL of 0.2 µg/g in green chilli fruits if harvested from 5<sup>th</sup> day after the last spray. Therefore, PHI of 5 days could be suggested.

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### 97. Residue and persistence of triazophos 40% EC in/on chilli (2016)

Two foliar sprays of triazophos 40% EC in chilli at 10 days interval @ 500 g a.i./ha starting from fruiting stage resulted in its residue below its limit of quantitation of 0.05 µg/g in green chilli fruits if harvested from 15<sup>th</sup> day after the last spray. Therefore, PHI of 15 days could be suggested if triazophos 40% EC is recommended in chilli with MRL of 0.05 µg/g.

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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9  
Anand Agricultural University, Anand – 388 110, Gujarat (India)

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### 98. Residue and persistence of chlorpyrifos 20% EC in/on chilli (2016)

Two foliar sprays of chlorpyrifos 20% EC in chilli at 10 days interval @ 300 g a.i./ha starting from fruiting stage resulted in its residue below its limit of quantitation of 0.01 µg/g in green chilli fruits if harvested from 10<sup>th</sup> day after the last spray. Therefore, PHI of 10 days could be suggested if chlorpyrifos 20% EC is recommended on chilli with MRL of 0.01 µg/g.

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### 99. Residue and persistence of carbendazim 50% WP in/on green chilli (2016)

Two foliar sprays of carbendazim 50% WP in chilli at 10 days interval @ 250 g a.i./ha starting from fruiting stage resulted in its residue below the MRL 2 µg/g (CODEX) in green chilli fruits on the 3<sup>rd</sup> day after the last application. Therefore, PHI of 3 days could be suggested if carbendazim 50% WP is recommended in chilli.

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### 100. Residue and persistence of fluopyram 200 g/L+ tebuconazole 200 g/L SC in/on chilli (2016)

Three foliar sprays of fluopyram 200 g/L + tebuconazole 200 g/L SC in chilli at 10 days interval @ 100 + 100 g a.i./ha starting from fruiting stage resulted its residue below its limit of quantitation of 0.05 µg/g in green chilli fruits on the 20<sup>th</sup> day after the last application. Therefore, PHI of 20 days could be suggested if the fluopyram 200 g/L + tebuconazole 200 g/L SC combination is recommended in chilli with MRL of 0.05 µg/g.

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### 101. Residue and persistence of carbendazim 50% WP in/on capsicum grown in open field (2016)

Two foliar sprays of carbendazim 50% WP in capsicum grown in open field at 10 days interval @ 250 g a.i./ha starting from fruiting stage resulted in its residue 0.41 µg/g in the fruits even on the 20<sup>th</sup> day after the last application, which being higher than the limit of quantitation of 0.05 µg/g, label claim of carbendazim 50% WP can be considered for capsicum based on risk assessment.

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### 102. Residue and persistence of chlorpyrifos 20% EC in/on capsicum grown in open field (2016)

Two foliar sprays of chlorpyrifos 20% EC in capsicum grown in open field at 10 days interval @ 300 g a.i./ha starting from fruiting stage resulted in its residue below its MRL 2 µg/g (CODEX) in the fruits immediately after the last application. Therefore, PHI of 1 day could be suggested if chlorpyrifos 20% EC is recommended in capsicum grown in open field.

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### 103. Residue and persistence of quinalphos 25% EC in/on capsicum grown in polyhouse (2016)

Two foliar sprays of quinalphos 25% EC in capsicum grown in polyhouse at 10 days interval @ 250 g a.i./ha starting from fruiting stage resulted in its residue below its limit of quantitation of 0.05 µg/g in the fruits if harvested from 10<sup>th</sup> day after the last spray. Therefore, PHI of 10 days could be suggested if quinalphos 25% EC is recommended in capsicum grown in polyhouse with MRL of 0.05 µg/g.

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### 104. Residue and persistence of triazophos 40% EC in/on capsicum grown in polyhouse (2016)

Two foliar sprays of triazophos 40% EC in capsicum grown in polyhouse at 10 days interval @ 500 g a.i./ha starting from fruiting stage resulted in its residue below its limit of quantitation of 0.05 µg/g in the fruits if harvested from 15<sup>th</sup> day after the last spray. Therefore, PHI of 15 days could be suggested if triazophos 40% EC is recommended in capsicum grown in polyhouse with MRL of 0.05 µg/g.

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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9

Anand Agricultural University, Anand – 388 110, Gujarat (India)

- 
- 105 Residue and persistence of chlorpyrifos 20% EC in/on capsicum grown in polyhouse (2016)**  
Two foliar sprays of chlorpyrifos 20% EC in capsicum grown in polyhouse at 10 days interval @ 300 g a.i./ha starting from fruiting stage resulted in its residue below its MRL of 2 µg/g (CODEX) in the fruits immediately after the last application. Therefore, PHI of 1 day could be suggested if chlorpyrifos 20% EC is recommended in capsicum grown in polyhouse.
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- 106 Residue and persistence of acephate 75% SP in/on capsicum grown in polyhouse (2016)**  
Two foliar sprays of acephate 75% SP in capsicum grown in polyhouse at 10 days interval @ 560 g a.i./ha starting from fruiting stage resulted in its residue 0.42 µg/g in the fruits even on the 15<sup>th</sup> day after the last application which being higher than limit of quantitation of 0.05 µg/g, label claim of acephate 75% SP can be considered for capsicum based on the risk assessment.
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- 107 Residue and persistence of carbendazim 50% WP in/on capsicum grown in polyhouse (2016)**  
Two foliar sprays of carbendazim 50% WP in capsicum grown in polyhouse at 10 days interval @ 250 g a.i./ha starting from fruiting stage resulted in its residue 0.25 µg/g in the fruits even on the 20<sup>th</sup> day after the last application which being higher than limit of quantitation of 0.05 µg/g, label claim of carbendazim 50% WP can be considered for capsicum based on the risk assessment.
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- 108 Residue and persistence of quinalphos 25% EC in/on tomato (2016)**  
Two foliar sprays of quinalphos 25% EC in tomato at 10 days interval @ 250 g a.i./ha starting from fruiting stage resulted in its residue below its limit of quantitation of 0.05 µg/g in tomato fruits if harvested from 7<sup>th</sup> day after the last spray. Therefore, PHI of 7 days could be suggested if quinalphos 25% EC is recommended in tomato with MRL of 0.05 µg/g.
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- 109 Residue and persistence of carbendazim 50% WP in/on tomato (2016)**  
Two foliar sprays of carbendazim 50% WP in tomato at 10 days interval @ 250 g a.i./ha starting from fruiting stage resulted in its residue below the MRL 0.5 µg/g (CODEX) in the tomato fruits on the 15<sup>th</sup> day after the last application. Therefore, PHI of 15 days could be suggested if carbendazim 50% WP is recommended in tomato.
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- 110. Residue and persistence of chlorpyrifos 20% EC in/on tomato (2016)**  
Two foliar sprays of chlorpyrifos 20% EC in tomato at 10 days interval @ 300 g a.i./ha starting from fruiting stage resulted in its residue below its limit of quantitation of 0.01 µg/g in tomato fruits if harvested from 7<sup>th</sup> day after the last spray. Therefore, PHI of 7 days could be suggested if chlorpyrifos 20% EC is recommended in tomato with MRL of 0.01 µg/g.
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- 111. Residue and persistence of imidacloprid 70% WG in/on tomato (2016)**  
Three foliar sprays of imidacloprid 70% WG in tomato at 7 days interval @ 35 g a.i./ha starting from fruiting stage resulted in its residue below its MRL of 1.0 µg/g in tomato fruits one hour after the last application. Therefore, PHI of 1 day could be suggested if imidacloprid 70% WG is recommended in tomato.
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- 112. Residue and persistence of fluopyram 400 g/L SC in/on tomato (2016)**  
Soil drench of fluopyram 400 g/L SC @ 250 g a.i./ha in tomato, twice at 15 days interval starting from fruiting stage revealed its residue below determination level in tomato fruits even up to 15 days after the last application. Therefore PHI of 1 day could be suggested if fluopyram 400 g/L SC is recommended in tomato.
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**113. Residue and persistence of imidacloprid 17.8% SL in/on okra (2016)**

Two foliar sprays of imidacloprid 17.8% SL in okra at 10 days interval @ 20 g a.i./ha starting from fruiting stage resulted in its residue below its MRL of 2 µg/g in okra fruits one hour after the last application. Therefore, PHI of 1 day could be suggested.

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**114. Residue and persistence of imidacloprid 17.8% SL in/on brinjal (2016)**

Two foliar sprays of imidacloprid 17.8% SL in brinjal at 10 days interval @ 20 g a.i./ha starting from fruiting stage resulted in its residue below its MRL 0.01 µg/g at 1-day after the last application. Therefore, PHI of 1 day could be suggested if imidacloprid 17.8% SL is recommended in brinjal.

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**115. Residue and persistence of spiromesifen 22.9% SC in/on brinjal (2016)**

Two foliar sprays of spiromesifen 22.9% SC in brinjal at 10 days interval @ 96 g a.i./ha starting from fruiting stage resulted in its residue below limit of quantitation of 0.05 µg/g in brinjal fruits one day after the last application. Therefore, PHI of 1 day could be suggested.

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**116. Residue and persistence of fluopyram 200 g/L + tebuconazole 200 g/L SC in/on onion (2016)**

Three foliar sprays of fluopyram 200 g/L + tebuconazole 200 g/L SC in onion at 10-day interval @ 75 +75 g a.i./ha starting from bulb formation stage resulted in the residue below their limit of quantitation of 0.05 µg/g in onion bulbs on the 50th day (at harvest) after the last application. Therefore, the PHI of 50 days could be suggested for bulb onion if the fluopyram 200 g/L + tebuconazole 200 g/L SC combination is recommended in onion with 0.05 µg/g MRL. However, in spring onion as the residue levels being higher than the limit of quantitation even on the 20th day, risk assessment can be carried out to fix the MRLs.

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**117. Residue and persistence of flubendiamide 240 g/L + thiacloprid 240 g/L SC in/on redgram (2016)**

Three foliar sprays of flubendiamide 240 g/L + thiacloprid 240 g/L SC in red gram at 10 days interval @ 48 + 48 g a.i./ha starting from pod formation stage resulted in the residues below their limit of quantitation of 0.05 µg/g in matured pods on the 41<sup>st</sup> day (harvest) after the last application. Therefore, PHI of 41 days could be suggested for matured pods/seeds if flubendiamide 240 g/L + thiacloprid 240 g/L SC combination is recommended in red gram with 0.05 µg/g MRL. However, in green pods as the residue levels being higher than the limit of quantitation even on the 20<sup>th</sup> day, risk assessment can be carried out to fix the MRLs in green pods.

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**118. Residue and persistence of trifloxystrobin 25% + tebuconazole 50% WG in/on cowpea (2016)**

Two foliar sprays of trifloxystrobin 25% + tebuconazole 50% WG in cowpea at 10 days interval @ 87.5+175 g a.i./ha at pod formation stage resulted in the residues below their limit of quantitation of 0.05 µg/g in matured pod /seed on the 42<sup>nd</sup> day (harvest) after the last application. Therefore, PHI of 42 days could be suggested for matured pods if the trifloxystrobin 25% + tebuconazole 50% WG combination is recommended in cowpea with 0.05 µg/g MRL. However, in green cowpea pods as the residue levels reached below determination limit of 0.05 µg/g on the 20<sup>th</sup> day, PHI of 20-day could be suggested for green pods

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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9  
Anand Agricultural University, Anand – 388 110, Gujarat (India)

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### 119. Residue and persistence of deltamethrin 2.5% EC in/on chickpea (2016)

Three foliar sprays of deltamethrin 2.5% EC in chickpea at 7 days interval @ 12.5 g a.i./ha starting from pod setting stage resulted in its residue below its limit of quantitation of 0.05 µg/g in matured pods/seeds on the 37<sup>th</sup> day (harvest) after the last application. Therefore, PHI of 37 days could be suggested if deltamethrin 2.5% EC is recommended in chickpea with 0.05 µg/g MRL in seed. However, for green pods, PHI of 7 days could be suggested.

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### 120. Residue and persistence of monocrotophos 36% SL in castor (2015)

Two foliar sprays of monocrotophos 36% SL in castor at 15 days interval @ 157.32 and 314.64 g a.i. ha<sup>-1</sup> starting from flowering stage resulted in its residue below the limit of quantitation of 0.05 µg g<sup>-1</sup> in castor oil and cake if harvested 84 days after the second spray. Therefore, PHI of 84 days could be suggested if monocrotophos 36% SL is recommended on castor with MRL of 0.05 µg/g in oil and cake.

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### 121. Residue and persistence of monocrotophos 36% SL in pigeon pea (2015)

Two foliar sprays of monocrotophos 36 SL in pigeonpea at 15 days interval @ 450 and 900 g a.i./ha starting from pod formation stage resulted in its residue below determination level of 0.05 µg g<sup>-1</sup> in seeds 45 days after the last spray. Therefore, PHI of 45 days could be suggested if monocrotophos 36% SL is recommended on pigeon pea with MRL of 0.05 µg/g in grains.

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### 122. Residue and persistence of monocrotophos 36% SL in mustard (2015)

Two foliar sprays of monocrotophos 36% SL in mustard at 10 days interval @ 135 and 270 g a.i./ha starting from pod formation stage resulted in its residue below the limit of quantitation of 0.05 µg/g in mustard oil and cake if harvested 43 days after the second spray. Therefore, PHI of 43 days could be suggested if monocrotophos 36% SL is recommended on mustard with MRL of 0.05 µg/g for oil and cake.

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### 123. Residue and persistence of phosphamidon 40% SL in mustard (2015)

Two foliar sprays of phosphamidon 40% SL in mustard at 10 days interval @ 200 and 400 g a.i./ha starting from flowering stage resulted in its residue below the limit of quantitation of 0.05 µg/g in mustard oil and cake if harvested 43 days after the second spray. Therefore, PHI of 43 days could be suggested if phosphamidon is recommended on mustard with MRL of 0.05 µg/g for oil and cake.

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### 124. Residue and persistence of phenthoate 50% EC in cotton (2015)

Three foliar sprays of phenthoate 50% EC in cotton at 15 days interval @ 1000 and 2000 g a.i./ha starting from flowering and square formation stage resulted in its residue below the limit of quantitation of 0.05 µg/g in cotton oil, lint and cake if harvested 29 days after the third spray. Therefore, PHI of 29 days could be suggested if phenthoate 50% EC is recommended on cotton with MRL of 0.05 µg/g for oil, lint and cake.

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### 125. Residue and persistence of ipconazole 25% + metalaxyl 20% ME in maize (2015)

.zSeed treatment of a combination product ipconazole 25% + metalaxyl 20% ME in *rabi* maize @ 0.25 + 0.20 and 0.50 + 0.40 g a.i./kg seed did not result in their residues in immature grains with cob as well as matured grains at harvest. The residues persisted in the seedlings only up to the 20 days from the date of treatment. The combination product if registered for maize can be considered safe from residue point of view.

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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9

Anand Agricultural University, Anand – 388 110, Gujarat (India)

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### 126. Residue and persistence of penflufen 154 g/L + trifloxystrobin 154 g/L FS in chickpea (2015)

Seed treatment of the combination product penflufen 154 g/L+ trifloxystrobin 154 g/L FS @ 15.4 + 15.4 and 30.8 + 30.8 g a.i./100 kg seed in chickpea neither revealed residues of any molecule of the mixture nor the metabolite of trifloxystrobin above determination in the green pods collected at pod formation stage or matured grains and soil collected at the time of harvest.

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### 127. Residue and persistence of flonicamid 15% + fipronil 15% WG in cotton (2015)

Two foliar applications of the combination product of flonicamid 15% + fipronil 15% WG @ 60 + 60 and 120 + 120 g a.i. ha<sup>-1</sup> in cotton at 15 days interval starting from flowering and boll formation stage revealed residues of either product below their determination levels in cotton seed, lint, oil and cake 35 days after the last application. Therefore, the PHI of 35 days can be recommended if a mixture of flonicamid 15% + fipronil 15% WG is recommended in cotton.

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### 128. Residue and persistence of spirotetramate 150 g/L OD in brinjal (2015)

Three foliar applications of spirotetramate 150 g/L OD in brinjal at 10 days interval @ 90 g a.i./ha starting from flowering stage resulted in its residue below determination level in brinjal fruits within one hour of the last application. Considering the MRL of spirotetramate at the limit of quantitation, i.e. 0.05 µg/g, PHI of 1 day can be recommended if the insecticide is registered on brinjal.

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### 129. Residue and persistence of chlorpyrifos 20% EC in okra (2015)

Two foliar sprays of chlorpyrifos 20% EC in okra at 10 days interval @ 300 g a.i./ha starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg/g in okra if fruits are harvested from 3 days after the second spray. Therefore, PHI of 3 days could be suggested if chlorpyrifos 20% EC is recommended on okra with MRL of 0.01 µg/g.

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### 130. Residue and persistence of quinalphos 25% EC in okra (2015)

Two foliar sprays of quinalphos 25% EC in okra at 10 days interval @ 250 g a.i./ha starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg g<sup>-1</sup> in okra if fruits are harvested from 3 days after the second spray. Therefore, PHI of 3 days could be suggested if quinalphos 25 EC is recommended on okra with MRL of 0.01 µg/g.

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### 131. Residue and persistence of ethion 50 EC in okra (2015)

Two foliar sprays of ethion 50% EC in okra at 10 days interval @ 500 g a.i. ha<sup>-1</sup> starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg g<sup>-1</sup> in okra if fruits are harvested from 10 days after the second spray. Therefore, PHI of 10 days could be suggested if ethion 50% EC is recommended on okra with MRL of 0.01 µg g<sup>-1</sup>.

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### 132. Residue and persistence of carbendazim 50% WP in okra (2015)

Two foliar sprays of carbendazim 50% WP in okra at 10 days interval @ 250 g a.i./ha starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg/g in okra if fruits are harvested from 20 days after the second spray. Therefore, PHI of 20 days could be suggested if carbendazim 50% WP is recommended on okra with MRL of 0.01 µg/g.

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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9  
Anand Agricultural University, Anand – 388 110, Gujarat (India)

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### 133. Residue and persistence of chlorpyrifos 20% EC in brinjal (2015)

Two foliar sprays of chlorpyrifos 20% EC in brinjal at 10 days interval @ 300 g a.i./ha starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg/g in brinjal if fruits are harvested from 5 days after the second spray. Therefore, PHI of 5 days could be suggested if chlorpyrifos 20% EC is recommended on brinjal with MRL of 0.01 µg/g.

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### 134. Residue and persistence of quinalphos 25% EC in brinjal (2015)

Two foliar sprays of quinalphos 25% EC in brinjal at 10 days interval @ 250 g a.i./ha starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg/g in brinjal if fruits are harvested from 5 days after the second spray. Therefore, PHI of 5 days could be suggested if quinalphos 25% EC is recommended on brinjal with MRL of 0.01 µg/g.

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### 135. Residue and persistence of ethion 50% EC in brinjal (2015)

Two foliar sprays of ethion 50% EC in brinjal at 10 days interval @ 500 g a.i./ha starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg/g in brinjal if fruits are harvested from 15 days after the second spray. Therefore, PHI of 15 days could be suggested if ethion 50% EC is recommended on brinjal with MRL of 0.01 µg/g.

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### 136. Residue and persistence of carbendazim 50% WP in brinjal (2015)

Two foliar sprays of carbendazim 50% WP in brinjal at 10 days interval @ 250 g a.i./ha starting from fruiting stage resulted in its residue below the limit of quantitation of 0.01 µg/g in brinjal if fruits are harvested from 23 days after the second spray. Therefore, PHI of 23 days could be suggested if carbendazim 50% WP is recommended on brinjal with MRL of 0.01 µg/g.

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### 137. Residue and persistence of acephate 75% SP in/on okra (2014)

Two foliar sprays of acephate 75% SP in okra at 10-day interval @ 560 g a.i./ha starting from fruiting stage resulted in its residues below the MRL of 0.05 µg/g (LOQ-Limit of Quantitation) in okra if fruits are harvested from 10<sup>th</sup> day after the second spray. Therefore, pre-harvest interval (PHI) of 10-day could be suggested if acephate is recommended on okra.

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### 138. Residue and persistence of profenophos 50% EC in/on okra (2014)

Two foliar sprays of profenophos 50% EC in okra at 10-day interval @ 500 g a.i./ha starting from fruiting stage resulted in its residue below MRL 0.05 µg/g (LOQ-Limit of Quantitation) in okra fruits if harvested 5 days after the second spray. Therefore, PHI of 5-day could be suggested if profenophos is recommended on okra.

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### 139. Residue and persistence of triazophos 40% EC in/on okra (2014)

Two foliar sprays of triazophos 40% EC in okra at 10-day interval @ 500 g a.i./ha starting from fruit initiation stage resulted in its residue below the MRL of 0.05 µg/g (LOQ) in okra if fruits are harvested 5 days after the second spray. Therefore, PHI of 5 days could be suggested if triazophos is recommended on okra.

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### 140. Residues and Dissipation of Acephate on Brinjal (2013)

Two foliar sprays of acephate in brinjal at 10-day interval @ 560 g a.i./ha starting from fruiting stage resulted in its residue below MRL 0.1 µg/g (LOQ) in brinjal if fruits are harvested 10<sup>th</sup> day after the second spray. Therefore, PHI of 10-day could be suggested if acephate is recommended on brinjal.

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## All India Network Project on Pesticide Residues

Pesticide Residues Laboratory, ICAR Unit-9  
Anand Agricultural University, Anand – 388 110, Gujarat (India)

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### 141. Residues and Dissipation of Profenophos on Brinjal (2013)

Two foliar sprays of profenophos in brinjal at 10-day interval @ 500 g a.i./ha starting from fruiting stage resulted in its residue below EU MRL of 0.05 µg/g in brinjal fruits if harvested 15<sup>th</sup> day after the second spray. Therefore, PHI of 15-day could be suggested if profenophos is recommended on brinjal.

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### 142. Residues and Dissipation of Triazophos on Brinjal (2013)

Two foliar sprays of triazophos in brinjal at 10-day interval @ 500 g a.i./ha starting from fruit initiation stage resulted in its residue below the MRL of 0.05 µg/g (LOQ) in brinjal if fruits are harvested 15<sup>th</sup> day after the second spray. Therefore, PHI of 15-day could be suggested if triazophos is recommended on brinjal.

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### 143. Residues and Dissipation of Chlorpyriphos on Cabbage (2013)

Two foliar sprays of chlorpyriphos in cabbage at 10-day interval @ 300 g a.i./ha starting from head formation stage resulted in its residue below EU/Codex MRL of 1.0 µg/g in cabbage if harvested even one hour (0-day) after the second spray. Therefore, PHI of 1-day could be suggested if chlorpyriphos is recommended on cabbage.

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### 144. Residues and Dissipation of Profenophos on Cabbage (2013)

Two foliar sprays of profenophos in cabbage at 10-day interval @ 500 g a.i./ha starting from head formation stage resulted in its residue below EU MRL of 0.05 µg/g in cabbage if heads are harvested 7<sup>th</sup> day after the second spray. Therefore, PHI of 7-day could be suggested if profenophos is recommended on cabbage.

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### 145. Residues and Dissipation of Acephate on Capsicum (2013)

Two foliar sprays of acephate in capsicum at 10-day interval @ 560 g a.i./ha starting from fruit initiation stage resulted in its residues below MRL of 0.1 µg/g (LOQ) in capsicum fruits if harvested 15<sup>th</sup> day after the second spray. Therefore, PHI of 15-day could be suggested if acephate is recommended on capsicum.

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### 146. Residues and Dissipation of Profenophos on Capsicum (2013)

Two foliar sprays of profenophos in capsicum at 10-day interval @ 500 g a.i./ha starting from fruit initiation stage resulted in its residue below 0.05 µg/g (LOQ) in capsicum if fruits are harvested from 10<sup>th</sup> day after the second spray. Therefore, PHI of 10-day could be suggested if profenophos is recommended on capsicum.

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### 147. Residues and Dissipation of Quinalphos on Capsicum (2013)

Two foliar sprays of quinalphos in capsicum at 10-day interval @250 g a.i./ha starting from fruit initiation stage resulted in its residue below EU MRL of 0.05 µg/g in capsicum if fruits are harvested 1 day after the second spray. Therefore, PHI of 1-day could be suggested if quinalphos is recommended on capsicum.

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### 148. Residues and Dissipation of Triazophos on Capsicum (2013)

Two foliar sprays of triazophos in capsicum at 10-day interval @ 500 g a.i./ha starting from fruit initiation stage resulted in its residue below the MRL of 0.05 µg/g (LOQ) in capsicum if fruits are harvested 7<sup>th</sup> day after the second spray. Therefore, PHI of 7-day could be suggested if triazophos is recommended on capsicum.

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Pesticide Residues Laboratory, ICAR Unit-9  
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### 149. Residues and Dissipation of Chlorpyrifos on Cauliflower (2013)

Two foliar sprays of chlorpyrifos in cauliflower at 10-day interval @ 300 g a.i./ha starting from curd formation stage resulted in its residue below EU MRL of 0.05 µg/g in cauliflower if harvested 15th day after second spray. Therefore, PHI of 15-day could be suggested if chlorpyrifos is recommended on cauliflower.

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### 150. Residues and Dissipation of Cypermethrin on Cauliflower (2013)

Two foliar sprays of cypermethrin in cauliflower at 10-day interval @ 50 g a.i./ha starting from curd formation stage resulted in its residue below EU MRL of 0.05 µg/g in cauliflower curd if harvested 5th day after the second spray. Therefore, PHI of 5-day could be suggested if cypermethrin is recommended on cauliflower.

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### 151. Residues and Dissipation of Profenophos on Cauliflower (2013)

Two foliar sprays of profenophos in cauliflower at 10-day interval @ 500 g a.i./ha starting from curd formation stage resulted in its residue below EU MRL 0.05 µg/g in cauliflower curd if harvested 7th day after the second spray. Therefore, PHI of 7-day could be suggested if profenophos is recommended on cauliflower.

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### 152. Residues and Dissipation of Acephate on Chilli (2013)

Two foliar sprays of acephate in chilli at 10-day interval @ 560 g a.i./ha starting from fruiting stage resulted in its residue below the Codex MRL of 5.0 µg/g one hour after application. Therefore, PHI of 1-day could be suggested if acephate is recommended on chilli.

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### 153. Residues and Dissipation of Cypermethrin on Chilli (2013)

Two foliar sprays of cypermethrin in chilli at 10-day interval @ 50 g a.i./ha starting from fruit initiation stage resulted in its residue below EU MRL of 0.5 µg/g in chilli if fruits are harvested on even 1 hour (0-day) after the second spray. Therefore, PHI of 1-day could be suggested if cypermethrin is recommended on chilli.

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### 154. Residues and Dissipation of Profenophos on Chilli (2013)

Two foliar sprays of profenophos at 10-day interval @ 500 g a.i./ha starting from fruit initiation stage resulted in its residues below the MRL of 0.05 µg/g (LOQ & EU MRL) in chilli fruits if harvested 10th day after the second spray. Therefore, PHI of 10-day could be suggested if profenophos is recommended on chilli.

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### 155. Residues and Dissipation of Cypermethrin on Tomato (2013)

Two foliar sprays of cypermethrin in tomato at 10-day interval @ 50 g a.i./ha starting from fruiting stage resulted in its residues below EU MRL of 0.5 µg/g in tomato if fruits are harvested even one hour (0-day) after the second spray. Therefore, PHI of 1-day could be suggested if cypermethrin is recommended on tomato.

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### 156. Residues and Dissipation of Profenophos on Tomato (2013)

Two foliar sprays of profenophos in tomato at 10-day interval @ 500 g a.i./ha starting from fruit initiation stage resulted in its residue below EU MRL of 10 µg/g in tomato even if fruits are harvested one hour (0-day) after the second spray. Therefore, PHI of 1-day could be suggested if profenophos is recommended on tomato.

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### 157. Residues and Dissipation of Triazophos on Tomato (2013)

Two foliar sprays of triazophos in tomato at 10-day interval @ 500 g a.i./ha starting from fruit initiation stage resulted in its residue below the MRL of 0.05 µg/g (LOQ) in tomato if fruits are harvested 10th day after the second spray. Therefore, PHI of 10-day could be suggested if triazophos is recommended on tomato.

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### 158. Dissipation of Quizalofop ethyl 5% EC in Blackgram (2009)

Control of grassy weeds in blackgram following post emergence foliar application of quizalofop ethyl 5 EC @ 50 g a.i./ha (20 mL formulation per 10 L water) as post emergence 29 days after sowing, do not pose residue problem in blackgram grains at harvest. Therefore, the PHI of 47 days is recommended.

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### 159. Dissipation of Quizalofop ethyl 5% EC in Onion (2009)

Control of grassy weeds in onion following a single spray of quizalofop ethyl 5 EC as post emergence @ 50 g a.i./ha (20 mL formulation per 10 L water) 22 days after transplanting, do not pose residue problem in onion plants, if harvested 3 days after application. Therefore, the PHI of 3 days for green onion is recommended. Onion bulbs at harvest were also safe from residue point of view.

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