

Crop-wise and pest-wise approved uses and alternatives of Endosulfan

<i>Crop</i>	Insect Pest	Alternate Insecticide*
(A) Endosulfan 35% EC		
Paddy	Gall midge	Carbofuran 3%CG,Cabosulfan 6%GR,Carbosulfan 25%EC, Chlorpyriphos 10%GR, Chlorpyriphos 20%EC, Chlorpyriphos 1.5%DP,Etopenprox 10%EC, Fipronil 5% SC, Lambda-cyhalothrin 2.5% EC, Lambda-cyhalothrin 5% EC, Methyl Parathion 50% EC,Phorate 10%CG, Quinalphos 5%GR, Thiamethoxam 25%WG,
	Hispa	Carbofuran 3%CG, Chlorpyriphos 20%EC, Lambda-cyhalothrin 2.5% EC, Lambda-cyhalothrin 5% EC, Malathion 50% EC, Methyl Parathion 50% EC, Phorate 10%CG,Quinalphos 25% EC, Quinalphos 25% Gel,Triazophos 20%EC &40%EC
	Stem borer	Acephate 75%SP, Azadirachtin 0.15% NSK, 0.3%EC & 5% Neem Extract,Benfuracarb 3%GR, Carbofuran 3%CG, Carbosulfan 6%GR & 25%EC,Cartaphydrochloride 4%GR &50%SP,, Chlorantranilprole 18.5%SC &0.4%GR, Chlorpyriphos 1.5%DP,10%GR, 20%EC , 50%EC & 1.5%DP, Deltamethrin 1.8%EC & 11%EC,Etopenprox 10%EC, Fipronil 5%SC ,0.3%GR &80%WG, Flubendiamide 20%WG & 39.35%SC, Lambda-cyhalothrin 4.9%CS, 2.5%EC &5%EC, Methyl parathion 50%EC, Monocrotophos 36%SL,Phorate 10%CG,Phosalone 35%EC,Phosphamidon 40%SL,Quinalphos 25%Gel, 5%GR,,20%AF &25%EC, Thiadcloprid 21.7%SC,Triazophos 20%EC &40%EC, Thiamethoxam 25%WG,. Phosphamidon 40%+Imidacloprid 2%SP,
	White jassid	Nil
Gram	Pod Borer	Azadirachtin 0.03%WSP,Carbaryl 10%DP,Chlorpyriphos 1.5%DP, Deltamethrin 2.8%EC, Emamectin benzoate 5%SG, Ethion 50%EC, Monocrotophos 36%SL, Novaluron 10%EC,NPV of <i>H.a.</i> 2%AS,Quinalphos 25%EC,&1.5%DP.
	Aphid	Nil
Cotton	Aphid	Acetamiprid 20%SP, Azadirachtin 0.03%WSP, Buprofezin 25%SC,Carbaryl 5%DP,Carbosulfan 25%DS, Chlorpyriphos 20%EC, Clothiadin 50%WDG, Deltamethrin 1.8%EC & 2.8%EC,Difenthiuron 50%WP,Dimethoate 30%EC, Fenvalerate 20%EC,Fipronil 5%SC,Fluvalinate 25%EC,Imidacloprid 70%WG,48%FS,70%WS,30.5%SC &17.8%SL, Malathion 50% EC, , Methyl Parathion 50% EC &2%DP,, Monocrotophos 36% SL, Oxydemeton methyl 25% EC, Phorate 10%CG, Profenophos 50%EC,Quinalphos 1.5%DP,Thiadcloprid 21.7%SC, Thiamethoxam 25 %WG &30%FS, Acephate 25%+Fenvalerate 3%EC ,Acephate 50%+Imidacloprid 1.8%SP,Cypermethrin 3%+quinalphos 20%EC,

	Jassids	Acephate 75%SP, Azadirachtin 0.03%WSP,& 5% Neem ext.conc.,Acetamiprid 20%SP, Buprofezin 25%SC, Carbaryl 5%DP,Carbosulfan 25%DS,Cypermethrin 25%EC, Clothiandin 50%WDG,Deltamethrin 1.8%EC &2.8%EC, Diafenthiuron 50%WP, Dimethoate 30%EC,Fenvalerate 20%EC,Fipronil 5%SC,Fluvalinate 25%EC,Imidacloprid 70%WG,48%FS,70%WS,30.5%SC &17.8%SL,Lambda-cyhalothrin 2.5%EC &5%EC,Malathion 50%EC,Methyl parathion 2%DP &50%EC, Monocrotophos 36% SL, Phorate 10%CG,Phosalone 35%EC &4%DP,Profenophos 50%EC, Quinalphos 25% EC,Thiacloprid 21.7%SC, Thiamethoxam 25% WG. Acephate 25%+Fenvalerate 3%EC, Acephate 50%+Imidacloprid 1.8%SP, Cypermethrin 3%+Quinalphos 20%EC, Indoxacarb14.5%+Acetamiprid 7.7%SC,
	Whitefly	Acetamiprid 20 SP, Azadirachtin 0.15% EC,, 0.03WP& 5%extract,Bifenthrin 10%EC,Buprofezin 25%SC, Chlorpyriphos 20%EC, Clothiandin 50%WDG,Deltamethrin 1.8%EC &2.8%EC,Diafenthiuron 50%WP, Ethion 50%EC,Fenpropathrin 30%EC,Fipronil 5%SC,Imidacloprid 48%FS,70%WS &17.8%SL,Malathion 50%EC, Monocrotophos 36%SL,Phorate 10%CG,Thiacloprid 21.7%SC,Thiamethoxam 30%FS, 70%CS &25%WG, Triazophos 40%EC, <i>Verticillium lecanii</i> 1.15%WP. Acephate 25%+Fenvalerate 3%EC, Acephate 50%+Imidacloprid 1.8%SP, Deltamethrin1%+Triazophos 35%EC, Indoxacarb14.5%+Acetamiprid 7.7%SC,
	Thrips	Phorate 10%CG,Phosalone 4%DP,Profenophos 50%EC,Quinalphos 1.5%DP,Thiacloprid 21.7%SC,Thiamethoxam 70%WS &25%WG,Buprofezin 25%SC,Carbosulfan 25%DS,Cypermethrin 25%EC,Deltamethrin 1.8%EC&2.8%EC,Diafenthiuron 50%WP,Dimethoate 30%EC,Fenvalerate 20%EC,Fipronil 5%SC,Imidacloprid 70%WG,40%FS,30.5%SC &17.8%SL,Lambda-cyhalothrin 2.5%EC &5%EC, Malathion 50%EC,Methyl parathion 2%DP &50%EC,Monocrotophos 36%SL, Thiamethoxam 25%WG, Acephate 25%+Fenvalerate 3%EC, Acephate 50%+Imidacloprid 1.8%SP,
	Leaf roller	Nil
Mustard,	Aphid	Chlorpyriphos 20% EC Dimethoate 30% EC, Malathion 50% EC, Methyl Parathion 2%DP , Monocrotophos 36 SL, Oxydemeton methyl 25%EC,Phorate 10%CG, Phosphamidon 40%SL.
	Gall midge	Nil
Bhindi	Aphid	Azadirachtin 5% Neem ext.conc.,Carbofuran3%CG,Dimethoate 30%EC,Imidacloprid 70%WG,48%FS,70%WS &17.8%SL,Malathion 50%EC,Permethrin 25%EC,Thiamethoxam 70%WS.
Chillies	Aphid	Carbosulfan 25%EC,Fipronil 5%SC,Imidacloprid 70%WS &17.8%SL,Lambdacyhalothrin 5%EC,Oxydemeton methyl 25%EC,Phorate 10%CG,Phosalone 35%EC,Quinalphos 25%Gel ,25%EC & 1.5%DP.
Wheat	Aphid,	Quinalphos 25 EC, Thiamethoxam 25%WG,Thiometon 25 EC,

	Termites	Thiamethoxam 30%FS.
	Pink borer/ Armyworm	Dichlorvos 76%EC, Methylparathion 50%EC.
Jute	Semilooper,	Azadirachtin 0.03% WSP, Quinalphos 1.5%DP & 25%ECQuinalphos 25 EC ,Phosalone 35 EC
	Bihar hairy caterpillar	Azadirachtin 0.03% WSP
	Yellow mite	Nil
Tea	Aphid,	Phosalone 35%EC,
	Hairy caterpillar	Deltamethrin 2.8%EC,Profenophos 50%EC,Quinalphos 20%AF
	Mealy bug/ Tea mosquito	Profenophos 50%EC,Thiamethoxam 25%WG
	Scale insects, thrips	NIL
Maize	Pink borer/Stem borer	Carbofuran3%CG, Phorate 10%CG.
	Aphid	NIL
Mango	Hopper,	Buprofezin 25%SC,Carbaryl50%WP,Deltamethrin2.8%EC,dimethoate 30%EC,Imidacloprid 17.8%SL, Lambda-cyhalothrin 5%EC,Malathion 50%EC,Monocrotophos 36%SL,Oxydemeton methyl 25%EC, Thiamethoxam 25%WG.
	Fruit fly,	NIL

	Termite	NIL
Groundnut	Jassid,	Imidacloprid 17.8%SL, Quinalphos 25%EC
	hairy caterpillar,	Carbaryl 50%WP,Dichlorvos 76%EC, Trichlorofon 5%GR,Dust & 50%EC
	Semilooper	NIL
(B) Endosulfan 4% DP		
Cotton	Aphid	Acetamiprid 20%SP, Azadirachtin 0.03%WSP, Buprofezin 25%SC, Carbaryl 5%DP,10%DP,Carbosulfan 25%DS, Chlorpyriphos 20%EC, Clothiadin 50%WDG, Deltamethrin 1.8%EC & 2.8%EC,Difenthiuron 50%WP,Dimethoate 30%EC, Fenvalerate 20%EC,Fipronil 5%SC,Fluvalinate 25%EC,Imidacloprid 70%WG,48%FS,70%WS,30.5%SC &17.8%SL, Malathion 50% EC, , Methyl Parathion 50% EC &2%DP,, Monocrotophos 36% SL, Oxydemeton methyl 25% EC, Phorate 10%CG, Profenophos 50%EC,Quinalphos 1.5%DP,Thiacloprid 21.7%SC, Thiamethoxam 25 %WG &30%FS, Acephate 25%+Fenvalerate 3%EC,
	Jassids	Acephate 75%SP, Azadirachtin 0.03%WSP,& 5% Neem ext.conc.,Acetamiprid 20%SP, Buprofezin 25%SC, Carbaryl 5%DP,&85%WP,Carbosulfan 25%DS,Cypermethrin 25%EC, Deltamethrin 1.8%EC &2.8%EC, Diafenthiuron 50%WP, Dimethoate 30%EC,Fenvalerate 20%EC,Fipronil 5%SC,Fluvalinate 25%EC,Imidacloprid 70%WG,48%FS,70%WS,30.5%SC &17.8%SL,Lambdacyhalothrin 2.5%EC &5%EC,Malathion 50%EC,Methyl parathion 2%DP &50%EC, Monocrotophos 36% SL, Phorate 10%CG,Phosalone 35%EC &4%DP,Profenophos 50%EC, Quinalphos 25% EC,Thiacloprid 21.7%SC, Thiamethoxam 25% WG. Acephate 25%+Fenvalerate 3%EC, Acephate 50%+Imidacloprid 1.8%SP, Cypermethrin 3%+Quinalphos 20%EC, Indoxacarb14.5%+Acetamiprid 7.7%SC,
	Thrips	Buprofezin 25%SC,Carbaryl 10%DP &85%WP,Carbosulfan 25%DS,Cypermethrin 25%EC,Deltamethrin 1.8%EC&2.8%EC,Diafenthiuron 50%WP,Dimethoate 30%EC,Fenvalerate 20%EC,Fipronil 5%SC,Imidacloprid 70%WG,40%FS,30.5%SC &17.8%SL,Lambdacyhalothrin 2.5%EC &5%EC, Malathion 50%EC,Methylparathion 2%DP &50%EC,Monocrotophos 36%SL,Phorate 10%CG,Phosalone 4%DP,Profenophos 50%EC,Quinalphos 1.5%DP,Thiacloprid 21.7%SC,Thiamethoxam 70%WS &25%WG, Acephate 25%+Fenvalerate 3%EC, Acephate 50%+Imidacloprid 1.8%SP,

	Whiteflies	Acetamiprid 20 SP, Azadirachtin 0.15% EC, & 0.03WP, Bifenthrin 10%EC, Buprofezin 25%SC, Chlorpyrifos 20%EC, Clothianidin 50%WDG, Deltamethrin 1.8%EC & 2.8%EC, Diafenthiuron 50%WP, Ethion 50%EC, Fenpropathrin 30%EC, Fipronil 5%SC, Imidacloprid 48%FS, 70%WS & 17.8%SL, Malathion 50%EC, Monocrotophos 36%SL, Phorate 10%CG, Profenophos 50%EC, Thiocloprid 21.7%SC, Thiamethoxam 30%FS, 70%CS & 25%WG, <i>Verticillium lecanii</i> 1.15%WP. Acephate 25%+Fenvalerate 3%EC, Acephate 50%+Imidacloprid 1.8%SP, Deltamethrin 1%+Triazophos 35%EC, Indoxacarb 14.5%+Acetamiprid 7.7%SC,
	Bollworms	Acephate 75%SP, Alphacypermethrin 10%EC&SC, Acetamiprid 20 SP, Alphacypermethrin 10 EC, Azadirachtin 0.15%EC, 0.3%EC, 0.03% EC & 5%Ext. conc, B.t.k, B.t.k. 5%WP, Beta cyfluthrin 2.45%SC, Beauveria bassiana 1.15%WP, Bifenthrin 10%EC, Carbaryl 5%DP, 10%DP, & 85%WP, Chlorantraniliprole 18.5%SC, Chlorpyrifos 20%EC & 50%EC, Cypermethrin 10%EC & 25%EC, Deltamethrin 1.8%EC, 2.8%EC, 11%EC & 25%tab, Diaflubenzuron 25%WP, Emamectin benzoate 5%SG, Ethion 50%EC, Fenpropathrin 10%EC & 30%EC, Fenvalerate 20% EC, 0.4%DP & 2%conc., Fipronil 5%SC, Flubendiamide 39.35%SC, Fluvalinate 25%EC, Indoxacarb 14.5% SC, & 15.8%EC, Lambda cyhalothrin 4.9%CS & 5% EC, Lufenuron 5.4%EC, Methomyl 40%SP, Monocrotophos 36%SL, Novaluron 10%EC, NPV of H.a. 0.43%AS, Permethrin 25%EC, Phenthoate 50%EC, Phosalone 35%EC, Profenofos 50%EC, Pyridalyl 10%EC, Quinalphos 20%AF, Spinosad 45%SC, Thiodicarb 75%WP, Triazophos 40%EC. Acephate 25%+Fenvalerate 3%EC, Acephate 50%+Imidacloprid 1.8%SP, Cypermethrin 3%+Quinalphos 20%EC, Chlorpyrifos 16%+Alphacypermethrin 1%EC, Deltamethrin 1%+Triazophos 35%EC, Ethion 40%+Cypermethrin 5%EC, Indoxacarb 14.5%+Acetamiprid 7.7%SC, Profenophos 40%+Cypermethrin 4%EC
	Leaf roller	NIL
Paddy	leaf hopper	Carbosulfan 25%EC, Deltamethrin 11%EC, Etophenprox 10%EC, Fenobucarb (BPMC) 50%EC, Fipronil 0.3%GR & 5%SC, Imidacloprid 30.5%SC & 17.8%SL, Oxydemeton methyl 25%EC, Phorate 10%CG, Phosphamidon 40%SL, Thiamethoxam 25%WG, Triazophos 20%EC & 40%EC.
	Stem borer, Gall midge,	As in Endosulfan 35% EC
	Aphid, White Jassids	Nil
Maize	Pink borer/ Stem borer	Phorate 10%CG.

	Aphid	Nil
Wheat	Aphid,	Quinalphos 25 EC, Thiamethoxam 25%WG meton 25 EC,
	Termites	Thiamethoxam 30%FS.
	Pink borer	As in Endosulfan 35% EC
Gram	Aphid	NIL
	Caterpillar / Pod borer/ Pea - semilooper	Azadirachtin 0.03%WSP,Chlorpyriphos 1.5%DP, Deltamethrin 2.8%EC, Emamectin benzoate 5%SG, Ethion 50%EC, Monocrotophos 36%SL, Novaluron 10%EC, NPV of <i>H.a.</i> 2%AS, Quinalphos 25%EC, & 1.5%DP.
Groundnut	Aphid	Chlorpyriphos 20 EC
Mustard	Aphid	Chlorpyriphos 20% EC Dimethoate 30% EC, Malathion 50% EC, Methyl Parathion 2%DP, Monocrotophos 36 SL, Oxydemeton methyl 25%EC, Phorate 10%CG, Phosphamidon 40%SL.
	Gall midge	Nil
Bhindi	Aphid, Jassid	Azadirachtin 5% Neem ext.conc., Carbofuran 3%CG, Dimethoate 30%EC, Imidacloprid 70%WG, 48%FS, 70%WS & 17.8%SL, Lambda-cyhalothrin 5%EC, Malathion 50%EC, Permethrin 25%EC, Thiamethoxam 70%WS
Onion	Aphid, jassid	NIL
Chillies	Aphid, jassid	Imidacloprid 70%WS, Oxydemetonmethyl 25%EC, Phorate 10%CG, Phosalone 35%EC, Quinalphos 25%EC & Gel.
Potatoes	jassid	Carbofuran 3%CG
Jute	Bihar hairy caterpillar	Azadirachtin 0.03% WSP
	Yellow mites	NIL

(C) Endosulfan 2% DP		
Arhar	Pod borer	Azadirachtin 0.03%WSP,B.t.k. 5%WP,Benfuracarb 40%EC,Chlorantraniliprole 18.5%SC,Chlorpyriphos 1.5%DP,Emamectin benzoate 5%SG, Ethion 50%EC, Flubendiamide 39.35%SC,Indoxacarb 14.5%SC, Lambdacyhalothrin 5%EC,Lufenuron 5.4%EC,Methomyl 40%SP,NPV of H.a.2%AS,Quinalphos 20%AF, 1.5%DP & 25%EC,Spinosad 45%SC.
Gram	Pod borer	Azadirachtin 0.03%WSP,Carbaryl 10%DP,Chlorpyriphos 1.5%DP, Deltamethrin 2.8%EC, Emamectin benzoate 5%SG, Ethion 50%EC, Monocrotophos 36%SL, Novaluron 10%EC,NPV of H.a.2%AS,Quinalphos 25%EC,&1.5%DP.
Bhindi	Fruit and shoot borer	Azadirachtin 5% Neem ext, Carbaryl 10%DP,Cypermethrin 0.25 DP, 10%EC & 25%EC, Deltamethrin 2.8%EC, Emamectin benzoate 5%SG,Fenpropathrin 30%EC, Fenvalerate 20%EC,Malathion 50%EC, Permethrin 25%EC ,Phosalone 35%EC,Pyridalyl 10%EC,Quinalphos 20%AF &25%EC.
Brinjal	Fruit and shoot borer	Azadirachtin 1%EC & 0.03%WSP, Chlorantraniliprole 18.5%SC, Chlorpyriphos 25%EC,Cypermethrin 0.25%DP & 25%EC,Dimethoate 30%EC Emamectin benzoate 5%SG,Fenpropathrin 30%EC,Fenvalerate 20%EC,Lambdacyhalothrin 5%EC,Phosalone 35%EC,Quinalphos 20%AF &25%EC,Thiodicarb 75%WP, Thiometon 25%EC,Triazophos 40%EC, Trichlorofon 5%GR,Dust &50%EC, Deltamethrin1%+Triazophos 35%EC,
(D) Endosulfan 35%+Cypermethrin 5%EC		
Cotton	Boll worm	Acephate 75%SP, Alphacypermethrin 10%EC&SC,Acetamiprid 20 SP, Alphacypermethrin 10 EC, Azadirachtin 0.15%EC,0.3%EC , 0.03% EC &5%Ext. conc,B.t.k, B.t.k. 5%WP,Beta cyfluthrin 2.45%SC, Beauveriabassiana 1.15%WP,Bifenthrin 10%EC, Carbaryl 5%DP,10%DP, &85%WP,Chlorantraniliprole 18.5%SC, Chlorpyriphos 20%EC &50%EC,Cypermethrin 10%EC &25%EC,Deltamethrin 1.8%EC, 2.8%EC,11%EC & 25%tab, Diaflubenzuron 25%WP,Emamectin benzoate 5%SG,Ethion 50%EC,Fenpropathrin 10%EC &30%EC,Fenvalerate 20% EC,,0.4%DP&2%conc.,Fipronil 5%SC,Flubendiamide 39.35%SC,Fluvalinate 25%EC, Indoxacarb 14.5% SC, & 15.8%EC, Lambdacyhalothrin 4.9%CS & 5% EC, Lufenuron 5.4%EC,Methomyl 40%SP,Monocrotophos 36%SL,Novaluron 10%EC,NPV of H.a.0.43%AS,Permethrin 25%EC,Phenthoate 50%EC,Phosalone 35%EC, Profenofos 50%EC,Pyridalyl 10%EC,Quinalphos 20%AF,Spinosad 45%SC,Thiodicarb 75%WP, Triazophos 40%EC.Acephate 25%+Fenvalerate 3%EC, Acephate 50%+Imid acloprid 1.8%SP,Cypermethrin 3%+Quinalphos 20%EC,Chlorpyriphos

	16%+Alphacypermethrin 1%EC, Deltamethrin1%+Triazophos35%EC,Ethion 40%+Cypermethrin 5%EC, , Indoxacarb14.5%+Acetamiprid 7.7%SC,Profenophos 40%+Cypermethrin 4%EC
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