

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, NEW DELHI

Original Application No. 632 of 2023

In the matter of Suo Moto Cognizance

In Re: News Item published in The Hindu dated 06.10.2023 titled "**Pollution takes a front seat as Stubble Fires Spike in Punjab**"

Status / Action taken report on behalf of Punjab Pollution Control Board and the State of Punjab in compliance to order dated 20.10.2023.

RESPECTFULLY SHOWETH

1. That the Hon'ble National Green Tribunal was pleased to take Suo Motto Cognizance of a News Item published in The Hindu dated 06.10.2023 titled "**Pollution takes a front seat as Stubble Fires Spike in Punjab**" and issued notice to the State of Punjab through its Chief Secretary, Ministry of Environment, Forest and Climate Change through its Secretary and the Director Commission for Air Quality Management.
2. That the Member Secretary, Punjab Pollution Control Board has appeared before the Hon'ble National Green Tribunal through hybrid mode in the above-mentioned case on 20.10.2023 and status report was furnished on behalf of the State of Punjab. After consideration of the matter, the Hon'ble National Green Tribunal was pleased to issue certain directions vide order dated 20.10.2023 to the authorities and the Punjab Pollution Control Board was directed to file further action taken report in the case. The further status report on behalf of the Punjab Pollution Control Board as well as the State of Punjab may kindly be read in the following paragraphs.
3. That on the basis of number of fire incidents reported in the areas, hot spot districts namely Sangrur, Bathinda, Ferozepur, Muktsar, Moga, Patiala, Tarn Taran and Barnala have been identified by the authorities. In compliance to the orders dated 20.10.2023 of this Hon'ble National Green Tribunal, the State



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authorities have identified the worst affected areas within the hot spot districts to focus in those areas for proper remedial measures. To identify the worst affected areas / blocks within the hot spot districts, the number total fire incidents that have taken place in the hot spot districts upto 30.11.2022 were counted, then the fire events were counted for block level areas upto 30.11.2022. A comparison chart showing the fire events upto 31.10.2022 and the similar period upto 31.10.2023 in the blocks of hot spots districts is given herein below for kind perusal of this Hon'ble Tribunal:

Hotspot comparison chart upto 31 Oct					
District	Total Fire events in District upto 30 Nov 2022	Block	Fire events in Block upto 30 Nov 2022	Comparison	
				Fire Events upto 31 Oct 2022	Fire Events upto 31 Oct 2023
Sangrur	5239	Sunam	996	366	246
		Lehra Gaga	738	170	207
Bathinda	4592	Nathana	602	55	16
		Rampura	600	52	35
Firozpur	4295	Guruhar Sahai	885	215	110
		Ghall Khurd	875	207	176
Muktsar	3884	Muktsar	1475	106	22
		Kot Bhai At Gidderbaha	1175	88	26
Moga	3609	Bagha Purana	1036	43	23
		Kot Ise Khan At Dharamkot	823	101	59
Patiala	3336	Nabha	786	328	74
		Patran	610	279	138
Tarn Taran	3184	Valtoha	634	441	219
		Patti	580	380	81
Barnala	2910	Barnala	1362	232	64
		Sehna	934	122	27

4. That the period during which stubble burning take place is between 15 September to 30 November. In order to effectively implement various measures for the prevention, control and prohibition of stubble burning incidents, in the State about 8500 field officials have been deputed. The Deputy Commissioners of hot spot districts have been specially instructed to ramp up the Information,



Education and Communication (IEC) activities in the block levels by ensuring the engagement of the people at the ground level. Special teams have been deputed in the hot spot areas / blocks for monitoring and enforcement measures. The Department of Agriculture and Farmer's Welfare of the State has devised I-Khet Machine App (Machinery Tracker App) to ensure maximum utilization of Crop Residue Machines by the farmers of the hot spot areas / blocks through Cooperative Societies, Customer Hiring Centres (CHCs), village Panchayats etc. Ex-situ management by means of Biomass power plants, Compressed Bio gas (CBG) plants, Bio-ethanol plants, Industrial Boilers, paddy straw palletization plants etc. is being done in the state. Apart from the above NGOs and Industrial Associations has also been roped in intensify the awareness campaigns in the hot spots areas / blocks and to help the farmers reap the paddy crop without indulging in stubble burning.

5. That in compliance to the directions of this Hon'ble Tribunal as contained in paragraph 10 of the order dated 20.10.2023 to prepare and place on record the area wise Crop Residue Management Plan, it is respectfully submitted that the State of Punjab has already prepared the District Crop Residue Management Plans after obtaining the requisite data from the Deputy Commissioners of the State. The District Crop Residue Management Plans are hereby produced and placed at **Annexure-A** for kind perusal of this Hon'ble Tribunal.
6. That respectfully, it is submitted that the State of Punjab is making all necessary, essential and imperative efforts to eradicate the problem of stubble burning with the involvement and participation of various stakeholder departments duly identified in the Action Plan submitted to the Central Commission for Air Quality Management in NCR and Adjoining Areas. It is relevant to mention here that upto 31.10.2023, 4328 number of stubbles burning sites have been visited by the Sub Divisional Teams and environmental compensation amounting to Rs. 24,30,000/- has been imposed in 973 number of cases in accordance with the mandate of the orders of the Hon'ble National Green Tribunal dated 10.12.2015 passed in O.A No. 118 of 2013.
7. That it is pertinent to mention here that the with the continuous, sincere and concerted efforts of the State Government and its departments, there is a

significant decline in the fire incidents of stubble burning during the year 2023 as compared to fire incidents for the years 2021 and 2022. The detail of the fire incidents for the period from 15 September to 31 October of the years 2021, 2022 and 2023 is given herein below:

2021	2022	2023
13124	16004	7673

8. That there is nearly 52% reduction in the stubble burning incidents reported upto 31.10.2023 in the State of Punjab in comparison to the same period during the paddy harvesting season for the year 2022.
9. That the State of Punjab has taken and is taking all the possible steps for the prohibition and control of stubble burning. However, there are some limitations and challenges which are required to be considered and resolved in the right perspective. The State Government is further strengthening the use of in-situ and ex-situ management options and IEC activities amongst the farming community for making behavioral change so as to totally eradicate the stubble burning incidents.
10. That the status report is hereby submitted in compliance to order dated 20.10.2023 for kind perusal and appropriate orders of this Hon'ble Tribunal.

Submitted by

Date: 5-11-2023

Place: PATIALA


(Gurindar Singh Majithia)

Member Secretary,
Punjab Pollution Control Board,
Patiala

On behalf of the State of Punjab

Member Secretary
Punjab Pollution Control Board
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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023	
District	Amritsar
Fire counts reported as per ISRO protocol in 2022	1542
Target for 2023	775

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	180000	(1,42,000 Basmati + 38,000 Non-Basmati)
2	Total quantity of paddy straw generation	lakh tonnes	9.47	
2.1	From Basmati	lakh tonnes	7.10	
2.2	From Non-Basmati	lakh tonnes	2.37	
3	Quantity planned for management through in-situ measures	lakh tonnes	6.11	4.26 MT + 1.85 MT = 6.11 MT
3.1	Overall Availability of Machines	No.	3787	
3.2	No. of new machines procured in 2023	No.	725	725 out of which 211 Surface Seeder and 370 Super Seeders and other machinery will be able to manage 185000 MT paddy straw.
3.3	Optimal distribution in blocks/villages	-		Priority has given to hot spot Villages and randomization has been done + Sanction letter is issued
3.4	Means for mapping of demand and supply of machines by the CHCs	-		Mapping of all machinery available has done at village level.
4	Area planned for bio-decomposer application	acres		In 2022 Bio-decomposer applied in 300 Acres and 750 MT straw quantites was managed.For 2023 Bio-decomposer target/supply from Directorate Agriculture is still awaited.
	Approx. quantity of straw to be managed by biodecomposer application	tonnes		
5	Quantity planned through ex-situ measures	lakh tonnes	3.36	2.91 MT + 0.45 MT Fodder= 3.36 lakh tonnes
5.1	As fuel in boilers, furnaces,etc.	lakh tonnes	2.05 per annum	M/s Buttar Biofuels Pvt. Ltd., Village Buttar Seviyan, Tehsil Baba Bakala District Amritsar. The industry is using paddy straw as fuel @ 205000 MT/Annum.
5.2	Pellets for brick kilns and TPPs	lakh tonnes		
5.3	For CBG/bio-ethanol production	lakh tonnes		
5.4	Other miscellaneous purposes	lakh tonnes	0.77	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		22 acres in Rayya, Harsha chhina, Chogawan, Ajnala and Tarsikka block
6.2	Availability of baling/raking equipment	-		62 No. of new Machines to be procured in 2023- 107 (Bailer-54+ Rake 53) will be able to manage 10000 MT
6.3	Briquetting and Pelleting plants in the district	-		JKSH Biofuel Kot Miglani is being set up towards end of season, it can handle up to 5 MT paddy straw
6.4	Transportation and logistics	-		Baler operator are storing the straw near their area of operation
7	Quantity planned for cattle fodder	tonnes	45000	
8	Net balance quantity with no specific management plan	tonnes		Planning has been done to manage all paddy straw generating in season 2023

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9	Any special measures to be reported	-	<p>1. Environmental protection committees have been established in hotspot villages, and meetings have been held with them.</p> <p>2. 50 Cluster Officers and 319 Nodal Officers were appointed to create awareness and monitor stubble burning incidents. Training has been provided to all cluster officers and nodal officers.</p> <p>3. The target of conducting 145 Village-level farmer training camps has been received, with 29 village-level camps already organized. The remaining target is set to be achieved in the month of September.</p> <p>4. A mega district-level camp has been completed, and 9 block-level camps are scheduled for the month of October. Announcements have also been made through religious places.</p>
			<p>5. IEC activities are being carried out in all villages, with a focus on sharing information about CRM machinery.</p> <p>6. For IEC activities, 600 wall paintings have been created, mobile van campaigns lasting 40 days have been launched, school activities have been mobilized, ASHA workers have been trained, and literature highlighting the ill effects of stubble burning will also be distributed in the month of September in hotspot areas.</p> <p>7. APAG (Air Pollution Action Group) and NGOs are collaborating with the District Administration and Agriculture Department for in situ management and the implementation of IEC activities in the district.</p>



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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023	
District	Barnala
Fire counts reported as per ISRO protocol in 2022	2910
Target for 2023	1455 (50%)

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	112000	
2	Total quantity of paddy straw generation	lakh tonnes	7.10	
2.1	From Basmati	lakh tonnes	0.09	
2.2	From Non-Basmati	lakh tonnes	7.01	
3	Quantity planned for management through in-situ measures	lakh tonnes	5.65	
3.1	Overall Availability of Machines	No.	3059	Super Seeder available 2329, Happy seeder available-730
3.2	No. of new machines procured in 2023	No.	-	Super Seeder (Target 2023): 432, Surface Seeder (Target 2023): 200
3.3	Optimal distribution in blocks/villages	-		Village wise demand and supply of the available machinery has been chalked out after having series of meetings with stakeholders. The data for distribution of machinery ensuring optimum utilization has been compiled through google sheets and has been shared with stake holders. Such sheets are being displayed at village level for information.
3.4	Means for mapping of demand and supply of machines by the CHCs	-		Mapping of the in-situ machinery available has been done village wise through google spread sheet which has been shared with all stakeholders.
4	Area planned for bio-decomposer application	acres	100	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	700	
5	Quantity planned through ex-situ measures	lakh tonnes	1.45	
5.1	As fuel in boilers, furnaces,etc.	lakh tonnes	0.30	Existing industry Trident India Pvt. Ltd.
5.2	Pellets for brick kilns and TPPs	lakh tonnes	-	
5.3	For CBG/bio-ethanol production	lakh tonnes	0.20	Sangrur RNG Plant (Village Punjgariyan)
5.4	Other miscellaneous purposes	lakh tonnes	0.95	(paddy straw bails store dump (80 acres) & Local Gatta Industries)
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		80 acre of land identified at Handiaya and Aspal Kalan villages for storage of 80,000 MT paddy straw bails.
6.2	Availability of baling/raking equipment	-	40	
6.3	Briquetting and Pelleting plants in the district	-		Farmers/Brick kiln owners are being encouraged on regular basis for setting up of pelleting units. Visits of the existing units have been organized in order to guide and familiarize the willing farmers with the working/ cost factor/ management of the process. Two farmers have shown keen interest in setting of such unit and agriculture, pollution control departments are helping them with the initial formalities.
6.4	Transportation and logistics	-		Transport facility has been organised by the stake-holding agencies/contractors as per their requirement.
7	Quantity planned for cattle fodder	tonnes	2000	
8	Net balance quantity with no specific management plan	tonnes	0	

9	Any special measures to be reported	-	<p>I. In pre-sowing effort, area shifted from long duration paddy varieties to short duration paddy to the tune of 25000 hectares, further leading to reduction in paddy straw production by 80000 MT.</p> <p>II. Division of district in 15 circles for optimal utilisation of machinery.</p> <p>III. Circle to be headed by ADO/AEO - Average 8-10 Villages in one circle.</p> <p>IV. Micro mapping of equipment – Village/Circle/Block Level.</p> <p>V. Identification of Hot spots has been done based upon the fire incidents in the past years. In order to cover such areas endeavor has been made to make special coordination between the local industry and bailers. Trident which is locally based industry has been encouraged to increase paddy straw consumption of boilers from 15000 MT to 25000 MT. Effort is being made to ensure that the demand is being met out from paddy straw being generated from such Hot spot areas.</p> <p>VI. Successful in engaging contractors for hiring storage space in district for storage of paddy straw bails to the tune of 8000 MT. (To be further used in industry situated in other parts of state.)</p> <p>VII. Micro management plan has been planned and minimum five employees/ progressive farmers have been deputed per village for awareness and management at later stages.</p> <p>VIII. Total 525 village awareness camps have been organized so far and their is further planning of covering each village through such camps in coming months. The schedule of such camps has been shared with all nodal officers and at village level to ensure maximum participation.</p> <p>IX. IEC activities will be carried out through vans/ painting competitions/ wall paintings and literature distribution.</p> <p>X. Identification of the owners having 65 HP Tractors has been done in order to ensure optimum utilization of CRM Machinery available with Cooperative Societies.</p> <p>XI. Members of kisan unions are also being involved for awareness activities at village level</p>
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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Bathinda
Fire counts reported as per ISRO protocol in 2022	4592
Target for 2023	2286 (50%)

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	232000	up by 15%
2	Total quantity of paddy straw generation	lakh tonnes	14.98	
2.1	From Basmati	lakh tonnes	0.55	
2.2	From Non-Basmati	lakh tonnes	14.43	
3	Quantity planned for management through in-situ measures	lakh tonnes	7.51	
3.1	Overall Availability of Machines	No.	8325	
3.2	No. of new machines procured in 2023	No.	1541	1235 (Sanction letters issued) against target of 1788 (No SC applicants)
3.3	Optimal distribution in blocks/villages	-		Draw has been conducted giving preference to villages having low machinery density.
3.4	Means for mapping of demand and supply of machines by the CHCs	-		<ol style="list-style-type: none"> 1. Village wise plans for utilization of machinery prepared. 2. Gazetted officers being appointed as special supervisor for 81 hotspot villages to monitor machinery use. 3. Cluster officers to ensure availability of machinery across villages in the cluster (Cross linking surplus and deficit villages) 4. Awareness camps by PACS and Agriculture Department. Promotion of I-khet app. 5. Contact details of Nodal officer, officials from department of co-operation and agriculture will be shared among farmers. 6. Lists of CRM machinery present in the village provided to special supervisors, cluster officers, Nodal officer, Lambardars, Gram Panchayat and PACS so that farmers can contact the above said officials and hire machinery available near to them for crop residue management.
4	Area planned for bio-decomposer application	acres	-	
5	Approx. quantity of straw to be managed by biodecomposer application	tonnes	-	
5	Quantity planned through ex-situ measures	lakh tonnes	4.07	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	2.25	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.32	Proposed Production- 106 TPD
5.3	For CBG/bio-ethanol production	lakh tonnes	1.50	
5.4	Other miscellaneous purposes	lakh tonnes	-	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		Only 1 industry requires land (50 acres). Land available for industries
6.2	Availability of baling/raking equipment	-	68	68 balers and rake
6.3	Briquetting and Pelleting plants in the district	-		3 under progress

6.4	Transportation and logistics	-		<p>-Multiple meetings conducted to facilitate the units and major issues like pipeline and electricity to HPCL plant, land availability to HPCL and private players have been resolved after use of force at few locations.</p> <p>-Areas of Concern: 1.HPCL: Land made available is not yet ready (levelling, boundary wall, weighing bridges etc.). Soil Conservation Department has not been able to construct the pond. 2. While we facilitated direct MoUs with Farmers for 1 lakh MT paddy straw, tender for additional 75k MT failed. Re-tendering is on. 3.Pancarbo: Farmer's protest against pipeline. Work has been conditionally started.</p>
7	Quantity planned for cattle fodder	tonnes	38000	
8	Net balance quantity with no specific management plan	tonnes	301200	
9	Any special measures to be reported	-		<p>-List of Farmers (J Form holders) provided to each nodal officer, to convey the message of zero paddy straw burning to the farmers telephonically. -Incentive: Reward of 5 lakh/2 Lakh/1 lakh to panchayats and Rs 1 Lakh for best performing PACS in each Block being planned. -Declaration regarding no paddy straw burning has been taken from all Govt./ PSU/ Board/ Corporations employees and all the lambardars -Special Supervisors for hot spot villages -Any lambardar or Govt./ PSU/ Board/ Corporations employee who burns paddy straw will face disciplinary action.</p>



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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023	
District	Faridkot
Fire counts reported as per ISRO protocol in 2022	2693
Target for 2023	1346

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	115000	
2	Total quantity of paddy straw generation	lakh tonnes	7.38	
2.1	From Basmati	lakh tonnes	0.61	
2.2	From Non-Basmati	lakh tonnes	6.76	
3	Quantity planned for management through in-situ measures	lakh tonnes	2.32	
3.1	Overall Availability of Machines	No.	5456	5456 subsidized machines available out of which there are 1729 super seeder
3.2	No. of new machines procured in 2023	No.	0	In CRM 2023-24, 517 new super seeder+200 surface seeder will be given on subsidy
3.3	Optimal distribution in blocks/villages	-		Draw will be conducted on agrimachinerypb.com portal which will ensure preferances to hot-spot villages and optimal distribution of machines in blocks and villages
3.4	Means for mapping of demand and supply of machines by the CHCs	-		Machines have been mapped village wise and report is attached.
4	Area planned for bio-decomposer application	acres	nil	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	nil	Note -Not preferred by farmers as per trials done in last 2 years
5	Quantity planned through ex-situ measures	lakh tonnes	2.27	
5.1	As fuel in boilers, furnaces,etc.	lakh tonnes	2.20	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.04	
5.3	For CBG/bio-ethanol production	lakh tonnes	-	
5.4	Other miscellaneous purposes	lakh tonnes	0.03	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-	NA	
6.2	Availability of baling/raking equipment	-		62 bailing equipment given on subsidy in past years + 29 new bailing equipment will be given subsidy this year 2023-24
6.3	Briquetting and Pelleting plants in the district	-	NA	
6.4	Transportation and logistics	-	NA	
7	Quantity planned for cattle fodder	Lakh tonnes	0.43	
8	Net balance quantity with no specific management plan	Lakh tonnes	2.35	1.5 lakh ton to be managed by 517 new super seeder and 1 lakh ton to be managed by by 200 new surface seeder to be given on subsidy this year.


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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023	
District	Fatehgarh Sahib
Fire counts reported as per ISRO protocol in 2022	1150
Target for 2023	575 (50%)

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	87411	
2	Total quantity of paddy straw generation	lakh tonnes	5.56	
2.1	From Basmati	lakh tonnes	0.63	
2.2	From Non-Basmati	lakh tonnes	4.93	Note: • Basmati Area increased from 9500 Ha in 2022 to 11500 Ha in 2023. • Under Non Basmati varieties 17 % area shifted to PR-126 (A Short duration / less water exhaustive variety)
3	Quantity planned for management through in-situ measures	lakh tonnes	2.56	
3.1	Overall Availability of Machines	No.	1403	Primary CRM Machines
3.2	No. of new machines procured in 2023	No.	576	New machines to be procured in 2023
3.3	Optimal distribution in blocks/villages	-	-	-
3.4	Means for mapping of demand and supply of machines by the CHCs	-	-	Village wise mapping of available machines will be done through Village nodal officers.
4	Area planned for bio-decomposer application	acres	0	As in last year the trials which were conducted by District Agriculture department were not successful and farmer acceptance for bio decomposer is almost negligible.
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	0	
5	Quantity planned through ex-situ measures	lakh tonnes	2.00	
5.1	As fuel in boilers, furnaces,etc.	lakh tonnes	1.60	(+20000 MT additional Estimate)
5.2	Pellets for brick kilns and TPPs	lakh tonnes	NIL	(As there is no unit in Fatehgarh sahib)
5.3	For CBG/bio-ethanol production	lakh tonnes	0.40	(+ 15000 MT additional Estimate)
5.4	Other miscellaneous purposes	lakh tonnes	NIL	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-	Yes	
6.2	Availability of baling/raking equipment	-	Yes	
6.3	Briqueting and Pelleting plants in the district	-	-	No unit in Fatehgarh Sahib
6.4	Transportation and logistics	-	Yes	
7	Quantity planned for cattle fodder	tonnes	5000	(As per practice will be utilized in Govt. Gaushalla for fodder purpose)
8	Net balance quantity with no specific management plan	tonnes	100000	1.0 Lakh tonne of straw from about 22571 Ha of land is a challenge to be managed.



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9	Any special measures to be reported	-	<p>i) About 90 Hotspot villages have been identified based on number of fire events in last three years and all these hotspot villages will be covered by means of field visit before the harvesting season.</p> <p>ii) Micro planning of CRM Machinery/Industries and farmers is being carried out to ensure no land parcel is left out.</p> <p>iii) Extensive awareness campaign is being carried out; Endeavour is being made to develop inter-personal relations among farmers and nodal officers So that no incidents of fires take place.</p> <p>iv) IEC activities through Wall painting, Village Awareness Camps, Awareness Vans and awareness by means of pledge and debate /painting competitions in the schools will also be carried out.</p>
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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Fazilka
Fire counts reported as per ISRO protocol in 2022	3075
Target for 2023	1537

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	101100	
2	Total quantity of paddy straw generation	lakh tonnes	5.87	
2.1	From Basmati	lakh tonnes	3.85	
2.2	From Non-Basmati	lakh tonnes	2.02	
3	Quantity planned for management through in-situ measures	lakh tonnes	3.53	
3.1	Overall Availability of Machines	No.	6059	
3.2	No. of new machines procured in 2023	No.	947	Target received from HO
3.3	Optimal distribution in blocks/villages	-		Draw will be conducted by software with the preference to the village having low machinery density and high no. of paddy straw incidents.
3.4	Means for mapping of demand and supply of machines by the CHCs	-		Dept. of agriculture and Dept. of co-operation are creating awareness regarding utilization of CRM machinery through awareness camps, promoting I-khet app and through farmer WhatsApp groups.
4	Area planned for bio-decomposer application	acres	200	200 units of Bio decomposer required from Head office to achieve this target
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	500	
5	Quantity planned through ex-situ measures	lakh tonnes	1.27	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	0.70	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.30	
5.3	For CBG/bio-ethanol production	lakh tonnes	0.15	
5.4	Other miscellaneous purposes	lakh tonnes	0.12	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-	6 yards and 135 acre land	
6.2	Availability of baling/raking equipment	-	65	
6.3	Briquetting and Pelleting plants in the district	-	1	
6.4	Transportation and logistics	-		Approx. 4 to 5 trolleys are available with each baler to transport the stubble from farm land to dump yard/ industry/Gaushala.
7	Quantity planned for cattle fodder	tonnes	50000	This includes requirement by the Gaushalas/local farmers/Rajasthan Gaushalas
8	Net balance quantity with no specific management plan	tonnes	57000	

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	<p>9 Any special measures to be reported</p>	-	<p>1. Awareness/IEC Activities:</p> <p>a. Oath taking ceremony to be organized in the morning prayers in all the 230 schools of the district followed by a lecture by the teacher to manage paddy stubble.</p> <p>b. 4 Vatavaran Mitras have been identified in each of the 230 Senior secondary schools of Fazilka who will volunteer to create awareness in Villages by door to door campaigning and rallies with slogan march. The nodal officer from the school and one Agriculture Officer will accompany the vatavaran Mitras.</p> <p>c. School Camp : Under our popular counselling and guidance programme Learn and Grow Every circle officer of Agriculture department will go to a school to counsel and provide information and guidance to the students regarding paddy straw management. The schedule for the same has been already shared with the schools.</p> <p>d. Village camps: The schedule of 289 Village camps have already been shared to schools and a nodal officer from the agriculture department have been deputed for the same purpose. The agriculture officer will organise the awareness camp in each village and will inform the farmers about</p> <ol style="list-style-type: none"> 1. Harmful effects of stubble burning 2. How to manage paddy straw through instu or exsitu management 3. Availability of machines in that village And benefits of paddy stubble etc. <p>e. Wall Paintings : 340 Wall painting against stubble burning will be painted across the hotspot villages, grain markets, bus stand, schools, nearby gurudwaras, panchayat ghar & cooperative societies of villages.</p> <p>f. Awareness Van : Awareness van with loud speakers will be visiting the villages especially the hotspots to create awareness against stubble burning. This will start in two shifts- 18th September to 22nd September and 16th October to 20th October in all villages of all blocks of District Fazilka.</p> <p>g. Literature distribution: Literature in the form of Pamphlets will be distributed in the village camps, school camps, through awareness van.</p> <p>2. Gaushala : 26 registered Gaushalas have been directed by DC Fazilka to store and use 42200 quintal stubble as fodder. Also 12 unregistered Gaushalas have been directed to use 2700 Quintal Stubble as Fodder.</p> <p>3. Gaushalas in Rajasthan: Two agriculture officers have been deputed to contact and visit these gaushalas. The gaushala owners of Fazilka have also committed to share numbers of the gaushala owners of the Rajasthan who can take maximum stubble out of the district.</p> <p>4. Industries : A separate meeting with the Industries was organized to ask them to take maximum Stubble out of the Farms. They have committed to use 1.27 lakh tonne of Stubble. As per Annexure A.</p> <p>5. Brick Klin : 119 Brick Klins have been directed to use 20% pellet instead of coal.</p> <p>6. Surface seeder : Promotion of the this machine and technique will be done for maximum in-situ and awareness through village camps. Subsidy given by the govt. will also be discussed in the camps. We have received 142 applications till date for this machine against the target of 200 which was assigned to our District Fazilka.</p> <p>7. In-situ : 6059 CRM machines available in district Fazilka for in-situ management of stubble and approx.</p>
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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023	
District	Firozpur
Fire counts reported as per ISRO protocol in 2022	4282
Target for 2023	2141

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	183500	
2	Total quantity of paddy straw generation	lakh tonnes	11.00	Approx
2.1	From Basmati	lakh tonnes	1.57	
2.2	From Non-Basmati	lakh tonnes	9.43	
3	Quantity planned for management through in-situ measures	lakh tonnes	7.18	
3.1	Overall Availability of Machines	No.	10617	
3.2	No. of new machines procured in 2023	No.	1966	
3.3	Optimal distribution in blocks/villages	-		This will be done by the software developed by the agriculture Department to select beneficiaries focusing on uniform distribution of CRM machinery in all the villages of the district while prioritizing the hotspot villages of the Distt.
3.4	Means for mapping of demand and supply of machines by the CHCs	-		Mapping of all the machines available in the district has been done and the focus is to increase the utilisation of the available machinery by promoting i-khet app and through farmer whatsapp groups. The machines available in PACs of 22 hotspot villages have been mapped and direction have been issued to give machines available with them on priority basis to small and marginal farmers.
4	Area planned for bio-decomposer application and Approx. quantity of	acres	300	300 acres fo area (50 acres in each of six blocks)
5	Quantity planned through ex-situ measures	lakh tonnes	2.50	By SAEL biomass plant
5.1	As fuel in boilers, furnaces,etc.	lakh tonnes	2.25	A Biomass power plant namely SAEL situated at Hakumat Singh Wala is operational in Distt Ferozepur and it uses around 2.25 lakh tonnes of paddy straw as fuel.
5.2	Pellets for brick kilns and TPPs			No Pelletization unit is operational in Distt Ferozepur
5.3	For CBG/bio-ethanol production			No CBG/bio-ethanol production plant is operational in Distt Ferozepur
5.4	Other miscellaneous purposes	lakh tonnes	0.25	Four cardboard factories are operational in Distt with consumption of around 25000 tonnes of paddy straw
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	acre	130	Total 8 yards of around 130 acre land
6.2	Availability of baling/raking equipment	-	147	Total of 147 balers and rakers are available (17 big balers and 130 small balers)
6.3	Briquetting and Pelleting plants in the district	-	-	
6.4	Transportation and logistics	-		Available
7	Quantity planned for cattle fodder	tonnes	157000	In this year in Distt Ferozepur, basmati crop is grown on 31500 hactares of land which will produce around 1.57 lakh tonnes of straw. This 1.57 lakh tonnes of straw which will be generated from basmati crop is presumed to be used as fodder due to shortage of wheat straw and destruction of fodder due to floods.
8	Net balance quantity with no specific management plan	tonnes	0.00	- Nil - Total straw generation=11.00 lakh tonnes - Quantity planned for in-situ management=7.18 lakh tonnes - Quantity planned through ex-sit management=2.50 lakh tonnes - Quantity planned for cattle fodder=1.5 lakh tonnes

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9	Any special measures to be reported	-	<ul style="list-style-type: none">-Krishi Vigyan Kendra Ferozepur will adopt 4 hotspot villages with max fire count-Fire brigades will be placed in all the hotspot villages-Promotion of i-Khet app is being done to maximize the use of available machinery-Meetings are being conducted with officials of Industries, Baler unions and farmers for better coordination among them.-IEC activities like camps, school activities, wall paintings, songs, nuked natak etc will be conducted starting from next week with main focus on hotspot villages.- A total of 563 Nodal officer and 36 cluster officer have been appointed in different illages of the district to monitor farm fires occured if any
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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Gurdaspur
Fire counts reported as per ISRO protocol in 2022	854
Target for 2023	300

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	170000	130000 Paddy + 40000 Basmati
2	Total quantity of paddy straw generation	lakh tonnes	10.20	
2.1	From Basmati	lakh tonnes	2.40	
2.2	From Non-Basmati	lakh tonnes	7.80	
3	Quantity planned for management through in-situ measures	lakh tonnes	6.00	
3.1	Overall Availability of Machines	No.	4606	
3.2	No. of new machines procured in 2023	No.	639	
3.3	Optimal distribution in blocks/villages	-		Optimal distribution will be done as this year online draw of machinery will be conducted with preference to Hotspot villages after 10th September
3.4	Means for mapping of demand and supply of machines by the CHCs	-		Hotspot villages identified and also those villages where already lesser machines are available. More applications have been taken from these villages. Also CHCs have been established at block level to cater to the demand of these villages
4	Area planned for bio-decomposer application	acres	200	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	480	This year no target of Biodecomposer received yet
5	Quantity planned through ex-situ measures	lakh tonnes	1.51	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	0.90	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.60	
5.3	For CBG/bio-ethanol production	lakh tonnes	Nil	There is no CBG or Bioethanol plant in the district
5.4	Other miscellaneous purposes	lakh tonnes	0.10	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-	111 acre	As reported by DDPO Gurdaspur
6.2	Availability of baling/raking equipment	-	160	Old Baler + Rake = 42 New Machines Sanctioned (Baler+ rake)= 118
6.3	Briquetting and Pelleting plants in the district	-		5 in progress as reported by PPCB
6.4	Transportation and logistics	-		More than 30 trollies available with bailer operators. Nos. will reach 100 this year
7	Quantity planned for cattle fodder	tonnes	240000	Total area under Basmati is 40000 Ha. This stubble is used as fodder for cattle
8	Net balance quantity with no specific management plan	tonnes	30000	

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9	Any special measures to be reported	-	<ol style="list-style-type: none">1. 332 village level nodal officers appointed to check stubble burning esp in hotspot areas.2. Honoring farmers who will not burn stubble with 'Protectors of Environment' award3. Honoring panchayats that will not burn stubble by expediting and prioritising their development works4. Awareness programs are being run in villages since the last 4 months5. Numberdaars and sarpanches have been made responsible for the good work or the stubble burning incidents, if any, and they will be appreciated accordingly.6. Mass media coverage is being done to make people aware. Programs are being run in schools and colleges to make young students aware of the ill effects.7. 10 applications for Bio-Mass Paddy supply chain have been applied and expected to be sanctioned so that this machines will be utilized for stubble management
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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Hoshiarpur
Fire counts reported as per ISRO protocol in 2022	259
Target for 2023	0

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	81000	Paddy- 79000Ha, Basmati - 2000Ha
2	Total quantity of paddy straw generation	lakh tonnes	5.25	
2.1	From Basmati	lakh tonnes	0.11	
2.2	From Non-Basmati	lakh tonnes	5.14	
3	Quantity planned for management through in-situ measures	lakh tonnes	2.60	
3.1	Overall Availability of Machines	No.	2155	
3.2	No. of new machines procured in 2023	No.	-	363 machines (including 94 Surface Seeders) have been sanctioned in 2023 to Farmers & Co-op Societies
3.3	Optimal distribution in blocks/villages	-		-Block Agriculture Officers will ensure village-wise mapping of In-Situ CRM Machines available with farmers within Blocks to ensure 100% utilization. - Block-level Custom Hiring Centres (CHCs) with CRM machinery worth about Rs. 5 lakh each have been established for providing In-Situ machinery to Small & Marginal Farmers on priority. - Written directions issued to Block Agriculture Officers to submit Block-wise Mapping Plan to the DC for efficient utilization.
3.4	Means for mapping of demand and supply of machines by the CHCs	-		-Special emphasis being laid on 100% utilization of Surface Seeders in CRM @ about 100 Acres (i.e. 40 Hectares) per Surface Seeder during the season. -Also, Farmers are being encouraged (through IEC Activities & Village-wise Camps) to use i-khet Mobile App showing availability & usage (booking) of CRM Machinery available in their neighbourhood.
4	Area planned for bio-decomposer application	acres	247	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	650	
5	Quantity planned through ex-situ measures	lakh tonnes	1.54	12 industries present in the district
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes		
5.2	Pellets for brick kilns and TPPs	lakh tonnes		
5.3	For CBG/bio-ethanol production	lakh tonnes		
5.4	Other miscellaneous purposes	lakh tonnes		
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-	54 acres	
6.2	Availability of baling/raking equipment	-	17 balers and 17 rakes	17 balers and 17 rakes available till 2022, 28 balers and rake sanctioned in 2023

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6.3	Briquetting and Pelleting plants in the district	-		The following two industries has been granted NOC by the Board for manufacturing pellets by utilization of paddy. a) M/s EECO Urja Ventures, Vill Kotla Gonspur, Distt Hoshiarpur for paddy Pellets @ 100 TPD from paddy of 120 TPDNOC granted vide no. CTE/Fresh/HSP/2023/23032415 dated 28.08.2023 valid . upto 27.08.2024 b) One Bio Mass CBC Plant back side Reliance industry, Chohal District Hoshiarpur in the name of M/s Reliance Chemicals and Materials Limited, Hoshiarpur Bio-Energy Complex, Vill. Baroti has been granted NOC vide no. CTE/Fresh/PBIP/HSR2023/2301184 235 dated 28.08.2023 valid upto 09.02.2024 for manufacturing of Compressed Bio-Gass@ 9000 MTA & Briquettes Pellets @ 21000 MTA from Paddy 70000 MTA
6.4	Transportation and logistics	-		The Paddy straw aggregators have their own transport. If they face any constraint or issue regarding transport, it would be addressed by concerned Sub Divisional Magistrates.
7	Quantity planned for cattle fodder	tonnes	110000	
8	Net balance quantity with no specific management plan	tonnes	0	
9	Any special measures to be reported	-	-	

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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Jalandhar
Fire counts reported as per ISRO protocol in 2022	1388
Target for 2023	700

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	170000	
2	Total quantity of paddy straw generation	lakh tonnes	9.47	
2.1	From Basmati	lakh tonnes	0.78	
2.2	From Non-Basmati	lakh tonnes	8.69	
3	Quantity planned for management through in-situ measures	lakh tonnes	3.00	
3.1	Overall Availability of Machines	No.	5618	
3.2	No. of new machines procured in 2023	No.	790	
3.3	Optimal distribution in blocks/villages	-		1. optimal distribution of new machines will be ensured through CRM Portal. 2. 5618 machines already provided till date under CRM scheme are present in blocks as per paddy area.
3.4	Means for mapping of demand and supply of machines by the CHCs	-		1. Existing 1138 CHC's in district will be mapped by block officers of Agriculture Deptt. 2. Machines with coop societies will be mapped by Coop deptt.
4	Area planned for bio-decomposer application	acres	200	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	500	
5	Quantity planned through ex-situ measures	lakh tonnes	4.06	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	0.57	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	1.11	
5.3	For CBG/bio-ethanol production	lakh tonnes	1.68	There are 4 CBG/Bio Fuel plants which are upcoming in District Jalandhar which will handle 1.68 lakh MT of Paddy straw.
5.4	Other miscellaneous purposes	lakh tonnes	0.70	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		
6.2	Availability of baling/raking equipment	-	129	1). Already available=58 2). Target for 2023-24=71 3). Total availability during 2023-24 season= 129
6.3	Briquetting and Pelleting plants in the district	-		3 paddy based plants proposed to set which is likely to handle around 1,11,000 MT of paddy straw
6.4	Transportation and logistics	-		
7	Quantity planned for cattle fodder	tonnes	50000	

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8	Net balance quantity with no specific management plan	tonnes	190,000	
9	Any special measures to be reported	-		<p>1. Nodal and duster officers have been appointed for each village to check stubble burning incidents.</p> <p>2. Regular meetings are being held with Brick kiln association for use of paddy pellets as fuel.</p> <p>3. In order to control the menace of stubble burning during paddy harvesting season 2023 responsibility of District Administration, Jalandhar and letter regarding "No Burning of Paddy Stubble" by Govt Employee has also been issued.</p> <p>4. IEC Activities will be carried out to aware farmers not to burn stubble in their field.</p> <p>5. 275 surfaces seeder will be used on trial basis.</p>

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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023	
District	Kapurthala
Fire counts reported as per ISRO protocol in 2022	1279
Target for 2023	700

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	118700	
2	Total quantity of paddy straw generation	lakh tonnes	6.00	
2.1	From Basmati	lakh tonnes	0.50	
2.2	From Non-Basmati	lakh tonnes	5.50	
3	Quantity planned for management through in-situ measures	lakh tonnes	3.15	
3.1	Overall Availability of Machines	No.	4749	From 2018-19 to 2022-23 applicants have availed subsidy on around 4749 INSITU implements.
3.2	No. of new machines procured in 2023	No.	-	During 2023-24, Under CRM Scheme Sanctions have been issued for 701 Crop Residue Management Implements/ Machines on 15.09.2023 after conducting DLEC Meeting and the expiry of these sanctions is 29.09.2023
3.3	Optimal distribution in blocks/villages	-	-	Offline village mapping of more than 4700 subsidized implements has been done blockwise and beneficiaries will be motivated to rent out their implements to Small and Marginal farmers on priority basis. One Block Level CHC has been established in each block to facilitate Small and Marginal Farmers. 2 Super Seeders per Block CHC are available which will be given to Small and Marginal Farmers on priority basis.
3.4	Means for mapping of demand and supply of machines by the CHCs	-	-	Farmers are encouraged to use 'i-Khet' mobile application to rent out their implements to other needy farmers
4	Area planned for bio-decomposer application	acres	200	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	400	
5	Quantity planned through ex-situ measures	lakh tonnes	0.90	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	0.00	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.90	Phagwara Tehsil for plant at Bundala
5.3	For CBG/bio-ethanol production	lakh tonnes	0.00	
5.4	Other miscellaneous purposes	lakh tonnes	0.00	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-	-	91-4-15
6.2	Availability of baling/raking equipment	-	37	Farmers have availed subsidy on 20 balers and 17 rakes from 2018-19 to 2022-23. They can manage upto 0.12 Lakh Tonnes of Stubble.
6.3	Briquetting and Pelleting plants in the district	-	NIL	
6.4	Transportation and logistics	-	-	No information
7	Quantity planned for cattle fodder	tonnes	4000	

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8	Net balance quantity with no specific management plan	tonnes	129,000	
9	Any special measures to be reported	-		<p>1. In order to control the menace of stubble burning during paddy harvesting Season 2023 responsibility of different departments has been fixed through District Administration, Kapurthala and letter regarding "No Burning of Paddy Stubble" by Government Employees has also been issued.</p> <p>2. District level and Sub-division level Monitoring Committees have been established.</p> <p>3. IEC Activities will be carried out to aware farmers not to burn stubble in their fields.</p>

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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023	
District	Ludhiana
Fire counts reported as per ISRO protocol in 2022	2682
Target for 2023	1341 (50%)

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	256900	
2	Total quantity of paddy straw generation	lakh tonnes	16.60	
2.1	From Basmati	lakh tonnes	0.57	
2.2	From Non-Basmati	lakh tonnes	16.03	
3	Quantity planned for management through in-situ measures	lakh tonnes	11.07	11.07 lakh tonnes Appx 66.6 % of total
3.1	Overall Availability of Machines	No.	7006	A total of 7006 CRM machines are available in District. Location and details of each machine is available with block agriculture office and will encourage for their maximum utilization. Also data of all such machines is available on "i-khet machine" mobile application from where it can be hired. Apart from this proposed machine operators will be contacted personally and shall be inspired for full capacity utilization of CRM machines through custom hiring. This way 100% utilization of all 7006 CRM machines will be ensured.
3.2	No. of new machines procured in 2023	No.	.	Target of 1875 new machines is received for year 2023-24. Selection will be done after application date closes on 10/09/2023.
3.3	Optimal distribution in blocks/villages	-		Optimal distribution of CRM machines will be done by the software developed by Agriculture department to select beneficiaries focusing on villages having lower density of CRM machines and with higher density of stubble burning fire incidences (hot spot villages).
3.4	Means for mapping of demand and supply of machines by the CHCs	-		It's been found that 50% of incidences come from top 100 hot spot villages and special mapping would be done with available machines in PACS of these villages and will be made available to small and marginal farmers on priority basis. Similarly vulnerable farmers from these hot spot villages will be contacted in person to guide and provide them with CRM machinery. Extra IEC activities will be done specially in Potato belt for peer to peer communication among farmers. Apart from them data of CRM machines which will be made available to farmers this year will be on boarded on "i-khet machine" application.
4	Area planned for bio-decomposer application	acres	110.00	It is subject to availability of Biodecomposers; however farmers have not shown a keen interest in its application.
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	308.00	


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5	Quantity planned through ex-situ measures	lakh tonnes	1.60	<p>Apart from 1.60 lakh tonnes another 1.65 lakh tonnes tentative demand is received from industries.</p> <p>Total: 3.25 lakh tones (equivalent to 50,000 ha ie 19.57% of total straw generated)</p>
5.1	As fuel in boilers, furnaces,etc.	lakh tonnes	1.15	It is informed that there are 04 no. industries which are using paddy straw as fuel in boilers and around 115000 MT paddy straw is being utilized in boiler.
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.15	There is 01 pelletization plant operating in district Ludhiana (Eco Stan Biofuels, Village Lehra, Ludhiana Quantity: 3.2 TPH, 15,000 tonnes) (In operation)
5.3	For CBG/bio-ethanol production	lakh tonnes	0.30	Farm Gas CBG Plant utilizing 30,000 tonne of paddy straw is operational at Khanna.
5.4	Other miscellaneous purposes	lakh tonnes		
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-	376	151 acres of land at 33 sites as identified by Panchayats. Additional 217 acres of dump lands available with industries and 8 acres of land is available with Gaushalas. (Total 376 acres)
6.2	Availability of baling/raking equipment	-	102	<p>A total of 102 Balers/Rakes already available in district in addition 104 Baler/Rakes will be given on subsidy this year. A meeting was held with Baler operators on 25/08/2023 and was instructed to operate within Ludhiana District.</p> <p>With 206 balers made available to district a total of approximately 50,000 ha of land can be managed through Ex-situ techniques.</p>
6.3	Briquetting and Pelleting plants in the district	-	1	There is 01 pelletization plant operating in district Ludhiana (Eco Stan Biofuels, Village Lehra, Ludhiana Quantity: 3.2 TPH) (In operation)
6.4	Transportation and logistics	-	-	The Department will find suitable spread out locations with available land parcels leased out to the industries using paddy straw. With more than 100 available balers / rakers and over 160 special straw trolleys will be used aggregate straw to the selected locations. During this season a fleet of 104 more balers and 200 more straw trolleys will be added to the paddy straw supply chain management.
7	Quantity planned for cattle fodder	tonnes	12,178	13531 cattle utilizing 3 kg straw per animal per day for 300 days. As reported by DDAH, Ludhiana. 0.12178 lakh tonnes
8	Net balance quantity with no specific management plan	tonnes	215,800	13% of total
9	Any special measures to be reported	-		<p>1. Top 100 hot spot villages accounting for more than 50% of fire incidences will be targeted with special IEC Campaign.</p> <p>2. Planning of award/ incentives to farmers managing paddy straw without burning.</p> <p>3. Prominent personalities will be requested to make public appeals to farmers to save environment and to shun the practice.</p> <p>4. Government employees/ Officials having farm lands will face action if they found indulged in straw burning.</p>


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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Malerkotla
Fire counts reported as per ISRO protocol in 2022	869
Target for 2023	0

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	52000	
2	Total quantity of paddy straw generation	lakh tonnes	3.30	
2.1	From Basmati	lakh tonnes	0.30	
2.2	From Non-Basmati	lakh tonnes	3.00	
3	Quantity planned for management through in-situ measures	lakh tonnes	2.81	
3.1	Overall Availability of Machines	No.	1250	
3.2	No. of new machines procured in 2023	No.	455	
3.3	Optimal distribution in blocks/villages	-		Village wise / Cooperative Society wise CRM machines mapping has been done.
3.4	Means for mapping of demand and supply of machines by the CHCs	-		Through Cooperative Societies, Panchayats, Fields staff of Agriculture Department
4	Area planned for bio-decomposer application	acres	0	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	0	
5	Quantity planned through ex-situ measures	lakh tonnes	0.27	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	0	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0	
5.3	For CBG/bio-ethanol production	lakh tonnes	0.15	
5.4	Other miscellaneous purposes	lakh tonnes	0.12	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		Land Available and will be supplied as per demand.
6.2	Availability of baling/raking equipment	-	4	
6.3	Briquetting and Pelleting plants in the district	-	0	
6.4	Transportation and logistics	-		
7	Quantity planned for cattle fodder	tonnes	40	
8	Net balance quantity with no specific management plan	tonnes	20000	
9	Any special measures to be reported	-		Management through in-situ -2.81 lakh tonnes


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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023	
District	Mansa
Fire counts reported as per ISRO protocol in 2022	2815
Target for 2023	1407

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	147590	
2	Total quantity of paddy straw generation	lakh tonnes	8.96	
2.1	From Basmati	lakh tonnes	1.00	
2.2	From Non-Basmati	lakh tonnes	7.96	
3	Quantity planned for management through in-situ measures	lakh tonnes	6.96	
3.1	Overall Availability of Machines	No.	6749	
3.2	No. of new machines procured in 2023	No.	806	806 Machines Sanctioned on 17-09-2023
3.3	Optimal distribution in blocks/villages	-		Draw for the procurement of new machinery will be conducted through portal as per the directions from Head Office.
3.4	Means for mapping of demand and supply of machines by the CHCs	-		-Village wise/Farmer-wise machinery mapping is in process by Dept. of Agri & farmer Welfare. * Efforts are being made by Dept. of Cooperative for proper utilization of machines.
4	Area planned for bio-decomposer application	acres	0	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	0	
5	Quantity planned through ex-situ measures	lakh tonnes	2.00	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	0.9	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.75	
5.3	For CBG/bio-ethanol production	lakh tonnes	0.00	
5.4	Other miscellaneous purposes	lakh tonnes	0.35	0.1 lac tons (Card Board Units) + 0.25 lac tons (through aggregators)
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		180 Acres of Land has been established for storage of Paddy Bales
6.2	Availability of baling/raking equipment	-	42	Approx. 42 Baler Units available (60 new Balers to be procured during 2023-24)
6.3	Briquetting and Pelleting plants in the district	-	4	
6.4	Transportation and logistics	-		Will be done by industries / owner of balers
7	Quantity planned for cattle fodder	tonnes	0	
8	Net balance quantity with no specific management plan	tonnes	260000	


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9	Any special measures to be reported	-	<p>i. 243 Village Nodal officers have been appointed one for each village.</p> <p>ii. District Mansa has been divided into 25 clusters where ADO/Cluster Officers/ Village Nodal Officers will work as a team for all activities related to stubble management.</p> <p>iii. 71 Hotspot Villages / 32 Potential Hotspots and 67 Villages with Zero Burning Targets have been identified.</p> <p>iv. Special Officials have been appointed for hotspot villages.</p> <p>v. Regular meetings are being held with Baler Owners/ Brick Kiln Owners/ industries and departmental officials</p> <p>vi. List of machinery available in each village has been pasted at common places and announcements will be made through public places and Shri Gurudwara Sahibs.</p> <p>vii. Persons who have not burnt the stubble for last few years have been identified and other farmers are being motivated through these farmers.</p>
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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Moga
Fire counts reported as per ISRO protocol in 2022	3609
Target for 2023	1805

Sr. No.	Parameter	Unit	Value	Status/Means of Implementation
1	Total area under paddy cultivation	ha	182000.00	
2	Total quantity of paddy straw generation	lakh tonnes	11.60	
2.1	From Basmati	lakh tonnes	0.10	
2.2	From Non-Basmati	lakh tonnes	11.50	
3	Quantity planned for management through In-situ measures	lakh tonnes	8.25	
3.1	Overall Availability of Machines	No.	5986	From 2018-19 to 2022-23 applicants have availed subsidy on around 5986 INSITU implements.
3.2	No. of new machines procured in 2023	No.	3557	During 2023-24, 3557 Machinery Applications including 141 Surface Seeder received till 5 PM dated 08/09/2023. No procurement has been done so far as no option and instructions for randomization of such cases has been received till date.
3.3	Optimal distribution in blocks/villages	-		Offline village mapping of more than 3453 subsidized implements has been done Block wise and beneficiaries will be motivated to rent out their implements to small and marginal Farmers on priority basis. One Block Level CHC has been established in each block to facilitate Small and Marginal Farmers. 10 Super Seeder and 02 Zero Drill per CHC are available which will be given to Small and Marginal Farmers on Priority basis
3.4	Means for mapping of demand and supply of machines by the CHCs	-		Farmers are encouraged to use 'i-Khet' mobile application to rent out their implements to other needy farmers
4	Area planned for bio-decomposer application	acres	75.00	
5	Approx. quantity of straw to be managed by biodecomposer application Quantity planned through ex-situ measures	tonnes lakh tonnes	750.00 0.86	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	0.70	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.15	
5.3	For CBG/bio-ethanol production	lakh tonnes	0.00	
5.4	Other miscellaneous purposes	lakh tonnes	0.01	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		64 Acres Land
6.2	Availability of baling/raking equipment	-		67 Balers
6.3	Briquetting and Pelleting plants in the district	-		1 Existing and 1 Proposed


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6.4	Transportation and logistics	-		Nil
7	Quantity planned for cattle fodder	tonnes	2,000	
8	Net balance quantity with no specific management plan	tonnes	423,000.00	
9	Any special measures to be reported	-		<p>1. Surface seeding and techniques are being promoted.</p> <p>2. A function is being organized in hot spot villages of district Moga to honor the farmers, did not burnt paddy straw from last 5 years and to encourage other farmers to adopt the same technique.</p> <p>3. BKO Association Moga along with PPCB officials visited Punjab Renewable Energy Systems Pvt. Ltd., Bhawanigarh on 08.09.2023 to get the information regarding set up of pelletization unit viz-a-viz estimation project COst and its maintenance & operational techniques.</p> <p>4. Awareness camps is being organized in an Educational Institutes to spread the awareness regarding ill effects of burning of paddy straw.</p> <p>5 During paddy harvesting, the fire trucks will patrol regularly in hot spot villages.</p> <p>6. IEC activities will be carried out to spread awareness among farmers regarding ill effects of stubble burning</p> <p>7. Monitoring committees have been established.</p> <p>8. Directions have been issued to government employees regarding "No burning of paddy stubble".</p> <p>9. Responsibilities of various stakeholder departments have been fixed to control the menace of stubble</p> <p>10. Training has been provided on 14.8.2023 to cluster officers and nodal officers at DC office Moga regarding operation and working of ATR app.</p>

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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Pathankot
Fire counts reported as per ISRO protocol in 2022	1
Target for 2023	0

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	28900	
2	Total quantity of paddy straw generation	lakh tonnes	1.78	
2.1	From Basmati	lakh tonnes	0.16	
2.2	From Non-Basmati	lakh tonnes	1.62	
3	Quantity planned for management through In-situ measures	lakh tonnes	0.31	
3.1	Overall Availability of Machines	No.	241	
3.2	No. of new machines procured in 2023	No.	38	No. of new machines demand in 2023
3.3	Optimal distribution in blocks/villages	-		-
3.4	Means for mapping of demand and supply of machines by the CHCs	-		-
4	Area planned for bio-decomposer application	acres	100.00	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	-	
5	Quantity planned through ex-situ measures	lakh tonnes	0.45	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	0.45	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.00	
5.3	For CBG/bio-ethanol production	lakh tonnes	0.00	
5.4	Other miscellaneous purposes	lakh tonnes	0.00	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		71 acre 3 kanal 11 marla
6.2	Availability of baling/raking equipment	-	1	
6.3	Briquetting and Pelleting plants in the district	-		58 Brick kilns
6.4	Transportation and logistics	-		Tractors and Trolleys
7	Quantity planned for cattle fodder	tonnes	1.47	
8	Net balance quantity with no specific management plan	tonnes	-	
9	Any special measures to be reported	-		Gujar Community Playing biggest role in ex-situ management

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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Patiala
Fire counts reported as per ISRO protocol in 2022	3338
Target for 2023	1669 (50%)

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	232500	
2	Total quantity of paddy straw generation	lakh tonnes	13.95	
2.1	From Basmati	lakh tonnes	0.73	
2.2	From Non-Basmati	lakh tonnes	13.22	
3	Quantity planned for management through in-situ measures	lakh tonnes	10.38	
3.1	Overall Availability of Machines	No.	6012	Overall Availability of Machines- 6012 in situ machines are available subsidized in last 5 years out of which 3775 super seeder and happy seeder are available for managing 8.23 lakh tonnes straw.
3.2	No. of new machines procured in 2023	No.		Target for 1100 in situ machines has been allocated these machines will be procured in 2023 and out of which 934 surface seeder/ super seeders will be able to manage 2.6 lakh tonnes straw.
3.3	Optimal distribution in blocks/villages	-		318 villages where machinery is not sufficient has been identified and more focus is where in situ machinery is not sufficient and at 64 hot spot villages.
3.4	Means for mapping of demand and supply of machines by the CHCs	-		Mapping of all machinery available has done at village level.
4	Area planned for bio-decomposer application	acres	Nil	Not preferred by farmers as per trials done in last two years
	Approx. quantity of straw to be managed by biodecomposer application	tonnes		
5	Quantity planned through ex-situ measures	lakh tonnes	2.54	
5.1	As fuel in boilers, furnaces,etc.	lakh tonnes	1.30	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.70	
5.3	For CBG/bio-ethanol production	lakh tonnes	0.53	
5.4	Other miscellaneous purposes	lakh tonnes	0.01	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		Land available with all the ex-situ industries for storage of paddy straw. Another 38 acres extra land is available for storage of paddy straw in excess of 2.535 lakh tonnes.
6.2	Availability of baling/raking equipment	-		Availability of baling /raking equipment- 80 balers are available and 94 new targets for 2023 has been received making it total 174 balers adequate for 3.12 lakh tonnes straw baling.
6.3	Briquetting and Pelleting plants in the district	-		One operational and other under installation (would be installed by 30.09.2023)
6.4	Transportation and logistics	-		Available with all the ex-situ industries
7	Quantity planned for cattle fodder	tonnes	73000	
8	Net balance quantity with no specific management plan	tonnes	Nil	Planning has been done to manage all straw generating in season 2023.

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9	Any special measures to be reported	-	<p>1. Target of 180 Village level farmer training camps has been received and 22 village level camps has been organised and remaining target will be achieved in month of September. One mega district level camp is scheduled and 6 block level camps will be conducted in month of October, Announcements through religious places also been carried out.</p> <p>2. For IEC activity wall paintings, mobile vans, mobilisation of school activities, training of ASHA workers, distribution of literature of ill effects of stubble burning will also carried out in month of September in hotspot areas.</p> <p>3. MVS (Manav vikas sansthan) and APAG (Air pollution action group) NGOs are also working with District Administration & Agriculture department for insitu management and IEC activities in District.</p> <p>4. Micro planning of machinery with farmers and bio mass industries has been done.</p> <p>5 Farmers has been recognized who don't burn paddy straw and being carried in village level camps for lectures.</p> <p>6. Commitments in writing and signed has taken from all Govt. Employees for not burning paddy straw.</p> <p>7. Village wise micro-mapping is being done with the paddy storage points of ex-situ industries - https://docs.google.com/spreadsheets/d/1t0LxEWQF9mJld7QKc4TI6PjHWouLHEHa5q-YzSxa-uo/edit</p> <p>Plan to ensure 100% utilisation of machines - 1. A Directory of Machine owners is available with all Sarpanches, Mandi Officers, SDM Offices, Block Agriculture Officers and is also available on Distt.</p>

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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Rupnagar
Fire counts reported as per ISRO protocol in 2022	246
Target for 2023	0

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	40300	
2	Total quantity of paddy straw generation	lakh tonnes	2.59	
2.1	From Basmati	lakh tonnes	0.17	
2.2	From Non-Basmati	lakh tonnes	2.42	
3	Quantity planned for management through in-situ measures	lakh tonnes		
3.1	Overall Availability of Machines	No.	1230	From 2018 -19 to 2022-23 applicants have availed subsidy on 1230 implements
3.2	No. of new machines procured in 2023	No.		During 2023-24, about 676 applications have been received including surface seeder till 4:00 PM dated 08/09/2023. No supply order has been made so far as no option and instructions for placing supply order to beneficiaries has been received from higher authorities.
3.3	Optimal distribution in blocks/villages	-		Offline village mapping of more than 1200 machineries has been done block wise and beneficiaries like cooperative societies, panchayats, FPOs and farmers groups will be motivated to provide their implements to small and marginal farmers on priority basis. Draw of existing applicants will be conducted by software.
3.4	Means for mapping of demand and supply of machines by the CHCs	-		CHC are encouraged to use i-khet mobile app for rent out their implements. A Google Sheet has been formed to collect machinery demand to provide required machinery to hotspot villages in districts.
4	Area planned for bio-decomposer application	acres	Nil	Minimal response received from farmers due to the long incubation period.
5	Approx. quantity of straw to be managed by biodecomposer application	tonnes		
5	Quantity planned through ex-situ measures	lakh tonnes	0.35	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	0.10	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.25	Used by 2 Industries
5.3	For CBG/bio-ethanol production	lakh tonnes	-	
5.4	Other miscellaneous purposes	lakh tonnes	-	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		358 acres of Panchayati land identified for storage of straw
6.2	Availability of baling/raking equipment	-		29 balers
6.3	Briquetting and Pelleting plants in the district	-		01 unit upcoming at Lakhimpur, Rupnagar
6.4	Transportation and logistics	-		Self-arrangement made by aggregators/balers
7	Quantity planned for cattle fodder	tonnes	Nil	


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8	Net balance quantity with no specific management plan	tonnes	13000	
				<p>1. Village Level Awareness camps are being conducted in hot spot villages. Other IEC activities like wall printings, publicity vans, mobilisation of school activities, training of Asha workers, distribution of literature regarding ill effects of stubble burning will be carried out very soon.</p> <p>2. Regular meetings regarding advance preparedness. are being conducted with different departments.</p> <p>3. Each hot spot village will be adopted by Gazetted officer to ensure zero burning.</p> <p>4. Nodal officer will guide farmers regarding availability of machines.</p>
9	Any special measures to be reported	-		<p>5. Progressive farmers will be honored who did not burn paddy stubble for the last three years</p> <p>6. Ensuring proper supply chain from farmer to baler. to aggregator.</p> <p>7. Training of nodal and cluster officers are in process.</p> <p>8. Whatsapp group created at each sub division level</p> <p>9. Control room will be setup at sub division which will work 7x24</p> <p>10. The total estimated consumption of Pellets in the Thermal Plant will be about 1.3 lac Tonnes in 2023. The authorities of the Thermal Plant have called open tender for procurement of pellets. The company will</p>



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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Sangrur
Fire counts reported as per ISRO protocol in 2022	5239
Target for 2023	2620

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	239000	
2	Total quantity of paddy straw generation	lakh tonnes	14.60	
2.1	From Basmati	lakh tonnes	2.00	
2.2	From Non-Basmati	lakh tonnes	12.60	
3	Quantity planned for management through in-situ measures	lakh tonnes	9.87	
3.1	Overall Availability of Machines	No.	9448	
3.2	No. of new machines procured in 2023	No.	2760	Draw conducted
3.3	Optimal distribution in blocks/villages	-		Village and cooperative society wise CRM machines mapping has been done. Contact details of nodal officers of every village has been displayed at village level.
3.4	Means for mapping of demand and supply of machines by the CHCs	-		• Mapped machines detail are displayed at all Cooperative Societies, Panchayats, Field office of Agriculture Department, Tehsil Office, BDPO Office and Schools. • 13,440 acre of land will be covered by 168 surface seeders.
4	Area planned for bio-decomposer application	acres	0	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	0	
5	Quantity planned through ex-situ measures	lakh tonnes	2.25	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	0.70	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.15	
5.3	For CBG/bio-ethanol production	lakh tonnes	1.30	
5.4	Other miscellaneous purposes	lakh tonnes	0.10	
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		10 pockets of land having total area 107 acres with storage capacity 1.6 lakh tonnes
6.2	Availability of baling/raking equipment	-	30	30 balers/rakes
6.3	Briquetting and Pelleting plants in the district	-		1 under commissioning and 1 proposed
6.4	Transportation and logistics	-		Will be done by industries / owner of balers.
7	Quantity planned for cattle fodder	tonnes	200	
8	Net balance quantity with no specific management plan	tonnes	245000.00	



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9	Any special measures to be reported	-	<ul style="list-style-type: none">• Nodal officers have been appointed for each village to check burning of stubble.• Honoring progressive farmers who have not burnt stubble in previous seasons.• Establishing proper supply chain between farmers, baler owners and industries for proper supply of stubble from farm to end user.• Motivating industrialists for establishment of more palletizing units by arranging orientation programs to existing palletizing units.• Regular meetings are being held with Brick kiln owners for use of paddy pellets as fuel.• Panchayat lands have been identified for storage of paddy stubble.• IEC activities are being done at village level for awareness among farmers to not to burn stubble.• Orders prohibiting government employees/functionaries regarding burning of stubble in their land have been issued.
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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	SAS Nagar
Fire counts reported as per ISRO protocol in 2022	162
Target for 2023	0

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	30	
2	Total quantity of paddy straw generation	lakh tonnes	1.95	
2.1	From Basmati	lakh tonnes	0.10	
2.2	From Non-Basmati	lakh tonnes	1.85	
3	Quantity planned for management through	lakh tonnes	0.78	
3.1	Overall Availability of Machines	No.	2406	
3.2	No. of new machines procured in 2023	No.	279	
3.3	Optimal distribution in blocks/villages	-		Village wise mapping for CRM machinery has been done with major focus on Hot-spot Villages.
3.4	Means for mapping of demand and supply	-		Available
4	Area planned for bio-decomposer application	acres	0	
	Approx. quantity of straw to be managed	tonnes	0	
5	Quantity planned through ex-situ measures	lakh tonnes	1.41	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	0.87	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.20	
5.3	For CBG/bio-ethanol production	lakh tonnes	0	
5.4	Other miscellaneous purposes	lakh tonnes	0	
6	Infrastructure and logistics for continuous supply chain for ex-situ management			
6.1	Land parcels and straw storage capacity	-		122 acres
6.2	Availability of baling/raking equipment	-	118	
6.3	Briquetting and Pelleting plants in the district	-	0	One Pelletisation plant is under installation to meet the requirement of brick kilns in the district and industrial/Farmer associations are being encouraged to install more such units.
6.4	Transportation and logistics	-		Done
7	Quantity planned for cattle fodder	tonnes	0	
8	Net balance quantity with no specific measures	tonnes	0.00	
9	Any special measures to be reported	-		-


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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	SBS Nagar
Fire counts reported as per ISRO protocol in 2022	270
Target for 2023	0

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	62500	
2	Total quantity of paddy straw generation	lakh tonnes	4.04	
2.1	From Basmati	lakh tonnes	0.14	
2.2	From Non-Basmati	lakh tonnes	3.90	
3	Quantity planned for management through in-situ measures	lakh tonnes	2.16	
3.1	Overall Availability of Machines	No.	1942	
3.2	No. of new machines procured in 2023	No.	0	
3.3	Optimal distribution in blocks/villages	-		Distributed rationally
3.4	Means for mapping of demand and supply of machines by the CHCs	-		Through awareness activities and i-khet app
4	Area planned for bio-decomposer application	acres	1000	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	2600	
5	Quantity planned through ex-situ measures	lakh tonnes	1.43	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	0.72	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.00	
5.3	For CBG/bio-ethanol production	lakh tonnes	0.00	
5.4	Other miscellaneous purposes	lakh tonnes	0.70	Mulching
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		100 acres tentatively (15k-17k tonnes)
6.2	Availability of baling/raking equipment	-	70	45+25(for 2023)
6.3	Briquetting and Pelleting plants in the district	-	0	
6.4	Transportation and logistics	-		
7	Quantity planned for cattle fodder	tonnes	18750	
8	Net balance quantity with no specific management plan	tonnes	23730	



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9	Any special measures to be reported	-	<p>IEC campaign is being done to make district zero stubble burning</p> <p>1. All the machines owners have been instructed to rent their machines to the farmers who approach them. The co-operative societies have also been issued instructions to ensure 100% utility of their machines. The farmers who do not have machines are also advised to book machines using I-Khet mobile application or directly contact the farmers having machines.</p> <p>2. The Agriculture Department have received total 189 applications from thre farmers/ farmer groups/Co-operative societies for the purchase of Surface seeders. The coverage of area by Surface seeders depends upon the supply and availability of these machines which are yet to be procured by the farmers. One machine if utilized for 20 days will covere approx. 300 acres. If all the Surface seeders are supplied timely to the farmers then approx. 20000 hac area is expected to be covered undrer Surface seeder.</p>
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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Sri Muktsar Sahib
Fire counts reported as per ISRO protocol in 2022	3884
Target for 2023	1942

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	197000	
2	Total quantity of paddy straw generation	lakh tonnes	11.91	
2.1	From Basmati	lakh tonnes	4.95	
2.2	From Non-Basmati	lakh tonnes	6.96	
3	Quantity planned for management through in-situ measures	lakh tonnes	5.50	
3.1	Overall Availability of Machines	No.	7246	A target of 2075 machines for year 2023-24 has been given.
3.2	No. of new machines procured in 2023	No.		Sanction has been issued on 18.9.2023.
3.3	Optimal distribution in blocks/villages and Means for mapping of demand and supply of machines by the CHCs	-		<p>1. The 46 hotspot villages of the district account for 50% of the incidents of stubble burning. All Villages and blocks will be mapped with special focus on hotspot villages</p> <p>2. 10,000 hectares targeted to be covered under surface seeder. (Subject to availability of machines)</p> <p>3. Lists of available machines along with nodal officer and coordinator will be displayed at common places in the villages.</p> <p>4. For each mandi, a nodal officer from Mandi Board will be available and information desk will be set up in Mandi where farmer can get information about the CRM machines available in same or nearby villages.</p> <p>5. There would be special focus on providing machines with PACS, CHCs of agriculture department and KVKs to marginal and small farmers.</p> <p>6. I khet app is also very useful and farmers are also being sensitized for using it.</p>
4	Area planned for bio-decomposer application	acres	100.00	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	-	
5	Quantity planned through ex-situ measures	lakh tonnes	5.29	
5.1	As fuel in boilers, furnaces, etc.	lakh tonnes	5.24	
5.2	Pellets for brick kilns and TPPs	lakh tonnes	0.05	
5.3	For CBG/bio-ethanol production	lakh tonnes	-	
5.4	Other miscellaneous purposes	lakh tonnes	-	
6	Infrastructure and logistics for continuous supply chain for ex-situ			

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6.1	Land parcels and straw storage capacity	-		Industries engaged in ex situ management have sufficient land for storage of paddy straw.
6.2	Availability of baling/raking equipment	-	183	More shall be purchased as per target for year 2023-24.
6.3	Briquetting and Pelleting plants in the district	-		Proposals to set up plant are under process
6.4	Transportation and logistics	-		Industries engaged in ex-situ management have adequate transportation systems and logistics for arrangement of paddy straw. However, assistance shall be provided in arranging suitable space wherever needed.
7	Quantity planned for cattle fodder	tonnes	40,000	0.15 lakh tonnes will be used in Gaushalas within the district.
8	Net balance quantity with no specific management plan	tonnes	100,000	
9	Any special measures to be reported	-		<p>1. IEC activities are being done by stake holder departments at block and village level regularly with special focus on 46 hotspot villages.</p> <p>2. Nodal officers (Vatavarn Mitra) have been appointed in each village to engage with farmers and discourage them from stubble burning</p> <p>3. Farmers who have been practicing in situ and ex situ stubble management in previous years will be felicitated.</p>


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District Specific Plans for Prevention and Control of Paddy Straw Burning 2023

District	Tarn Taran
Fire counts reported as per ISRO protocol in 2022	3184
Target for 2023	1592

Sr. No.	Parameter	Unit	Value	Status/Mean of Implementation
1	Total area under paddy cultivation	ha	153500	
2	Total quantity of paddy straw generation	lakh tonnes	9.98	
2.1	From Basmati	lakh tonnes	3.38	
2.2	From Non-Basmati	lakh tonnes	6.60	
3	Quantity planned for management through in-situ measures	lakh tonnes	8.33	
3.1	Overall Availability of Machines	No.	6609	
3.2	No. of new machines procured in 2023	No.		760 machines sanctioned
3.3	Optimal distribution in blocks/villages	-		Department of Agriculture already started a micro level planning of machines at block level so that machines should be available to small and marginal farmers easily at minimum rent department take following steps . 1) Maximum awareness created among the farmers with different social media platforms about Ikheth APP so that farmers easily access the machines in their nearby location 2) For small and marginal farmers in-situ machines at block agriculture offices available at free of cost for small and marginal farmers . 3) Department of agriculture share the data of machines availability in different farmers whats app groups so they can easily know machine availability in their nearby locations. 4) Already instruction given to customer hiring centers owners that preferences should be given to small and marginal farmers 5) Coop. societies in distt tarn taran already instructed to give machineries to small, marginal farmers on priority basis. 6) Department of Agriculture constituted village level committees with 5 farmers and a circle in charge to provide insitu machineries to small and marginal farmers.
3.4	Means for mapping of demand and supply of machines by the CHCs	-		Distt tarn taran has a 8 blocks and Each Block having 3 insitu machines (1- super seeder, 1-Smart seeder and 1- Zero till machine) which are available at free of cost to marginal and small farmers
4	Area planned for bio-decomposer application	acres	494	
	Approx. quantity of straw to be managed by biodecomposer application	tonnes	1300	
5	Quantity planned through ex-situ measures	lakh tonnes	1.48	
5.1	As fuel in boilers, furnaces,etc.	lakh tonnes		M/s ETH Biofuels Pvt. Ltd., Village Louhka, Tehsil Patti, District Tarn Taran. The industry is using paddy straw as fuel @41000 MT/Annum.
5.2	Pellets for brick kilns and TPPs	lakh tonnes		
5.3	For CBG/bio-ethanol production	lakh tonnes		M/s Master Agro Fuel, Village JyotiShah, Tehsil Patti, District Tarn Taran. The industry is using paddy straw as a raw material @ 01 TPH (Total straw consumed in season 6000 MT)
5.4	Other miscellaneous purposes	lakh tonnes	0.13	M/s Rana Sugars Limited (Distillery Division), Village Louhka, Tehsil Patti, District Tarn Taran. The industry is using paddy straw as fuel @ 88000 MT/Annum.
6	Infrastructure and logistics for continuous supply chain for ex-situ			
6.1	Land parcels and straw storage capacity	-		27 acres available at 5 villages
6.2	Availability of baling/raking equipment	-	32	
6.3	Briquetting and Pelleting plants in the district	-	1	1 TPH (Total straw consumed in a year - 6000 MT)
6.4	Transportation and logistics	-		Will be done by industries / owner of balers.

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7	Quantity planned for cattle fodder	tonnes	34500	
8	Net balance quantity with no specific management plan	tonnes	113950.00	If all the New machines sanctioned mentioned in Sr no. 3 are purchased and start working in this season then all the area will be managed. Unmanaged Area will be zero .
9	Any special measures to be reported	-		Department of agriculture already conducted village level camps and maximum camps was organized in hot spot villages, to aware the farmers about ill effects of stubble burning . 1) In Distt top 100 hot spots villages identified and Department of Agriculture constituted village level committees in these villages. 5 progressive farmers of that village as a member with circle incharge to provide insitu machinerles to small and marginal farmers



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