

Annexure vi

Recommended chemicals of Central Insecticide Board

A. On the recommendation of pesticides by TNAU:

1. Tamil Nadu Agricultural University (TNAU) regularly conducts bio-efficacy and allied tests with newer molecules of pesticides based on research requests from Pesticide Industry. As and when the research is completed, TNAU through its internal process of scrutiny, evaluation and approval in Crop Scientist Meet and Scientific Workers Conference recommend the most fit pesticides. The recommendations are given specifically to the formulation of pesticides and not to the chemical as a whole. Also TNAU recommends pesticide formulations that are considered suitable to the Tamil Nadu condition. Hence, some of the formulations of pesticides don't find immediate recommendation even though they are registered with the CIB&RC.
2. As and when newer requests for different formulations of same chemicals by different pesticide firms are received from pesticide industries, they are also taken up for research and recommendation by TNAU.
3. In certain cases, old molecules are in recommendation, that need to be phased out. In order to meet the requirement of the crops in cultivation and also considering present pest scenario, based on previous detailed research with newer molecules of pesticides TNAU has brought them in to the recommendation state replacing the old ones registered still with CIB&RC.
4. The CIB&RC registered products are also test verified in Tamil Nadu for their suitability under differing agro-climatic conditions.
5. The recommendations of insecticides are made by Tamil Nadu Agricultural University based on those given by Central Insecticide Board to adhere to the label claim of the products also when no ready recommendations are available with TNAU.
6. Tamil Nadu Agricultural University is having the policy not to recommend synthetic pyrethroids either alone or as combination products.
7. The banned chemicals are not recommended by TNAU.

B. Measures to recommend newer molecules of pesticides:

As many as 72 pesticide molecules are being evaluated under Tamil Nadu condition at TNAU. The list is enclosed at Annexure -I.

The information on "Recommended chemicals list of Central Insecticide Board" and those under recommendation in TNAU CPG are enclosed.

ANNEXURE-I

1. Chlorantraniliprole 18.5% SC on green gram pests, maize fall army worm and pests of rice , sugarcane, tomato , chilli and bittergourd:
2. Fipronil 5% SC against cotton whitefly ,
3. Broflanilide 300 SC against cotton bollworms
4. Cyantraniliprole 200 SC against pests of tomato , chilli and capsicum, watermelon and cucumber
5. Flonicamid 50 % WG against sucking pests of cotton
6. Flubendiamide 90 G/L + Deltamethrin 60 G/L SC against corn fall army worm and stem borer
7. Tetraniliprole 200 G/L against corn fall army worm and stem borer
8. Thiodicarb 75% WP against corn fall army worm and stem borer
9. Tetraniliprole + Fipronil 480 FS against corn fall army worm, shoot fly and stem borer
10. Tetraniliprole 480 FS against corn fall army worm and shoot fly
11. Betacyfluthrin 8.49% w/w + Imidacloprid 19.81% w/w OD against corn fall army worm and stem borer
12. Tetraniliprole + Fipronil 480 FS against rice stem borer and leaf folder
13. Tetraniliprole 120 g/l + Thiacloprid 360 g/l w/v SC against rice stem borer, leaf folder and leaf hopper
14. Tetraniliprole 0.4% + Fipronil 0.6% GR against rice stem borer and leaf folder
15. Tetraniliprole 200 SC against chilli fruit borer
16. Spirotetramat 30 g/l + Diafenthiuron 120 g/l w/v SC against chilli whiteflies, mites and thrips
17. Betacyfluthrin 90 + Imidacloprid 210 OD against cucumber whiteflies
18. Tetraniliprole 200 SC against brinjal shoot and fruit borer
19. Tetraniliprole 120 g/l + Thiacloprid 360 g/l w/v SC against brinjal fruit borer, shoot borer and sucking pest complex
20. Spirotetramat 30 g/l + Diafenthiuron 120 g/l w/v SC against cotton whiteflies, jassids, aphids and thrips

21. Tetraniliprole 0.4% + Fipronil 0.6% GR against sugarcane early shoot borer, top shoot borer and white grubs
22. Fipronil 40% + Imidacloprid 40% WG against arecanut white grub
23. Tetraniliprole 200 SC against red gram pod borers
24. Spirotetramat + Imidacloprid 240 SC against potato whiteflies and aphids
25. Spirotetramat 240 SC against rose mites and thrips
26. Flupyradifurone 200 SL against chilli whiteflies in
27. Flupyradifurone 200 SL against tomato sucking pests
28. Tetraniliprole 120 + Spirotetramat 240 SC against cabbage diamond back moth, tobacco caterpillar and sucking pest complex
29. Acephate 95% SG against cardamom thrips & borer of panicle, capsule and shoot
30. RIL-225/F1 (25%SC) against rice BPH, WBPH & leaf folder
31. RIL-237/F1 (17.5%ZC) against cotton thrips, jassids, aphids & pink boll worm
32. RIL-237/F1 (17.5%ZC) against chillithrips, aphids & fruit borer
33. RIL-237/F1 (17.5%ZC) against onion thrips
34. RIL-237/F1 (17.5%ZC) against tomato thrips, white fly and fruit borer
35. RIL-173/F1 (22.5%SC) against cotton jassids, thrips, aphids, white fly and mealy bug
36. Buprofezin 20% + Acephate 50% WP against chillithrips, aphids & yellow mite
37. Flubendiamide 20% WG against maize fall army worm
38. QGU42 10% OD against grapes and downey mildew and potato late blight
39. Tebuconazole 25.9 EC" against Tikka leaf spot and rust of groundnut and fruit rot and powdery mildew of chillies
40. Trifloxystrobin 25% + Tebuconazole 50% WG (Nativo 75 WG) against Tikka leaf spot of Groundnut; leaf spot and powdery mildew of Cowpea & Fluopyram 200 + Tebuconazole 200-400 SC (w/v) against post-harvest diseases of Onion
41. Penflufen 154 + Trifloxystrobin 154-308 FS(w/v) against seed and seedling rot disease of cotton and Fosetyl Aluminium 80 wp (Aliette 80 wp) against Damping off of tomato
42. Fluopyram 200+Tebuconazole 200-400 SC (w/v) against anthracnose leaf spot in Kidney bean

43. Trieyclazole 22.5% w/v (20.36%w/w) + Azoxystrobin 7.5% w/v (6.79% w/w) for multiple disease control in Rice
44. RIL – 084/F1 (0.5% Gr) against rice sheath blight & sheath
45. Proquinazid 20% EC on grapes powdery mildew
46. FF1501 on diseases of tomato, potato and grapes
47. Fosetyl Aluminium (Aliette) 80 WP against Gummosis (Foot rot) disease in Citrus/Mandarin orange
48. Fluopyram 200 + Tebuconazole 200-400 SC (w/v) against post harvest diseases, *Botrytis*, *Aspergillus* and *Penicillium* and shelf life management in grapes
49. Fluopicolide 6.25%+Propamocarb Hydrochloride 62.5% SC), Tebuconazole 430 SC and Profiler 71.1 WG (Fluipicolide 4.44% + Fosetyl-A1 66.67% WG) against onion purple blotch, downy mildew, stemphylium blight and citrus gummosis
50. Lprovalicarb 5.5% + Propineb 61.25% WP) against fruit rot of Pomegranate
51. Fosetyl AL 80% WP) against fruit rot and bacterial leaf blight of pomegranate
52. Tebuconazole 060 FS) against bakane/foot rot and brown leaf spot as seed treatment in transplanted rice
53. Fluopyram 200+Tebuconazole 200 SC) against false smut and dirty panicle of rice
54. RIL-084/F1(0.5Gr) against rice sheath blight and sheath rot
55. Acrobat Top & BAS 750 02 F against tomato diseases and BAS 750 02 F & BAS 71700F against chilli diseases
56. Penflufen 154 + Trifloxystrobin 154 FS) against blast, brown leaf spot and sheath blight of rice, Flint Pro (Trifloxystrobin 3.5 % + Probineb 61.3% WG) against anthracnose, grey mildew and Alternaria leaf spots of cotton, Nativo (Tebuconazole 50% + Trifloxystrobin 25% WG) against alternaria leaf spots and Cercospora leaf spot of brinjal and Flint Pro (Trifloxystrobin 3.5% + Probineb 61.3% WG) against leaf spots, fruit spot and anthracnose of pomegranates.
57. TAEGRO against downy mildew in grapes and powdery mildew in chilli
58. Tebuconazole 430 SC against Leaf spot, Fruit spot and Anthracnose in Pomegranate
59. NF-171 10% SC formulation Downy mildew of Grapes.
60. TAEGRO against powdery mildew in chilli
61. Fluopyram 200 + Tebuconazole 200 SC) against sigatoka leaf spot and Aliette (Fosetyl AI 80% ap) against Panama wilt of banana

62. FF 1701 against sheath blight and brown spot of rice and FF 1702 against downy mildew of grapes; anthracnose of chillies; early and late leaf spot of tomato and false smut of rice
63. WCPL 2025 and Boscalid 25.2% + Pyrclostrobin 12.8% WG on grapes against powdery mildew, WCPL 2025 on chillies against rot, die back, powdery mildew & downey mildew and WCPL 18 on paddy against blast & blight disease"
64. Flauazapyroxed + Difenconazole and Matiram against cucurbits diseases and Mafentriflunconazole + Pyraclostrobin against cotton diseases
65. Oxathiapipropoli 0.6% + Mancozeb 60% + Mancozeb 60% (R2Y13) WG against downy mildew of grapes
66. GOD-F001 against powdery mildew and Anthracnose GOD-F002, and Powdery mildew and GOD-F003 against Downy mildew of grapes
67. Oxathiapiprolin 0.6%+Mancozeb 60% w/w wg (R2Y13) against late blight of tomato
68. BCS CS 55621 SC 20g / L against downy midew (Plasmoparaviticola) of grapes.
69. UPN117 against root knot nematode in tomato crop
70. Fluensulfone (NIMITZ 2GR) on different crops Nematodes
71. Fluazaindolizine(Q8u80) 500 SC(50% w/v) against Bittergourd Root knot nematode
72. Fluopyram 400Scnematodes on Pomegranate applied through drip irrigation and soil Drenching

CHEMICALS LIST OF CENTRAL INSECTICIDE BOARD UNDER TNAU RECOMMENDATION

ABAMECTIN 1.9% EC	<input type="checkbox"/> ACEPHATE 75% SP	<input type="checkbox"/> ACEPHATE 95% SG	ACETAMIPRID 20% SP
AZADIRACHTIN 0.15% W/W MIN. NEEM SEED KERNEL BASED E.C	AZADIRACHTIN 0.3% (3000 PPM) MIN. NEEM SEED KERNEL BASED E.C.	AZADIRACHTIN 1% MIN. E.C. NEEM BASED.	AZADIRACHTIN 1% (10000 PPM) MIN. NEEM BASED E.C
AZADIRACHTIN 0.03% MIN. NEEM OIL BASED E.C.	AZADIRACHTIN 0.03% (300 PPM) NEEM OIL BASED WSP	AZADIRACHTIN 5% W/W MIN. NEEM EXTRACT CONCENTRATES	<input type="checkbox"/> BENFURACARB 40% EC
BIFENAZATE 22.6% SC	BIFENAZATE 50% WP	CARBOFURAN 3% CG	<input type="checkbox"/> CARBOSULFAN 6% G
CARTAP HYDROCHLORIDE 4%	CARTAP HYDROCHLORIDE 50%	<input type="checkbox"/> CARBOSULFAN 25% EC	<input type="checkbox"/> CARBOSULFAN 25% DS

GRANULES	SP		
CHLORANTRANILIPROLE 18.5% SC	CHLORANTRANILIPROLE 0.4% GR	CHLORFENAPYR 10% SC	CHLORFLUAZURON 5.4% EC
CHLORPYRIFOS 20% EC	<input type="checkbox"/> CHLORPYRIFOS 50% EC	<input type="checkbox"/> CYANTRANILIPROLE 10.26% OD	<input type="checkbox"/> CLOTHIANIDIN 50% WDG
DICOFOL 18.5% EC	<input type="checkbox"/> DIAFENTHIURON 50%WP	<input type="checkbox"/> DIFLUBENZURON 25% WP	DIMETHOATE 30% EC
DIMETHOATE 30% EC	DINOTEFURAN 20% SG	EMAMECTIN BENZOATE 5% SG	EMAMECTIN BENZOATE 1.9% EC
ETHION 50% EC	FIPRONIL 5% SC	FIPRONIL 0.3% GR	FIPRONIL 80%WG
FLONICAMID 50% WG	FLUBENDIAMIDE 20% WG	FLUBENDIAMIDE 39.35% M/M SC	IMIDACLOPRIDE 70% WG
IMIDACLOPRID 17.8% SL	INDOXACARB 14.5% SC	INDOXACARB 15.8% EC	LAMBDA-CYHALOTHRIN 4.9% CS
LAMBDA-CYHALOTHRIN 2.5% EC	LUFENURON 5.4% EC	<input type="checkbox"/> MALATHION 5% DP	<input type="checkbox"/> MALATHION 50% EC
METAFLUMIZONE 22% SC	METHOMYL 40% SP	<input type="checkbox"/> MONOCROTOPHOS 36% SL	<input type="checkbox"/> NOVALURON 10% EC
PHENTHOATE 50% EC	<input type="checkbox"/> PHOSALONE 35% EC	<input type="checkbox"/> PHOSALONE 4% DP	<input type="checkbox"/> PROFENOFOS 50% EC
PROPARGITE 57% EC	<input type="checkbox"/> PYMETROZINE 50% WG	<input type="checkbox"/> PYRIDALYL 10% EC	<input type="checkbox"/> QUINALPHOS 5% GRANULE
QUINALPHOS 25% EC	<input type="checkbox"/> QUINALPHOS 1.5% DP	<input type="checkbox"/> SPINETORAM 11.7 % SC	<input type="checkbox"/> SPINOSAD 45.0% SC
SPIROMESIFEN 22.9% SC	THIACLOPRID 21.7% SC	<input type="checkbox"/> THIODICARB 75% WP	<input type="checkbox"/> THIAMETHOXAM 30% FS
THIAMETHOXAM 25% WG	THIAMETHOXAM 75% W/W SG	TOLFENPYRAD 15% EC	

RECOMMENDED CHEMICALS LIST OF CENTRAL INSECTICIDE BOARD

ABAMECTIN 1.9% EC	<input type="checkbox"/> ACEPHATE 75% SP	<input type="checkbox"/> ACEPHATE 97% DF	ACEPHATE 95% SG
ACEPHATE 95% SG	<input type="checkbox"/> ACETAMIPRID 20% SP	<input type="checkbox"/> ALPHACYPERMETHRIN 10% EC	<input type="checkbox"/> ALPHACYPERMETHRIN 10% SC
ALUMINUM PHOSPHIDE 56% 3 G TAB, 10G POUCH	ALUMINUM PHOSPHIDE 15% 12G TABLET	ALUMINUM PHOSPHIDE 6% TABLET	ALUMINIUM PHOSPHIDE 77.5% GR
AZADIRACHTIN 0.15% W/W MIN. NEEM SEED KERNEL BASED E.C	AZADIRACHTIN 0.3% (3000 PPM) MIN. NEEM SEED KERNEL BASED E.C.	AZADIRACHTIN 1% MIN. E.C. NEEM BASED.	AZADIRACHTIN 1% (10000 PPM) MIN. NEEM BASED E.C CONTAINING
AZADIRACHTIN 0.03% MIN. NEEM OIL BASED E.C. CONTAINING	AZADIRACHTIN 0.03% (300 PPM) NEEM OIL BASED WSP CONTAINING	AZADIRACHTIN 5% W/W MIN. NEEM EXTRACT CONCENTRATES	<input type="checkbox"/> BARIUM CARBONATE
BETA CYFLUTHRIN 2.45% SC	BENFURACARB 3% GR	BENFURACARB 40% EC	BIFENAZATE 50% WP
BIFENAZATE 22.6% SC	<input type="checkbox"/> BIFENTHRIN 8% SC	BIFENTHRIN 8.8% CS	<input type="checkbox"/> BIFENTHRIN 10% EC
BUPROFEZIN 70% DF	<input type="checkbox"/> CARBOFURAN 3% CG	<input type="checkbox"/> CARBOSULFAN 6% G	<input type="checkbox"/> CARBOSULFAN 25% EC
CARTAP HYDROCHLORIDE 4% GRANULES	CARTAP HYDROCHLORIDE 50% SP	<input type="checkbox"/> CARTAP HYDROCHLORIDE 75% SG	<input type="checkbox"/> CARBOSULFAN 25% DS
CHLORANTRANILIPROLE 18.5% SC	CHLORANTRANILIPROLE 0.4% GR	CHLORFENAPYR 10% SC	CHLORFLUAZURON 5.4% EC
CHLORPYRIFOS 10% G,	CHLORPYRIFOS 1.5% DP	CHLORPYRIFOS 20% EC	CHLORPYRIFOS 50% EC
CHROMAFENOZIDE 80% WP	<input type="checkbox"/> CLOTHIANIDIN 50% WDG	<input type="checkbox"/> CYANTRANILIPROLE 10.26% OD	<input type="checkbox"/> CYENOPYRAFEN 30% SC
CHROMAFENOZIDE 80% WP	CLOTHIANIDIN 50% WDG	CYANTRANILIPROLE 10.26% OD	CYENOPYRAFEN 30% SC

CYFLUMETOFEN 20% SC	CYPERMETHRIN 0.25% DP	CYPERMETHRIN 10% EC	<input type="checkbox"/> CYPERMETHRIN 25% EC
DAZOMET TECHNICAL <input type="checkbox"/>	<input type="checkbox"/> DELTA METHRIN 11% W/W EC	DELTA METHRIN 25% TABLET	DELTA METHRIN 1.8% EC
DELTA METHRIN 2.5% WP	<input type="checkbox"/> DELTA METHRIN 2.8% EC	<input type="checkbox"/> D.D. MIXTURE	DICHLORVOS 76% EC
DICOFOL 18.5% EC	<input type="checkbox"/> DIAFENTHIURON 50%WP	<input type="checkbox"/> DIFLUBENZURON 25% WP	DIMETHOATE 30% EC
DIMETHOATE 30% EC	DINOTEFURAN 20% SG	EMAMECTIN BENZOATE 5% SG	EMAMECTIN BENZOATE 1.9% EC
ENDOSULFAN 2% DP	<input type="checkbox"/> ENDOSULFAN 35%EC	<input type="checkbox"/> ENDOSULFAN 4% DP	ETHION 50% EC
ETHOFENOPROX 10%EC	ETOXAZOLE 10% SC	FENAZAQUIN 10% EC	FENOBU CARB (BPMC) 50% EC
FENPROPATHRIN 10% EC	FENPROPATHRIN 30% EC	FENPYROXIMATE 5% EC	FENVALERATE 20% EC
FENVALERATE 2% CONC	FENVALERATE 0.4% DP	FIPRONIL 5% SC	FIPRONIL 18.87% W/W SC
FIPRONIL 2.92% EC	FIPRONIL 0.3% GR	FIPRONIL 0.6% W/W GR	FIPRONIL 80%WG
FLONICAMID 50% WG	FLUBENDIAMIDE 20% WG	FLUBENDIAMIDE 39.35% M/M SC	FLUBENDIAMIDE 0.7% GR
FLUFENOXURON 10% DC	FLUMITE 20% SC / FLUFENZINE 20%SC	FLUOPYRAM 34.48 % W/W SC	FLUPYRADIFURONE 17.09% W/W SL
<input type="checkbox"/> FLUVALINATE 25% EC	HEXYTHIAZOX 5.45% W/W EC	IMIDACLOPRIDE 70% WG	IMIDACLOPRID 48% FS
IMIDACLOPRID 70% WS P	IMIDACLOPRID 30.5% M/M SC	IMIDACLOPRID 17.8% SL	IMIDACLOPRID 0.3% GR
INDOXACARB 14.5% SC	INDOXACARB 15.8% EC	LAMBDA-CYHALOTHRIN 4.9% CS	LAMBDA-CYHALOTHRIN 2.5% EC
LAMBDA-CYHALOTHRIN 5% EC	LUFENURON 5.4% EC	<input type="checkbox"/> MALATHION 5% DP	<input type="checkbox"/> MALATHION 50% EC

METAFLUMIZONE 22% SC	<input type="checkbox"/> METALDEHYDE	<input type="checkbox"/> METHOMYL 40% SP	METHYL BROMIDE 98% W/W
MILBEMECTIN 1% EC	MONOCROTOPHOS 15% SG	<input type="checkbox"/> MONOCROTOPHOS 36% SL	<input type="checkbox"/> NOVALURON 10% EC
NOVALURON 8.8% SC	<input type="checkbox"/> OXYDEMETON – METHYL 25% EC	<input type="checkbox"/> PERMETHRIN 25% EC	PHENTHOATE 2% DP
PHENTHOATE 50% EC	<input type="checkbox"/> PHORATE 10% CG	<input type="checkbox"/> PHOSALONE 35% EC	<input type="checkbox"/> PHOSALONE 4% DP
PHOSPHAMIDON 40% SL	PROFENOFOS 50% EC	<input type="checkbox"/> PROPARGITE 57% EC	<input type="checkbox"/> PYMETROZINE 50% WG
PROFENOFOS 50% EC	<input type="checkbox"/> PROPARGITE 57% EC	<input type="checkbox"/> PYMETROZINE 50% WG	<input type="checkbox"/> PYRIPROXYFEN 10% EC
PYRIDABEN 20% W/W WP <input type="checkbox"/>	PYRIDALYL 10% EC	QUINALPHOS 25% GEL	<input type="checkbox"/> QUINALPHOS 5% GRANULE
QUINALPHOS 20% AF	<input type="checkbox"/> QUINALPHOS 25% EC	<input type="checkbox"/> QUINALPHOS 1.5% DP	<input type="checkbox"/> SPINETORAM 11.7 % SC
SPINOSAD 45.0% SC	<input type="checkbox"/> SPINOSAD 2.5% SC	<input type="checkbox"/> SPIROMESIFEN 22.9% SC	SPIROTETRAMAT 15.31% W/W OD
THIACLOPRID 21.7% SC	<input type="checkbox"/> THIOCYCLAM HYDROGEN OXALATE	<input type="checkbox"/> THIODICARB 75% WP	<input type="checkbox"/> THIAMETHOXAM 30% FS
THIAMETHOXAM 70% WS	THIAMETHOXAM 75% W/W SG	THIAMETHOXAM 25% WG	TOLFENPYRAD 15% EC
TRICHLORFON 5% GR	TRICHLORFON 5% DUST	TRICHLORFON 50% EC	TRIAZOPHOS 20% EC
TRIAZOPHOS 20% WG	TRIAZOPHOS 40% EC		