Annexure 10.39.1

Guidelines for Registration requirements of pesticides for drone application

The applicant may apply for seeking registration for drone-based application of pesticides and the endorsement (label expansion) related approvals under the relevant provisions/category to the secretariat of the CIB&RC. For various categories of applications, the RC recommended the following requirements:-

A. Products with existing label claim in a crop recommended for spray with conventional sprayers and to endorse the use of Drones as alternate/additional spraying equipment.

Requirement:

a) If critical Good Agriculture Practices (cGAP) e.g. AI dose/ ha, Pre harvest Interval (PHI) and number of applications is within a recommended range of conventional spray then; Data on phyto-toxicity on the approved crop for one season two different agro-climatic conditions, where the target crop is cultivated, to be generated as per protocol (**given at Annexure II**) and also in the Spray Monitoring Form (**given at Annexure I**) from the Institutes approved by the RC, ICAR, SAU's or on the government/private land (for Drone based trial only) under supervision of trials through ICAR, SAU's on the private land.

b) If critical GAP e.g. AI dose/ha, PHI and number of applications is not within a recommended range of conventional spray then; Data on bio-efficacy, phyto-toxicity and residue may be generated **as per approved guidelines** alongwith protocol (**given at Annexure II and III**) and details shall also be submitted in the Spray Monitoring Form (**given at Annexure I**) from the Institutes approved by the RC, ICAR, SAU's or on the government/private land (for Drone based trial only) under supervision of trials through ICAR, SAU's on the private land.

No data requirement for chemistry/ Toxicology/Packaging/ Legal disciplines.

B. New product/Insecticide / new endorsement (label expansion) registration with use of conventional sprayers or Drones as spraying equipment or use of both as spraying equipment.

Requirement:

The applicant will submit the data/ information as per approved guidelines w.r.t. toxicity, bio efficacy, chemistry, packaging, Legal.

If the applicant wants to register new product for drone application as well, in addition to Conventional sprayer, and critical Good Agriculture Practices (GAP) is within a recommended and registered range of conventional spray, then they would submit additional data on phytotoxicity carried out as per protocol **(given at Annexure II)** for same (Drone application) from the Institutes approved by the RC, ICAR, SAU's or on the government/private land (for Drone based trial only) under supervision of trials through ICAR, SAU's on the private land.

In case cGAP for Drone application is not within recommended range of conventional spray, or a new product/label claim for exclusive use of Drone as spraying equipment is applied for; then data on Bio-efficacy studies as per protocol (**given at Annexure III**), phyto-toxicity **(given at Annexure II)** and residue should be submitted from the Institutes approved by the RC, ICAR, SAU's or on the government/private land (for Drone based trial only) under supervision of trials through ICAR, SAU's on the private land.

Note:

I. RC further decided that, each applicant wish to generate data, for seeking registration for drone-based application of pesticides and their endorsement (label expansion); shall intimate about proposed data generation to the Secretariat of CIB&RC in advance. Those who have already started data generation as on date, shall intimate to the Secretariat of CIB&RC with in 30 days of uploading of the minutes following in RC approved procedure/ form etc.

II. Wherever, the data alignment is required it should be as per the existing RC approved guidelines.

III. Further, no intimation required for use of RC approved pesticides with Drone where the use of any pesticide by any person for his own household purposes or for kitchen garden or in respect of any land under his cultivation is being done as envisioned in the provisions of section 38 under the Insecticides Act, 1968.

IV. The applicant shall also submit the label and leaflet with appropriate instruction, precautions do's and don't's for Drone based applications which shall be aligned as per DA&FW approved SOP document for use of Drone application of pesticide for crop protection.

SPRAY MONITORING FORM

Annexure-I

1	**LOCATION of Trial Details**	1		2		3		4		5		6	
1-1	Date												
1-2	Name of the location												
2	**VEGETATION DATA**												
2-1	Vegetation type (Crop, Grass, Bushes, Trees,)	G B T C		G B T C		G B T C		G B T C		G B T C		G B T C	
2-2	Height from ground/Crop Canopy (m)												
2-3	Crop names and pest/disease/weed infection/infestation/intensity (%)												
3	**PESTICIDEDATA**												
3-1	Trade name& Common name												
3-2	Concentration (g a.i./l or %)												
3-3	Formulation (EC, ULV, Dust)	E U D		E U D		E U D		E U D		E U D		E U D	
3-4	expiry date												
3-5	Is the insecticide mixed with water or solvent?	Y N		Y N		Y N		Y N		Y N		Y N	
3-6	If yes, what solvent and mixing ratio												
4	**WEATHER CONDITIONS**												
	Start and end of control operations	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
4-1	Date &time												
4-2	Temperature (°C)												
4-3	Relative humidity (%)												
4-4	Wind speed (m/s)												
4-5	Wind direction (degrees from N)												
4-6	Spray direction (degrees from N)												
5	**SPRAY APPLICATION**												
5-1	Sprayer type (Rotary, Airblast, ENS, Hydraulic, Other)	R A E H O		R A E H O		R A E H O		R A E H O		R A E H O		R A E H O	
5-2	Sprayer operator (Pilot, Driver, Hired, Other)	P D L H O		P D L H O		P D L H O		P D L H O		P D L H O		P D L H O	
5-3	Sprayer manufacturer												
5-4	Sprayer model												
5-5	Sprayer platform (Aerial, Vehicle, Handheld)	A V H		A V H		A V H		A V H		A V H		A V H	
5-6	Date of last calibration												
5-7	Atomizer height above ground (m)												
5-8	ROTARY SPRAYERS: speed setting (blade angle, pulley setting, no. batteries)												
5-9	Speed of atomizer (rpm)												
5-10	Flow rate setting (which nozzle or restrictor used)												
5-11	Flow rate/atomizer (l/min)												
5-12	Number of atomizers												
5-13	Track spacing (m)												
5-14	BARRIERS ONLY: width and												

	spacing (m)						
5-15	Forward speed (km/h)						
5-16	AERIAL SPRAYING: support supplied	GP = ground party available RC = radio communication with aircraft TG = DGPS track guidance					
		GP RC TG	GP RC TG	GP RC TG	GP RC TG	GP RC TG	GP RC TG
5-17	Ground marking (GPS, Flag, Mirror, Smoke, Vehicle, None)	G F M S V N	G F M S V N	G F M S V N	G F M S V N	G F M S V N	G F M S V N
6	**CONTROL EFFICACY**						
6-1	Effectiveness/mortality (%)						
6-2	Days after treatment/ time after treatment (hours)						
6-3	Yield of Crop/method of Effectiveness /mortality estimation (Quadrats, Target size, Visual, Cages, Other)	Q T V C O	Q T V C O	Q T V C O	Q T V C O	Q T V C O	Q T V C O
7	**SAFETY AND ENVIRONMENT**						
7-1	Protective clothing: what did the operator wear?	G = goggles M = mask L = gloves O = overalls B = boots					
		G M L O B	G M L O B	G M L O B	G M L O B	G M L O B	G M L O B
7-2	Was soap and water available?	Y N	Y N	Y N	Y N	Y N	Y N
7-3	Who was informed of spraying? (Farmers, Nomads, Villagers, Officials, Beekeeper, others, etc.)	F N V O B	F N V O B	F N V O B	F N V O B	F N V O B	F N V O B
7-4	Effect on non-target organisms	Y N	Y N	Y N	Y N	Y N	Y N
7-5	If yes, what type of effect?						
7-6	Details of anyone who felt unwell or if other problems were encountered						
7-7	Details about nearby water-bodies and water channels						

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Annexure 10.39.2

Guidelines for Application for use of drone in Agriculture forestry, non-cropped areas

The below mentioned Guidelines are to be read in consonance with the DA&FW approved SOP document for use of Drone application of pesticide for crop protection (small, marginal and organized sector) in agriculture, forestry, non-cropped areas (Annexure).

Drones are going to be important for increasing efficiency of application of crop protection chemicals/bio-pesticides/Plant growth regulators etc. by reducing manpower requirement, time of application, volume of water, quantity of chemicals and reducing exposure to human being to hazardous chemicals. Therefore, to facilitate the use of Drone technology in Agriculture in-line with the Government policy and thrust for increasing the use of Drone in different sectors including Agriculture, following requirements, guidelines, protocols, form etc. are prescribed:

1. Manner of application for Registration requirements of pesticides with drone:

Any applicant desires to register any insecticide/ pesticide for application with Drone, shall submit an application to the Secretariat of CIB&RC, DPPQ&S through CROP portal in Form-I, under relevant category of registration and endorsement as applicable, under the ambit of Insecticides Act, 1968 and the Rules 1971, for scrutiny and consideration as per RC approved guideline.

2. Form for intimation of conducting Trails on Pesticides application with Drones and spraying activity of pesticides with drone application:

Any applicant desires to generate data, for seeking registration for drone-based application of pesticides, their endorsement (label expansion) shall submit an application to the "Technical Committee" headed by the Plant Protection Adviser(PPA), DPPQ&S, through online/ offline mode in the Secretariat of CIB&RC, DPPQ&S by providing the following details:

- Name of the applicant
- Office addresses email and contract details
- Responsible Person for use of drone with Mobile Number contact details, email etc.
- Proposed/actual area of coverage by drone application in each season
- Products proposed/used for drone application
- Crops proposed/ actual covered for drone application
- No. of months/ time interval within which drone applications shall be made.
- Details of existing label claim with conventional application technology;

- Name and address of the Service Provider having following details:
- Full address
- Responsible Person with Mobile Number
- Name/Model of Drone/s to be used
- DGCA License No
- Names of Pilots with their License Nos.
- Any other relevant information

Further, those who have carried out the Spraying activity with drone, while data generation and on commercial scale are to ensure that Spray monitoring data dully filled by the operator/ service provider and submit through email (cibsecy@nic.in) /online portal created for the purpose, with-in seven days of actual use of Drone for application of pesticides, in the form as prescribed in Annexure-II;

The technical committee constituted by the Central Insecticide Board will then examine the proposal for its consideration /approval or otherwise in line with the directions issued by the CIB from time to time.

Guidelines for Registration requirements of pesticides for drone application:

The applicant may apply for seeking registration for drone-based application of pesticides and the endorsement (label expansion) related approvals under the relevant provisions/category to the secretariat of the CIB&RC as per the Guidelines and procedure approved by the RC from time to time (Annexure-III).

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