PROJECT REPORT

('ਪੁਰਾਲੀ ਬੁਚਾਓ ਫ਼ਸਲ ਵਧਾਓ')

Crop Residue Management Campaign 2018

District Bathinda

Supported By

National Bank for Agriculture and Rural Development



Implemented by



Abhivyakti Foundation

MAJOR HIGHLIGHTS OF THE CAMPAIGN

- * Awareness on Crop Residue Management
- * Audio Announcement Through Hired Vehicles
- * Poster Display on Crop Residue
- * Katputli Show on Crop Residue Management
- * Produced Short Film on Crop Residue Management Campaign















Shri. JPS Bindra CGM, NABARD, Punjab RO

Acknowledgement

It is estimated that around 20 million tonne paddy straw is generated and about 75-80 per cent of it is burnt in fields. Stubble burning in field leads to various issues with respect to pollution, soil nutrient loss, increment in CO2 emission and suspended particulate matter in atmosphere affecting environment and human health. Stubble burning is the main contributor to climate change in the state and also the major concern for stakeholders. The impact of burning on agriculture is huge in terms of loss of soil nutrient and organic matter, loss of soil moisture, etc.

Keeping in view the above facts, a project on Climate Resilience Building in Rural areas through crop residue management has been sanctioned by the Ministry of Environment, Forests and Climate Change. The National Bank for Agriculture and Rural Development (NABARD) is National Implementing Entity (NIE) responsible for implementation of adaptation projects under NAFCC.

NABARD has always taken into consideration social and environmental concerns to achieve the desired development results apart from channelizing and accelerating agriculture credit. Before this campaign NABARD partnering with NGOs, has piloted a few initiatives to discourage farmers from crop residue.

"Prali Bachao Fasal Vadhao" campaign carried out in all 22 districts of Punjab covering all paddy growing villages. It covered 4000 clusters containing 2-3 tagged villages each. It included all types of channels viz publicity material, awareness through ads /jingles on AIR and Doordarshan, holding awareness camps at various levels for awareness on crop residue management. The main goal was to reduce stubble burning and avoid environmental pollution and mitigate climate change

Abhivyakti Foundation carried out this campaign in 4 districts (Bathinda, Moga, Faridkot & Firozepur) of Punjab. Their humble efforts to present the activities under Crop Residue Management 2018 "Prali Bachao Fasal Vadhao" through district level booklet is highly appreciated. We do hope that whatever little effort made by Abhivyakti Foundation will continue and this report will be an instrument in further discussion towards Crop Residue Management implemented by Abhivyakti Foundation in district.

Shri J.P.S. Bindra

Chief General Manager, NABARD, Punjab RO



Mr. Shailendra Kumar Singh General Secretory, Abhivyakti Foundation

Acknowledgement

Abhivyakti Foundation has carried the Crop Residue Management Campaign 2018 "Prali Bachao fasal Vadhao" in the district Bathinda of Punjab. Untiring the sincere efforts by various departments helped make this a successful project. First and foremost we wish to place on record our sincere gratitude to National Bank for Agriculture and Rural Development (NABARD) Regional office Punjab for providing an opportunity for our organization to implement this project in district Bathinda and for always providing prompt and unwavering support to Abhivyakti Foundation.

For providing encouragement, support and valuable guidance during this duration of the grant we are indebted to Shri Vikas Mittal, District Development Manager, NABARD Bathinda.

We also wish to thank district Administration and all the line departments like KVK, Agriculture department, Animal Husbandry Department for their valuable support to the program.

Last but not the least, Abhivyakti Foundation extends sincere thanks to Regional office Punjab of the organization and its VLWs teams for untiringly carrying out the assigned work plan activities, and for conducting a successful campaign in 100 cluster of district Bathinda. In district Bathinda Crop Residue Management Campaign was conducted in all the 9 blocks of district Faridkot. VLWs of district Bathinda did a tremendous work to enhance awareness about Crop Residue Management in district Bathinda.

Shailendra Kumar Singh General Secretory

Shailens of with

Abhivyakti Foundation



Mr. Amritpal Singh Regional Director, Abhivyakti Foundation

Preface

The straw burning is an age-old agricultural practice followed by farmers biannually by setting fire to their fields to clear the land of residue (straw) of one harvest and sow the next. The problem related to the burning has been intensifying over the years, as Haryana, Punjab and Uttar Pradesh being the major burning hotspots.

The problem of open burning of agriculture has resulted in serious issues contributing towards global warming and environmental pollution. It also has an adverse impact on quality of air, soil health and human health.

The Environment Ministry has approved regional project on 'Climate Resilience Building among Farmers through Crop Residue Management' under National Adaptation Fund for Climate Change (NAFCC). The National Bank for Agriculture and Rural Development (NABARD) has been the appointed as the National Implementing Entity (NIE) responsible for implementation of climate adaptation projects under NAFCC.

Abhivyakti Foundation has been assigned as the implementing partner for the awareness campaign in 4 district of Punjab. In Bathinda district the Crop Residue Management Campaign 2018 was conducted in all the 9 blocks of district Bathinda by covering 100 village cluster of district Bathinda with the support of trained Village Level Workers (VLW). These VLWs created awareness among farmers through crop residue management and Promoting alternate uses of crop residue.

Abhivyakti foundation has taken grass root level efforts to undertake the activities under Crop Residue Management 2018 "Prali Bachao Fasal Vadhao" in the district Bathinda. We do hope that whatever little effort made by Abhivyakti Foundation will continue and this report will be an instrument in further discussion towards Crop Residue Management implemented by Abhivyakti Foundation in the district Bathidna.

Amritpal Singh Regional Director Abhivyakti Foundation

Table of Content

Content	Page No.
Organization Profile	7-10
Background of the project	11
Problem Statement	12-19
State & District Profile	20-23
District Level Training Programme	24-25
Block Level Training Programs	26-32
Geographical Coverage of Campaign	32
Cluster Level Programs - Block Bathinda	33-43
Cluster Level Programs - Block Goniana	44-55
Cluster Level Programs - Block Sangat	56-69
Cluster Level Programs - Block Talwandi Sabho	70-86
Cluster Level Programs - Block Maur	87-99
Cluster Level Programs - Block Rampura	100-110
Cluster Level Programs - Block Phul	111-120
Cluster Level Programs - Block Bhagta Bhai Ka	121-129
Cluster Level Programs - Block Nathana	130-141
Feedback Compilation of the Campaign	142-143
Farmers Opinions	144
Conclusion & Recommendation	145
Annexure	146-160

ABOUT ORGANIZATION

The formation of Abhivyakti Foundation was visualized in 2000 by Mr. Shailendra Kumar Singh, founder member and General Secretary of the organization. The organization started their social development initiative through publishing social magazine namely SRIJAN besides running the educational programme in slum areas namely Holambi Kala of north Delhi through raising donations. Subsequently, the organization has made their regular efforts to identify options and opportunities for expanding the development initiatives. These efforts resulted in success when we received first educational support from Ministry of Human Resource Development, Govt. of India under SARVA SHIKSHAN ABHIYAN programme in Palwal district of Haryana state in 2004. Following the 2004, the organization was gradually expanding both in terms of programmes and operational areas. Currently we are actively involved in Health & Sanitation, Education, Women and Child Development, Livelihood, Skill development programme and Research and Development programme with special focus on women and child. Under the various activities have been conducted in four states namely Delhi, Haryana, Uttar Pradesh and Punjab of northern India. The past one and half decade of development sector experiences has strengthened us in order to have effective results in improving the living conditions of poor and backward community of both rural and urban areas of northern India.

IDEOLOGY

Abhivyakti Foundation is guided and directed by different ideological values. They have been the control mechanisms for operating various programmes and activities of the organization. Our organization believes in following core values:

- Equity
- Transparency
- Participation
- Gender
- Self-Sustainable Development

Above said values have been followed not only at the level of planning and executing the programmes and activities but also at the level of recruiting and selecting the organizations' team members.

VISION

To establish Participatory, Gender Justice, Self-Reliance and Community Participation.

MISSION

Abhivyakti Foundation aims to organize women and weaker sections of the society for social change through participatory approach. Abhivyakti Foundation is

committed to educational development, Poverty Elimination, Ecological Balance, growth and self-reliance among people and empowerment of rural and urban community.

LEGAL IDENTITY

We have successfully able to complete the legal formalities required for running a successful organization. The legal details of Abhivyakti Foundation are given in following table:

S. No.	Legal Entity	Registration No.
1.	Society Registration Act 1860	39069/Delhi
2.	Income Tax Registration 80G Registration	DEL-AE22883-14072011/799
3.	PAN Registration	AAAAA4322L
4.	FCRA Registration	231660767

ORGANIZATIONAL STRUCTURE

Since the inception of the organization, we have made efforts to adopt the decentralize structure of the organization's team structure. We could successfully to have balance team, to a maximum level, from the point of view of Gender. At the different level of the organization team, each team members have been given opportunities to grow and contribute to the growth of the organization.

PROGRAMME

HEALTH & SANITATION

Since the beginning of organization, health and hygiene was one of major programme initiative of the organization and it has been continued till now. As a part of health initiatives, we have focused on HIV/AIDS Intervention programme in three states namely Delhi, Haryana and Punjab besides institutional health care services to the HIV positive and their families. We are involved in organizing the capacity building programme health care team of grass-root level organizations besides conducting awareness generation and health programme linkages for the benefit of women and children of both rural and urban areas.

Under the sanitation programme, we have successfully launched the Sanitation and Hygiene programme with the objective cover school going children of govt. schools and inter college of Gautam Budh Nagar district of Uttar Pradesh.

EDUCATION

Under the educational programme, we have focussed on primary education and preparing both adolescents and youth community for higher education. As a part of primary education programme, we have been involved in SARV SHIKSHAN ABHIYAN programme by providing the primary education to adults while adolescents and youth have been covered under Bachelor Preparatory Programme of Indira Gandhi Open University. In addition, they were also provided coaching classes for English language and also computer.

CHILD DEVELOPMENT

Child development was always one of important area of concern. During past, we could not only successful to run child health programme namely **Rajiv Gandhi Creche Programme** but also able to successfully launched **CHILD LINE** programme for helping the vulnerable child labourers in terms of supporting for their medical, psychological and institutional support. Recently, we have also entered in organizing financial literacy programme for school going children.

WOMEN EMPOWERMENT

Women empowerment is one of our core issues of the organization. We have been making intentional efforts for making women empowered have through enhancing their knowledge and skills, providing the option and opportunities of their social and economic growth, mobilization and solving their problems like harassment, exploitation and deprivation through various programmes and activities of the organization. We are actively involved in organizing the general awareness programme, formation of women Self Help Groups, running of vocational cum production unit of Jute bags, legal support through Mobile Women Help Line, and financial literacy programme.

SKILL DEVELOPMENT PROGRAMME

Under the skill development programme, we are successful to initiate programme "STeP" for youth community with the view of generating employment opportunities by deploying the technical courses. The project was financially supported SMILE FOUNDATION, national level supporting organization. It was envisaged that this programme will help the students to gain basic knowledge and education of communication and computers through theoretical and practical processes which would further help them to ensure employment opportunities

LIVELIHOOD

With the view of enhancing the income level and further economic growth of poor and backward community especially women group, we have launched livelihood programme for generation options and opportunities of employment generation. We are providing relevant technical inputs in respective trades selected by women group. Women are working at two levesl. Some women prefer to visit our production centre while other desire to work from home. We are also helping women for making linkages for loan from banks and market linkages.

RESEARCH & DEVELOPMENT

During the past experiences of more than one decade of development interventions, we have come across with various social issues which require further in-depth study. In this regard, we have been involved in different processes. Among this process, there were internal review, external evaluations and direct initiative of conducting research study.

PROGRAMME TEAM

During the one and half decade of working in development sector, we were quite successful to develop a team of qualified, experienced committed and energetic team. We have group of professionals having the background of social work, rural development, medical and engineering.

NETWORK:

Since the beginning of the organization, we have been believed in learning by sharing and exposing ourselves with like-minded people and organizations. In this regard, we are part of various platforms both at state and national level in order to show presence in development sector. Our organization is not only having organizational memberships of larger platforms but also playing leading role in the Network. The detailed information are mentioned below

- CNRI- Confederation of NGOs of Rural India
- Credibility Alliance
- Indian Social Responsibility Network
- UPVAN

Background

The crop residue management has been a major concern in India particularly in those areas where residue of cereal crops are available in both the cropping seasons (Kharif & Rabi). The burning of surplus residue is posing major challenge due to changing global scenario on climate variability. Hence sustained efforts and implementable interventions needs to be taken-up to improve the climate resilience among farmers. The Project has been implemented in the State of Punjab & Haryana and Partly in Rajasthan & Uttar Pradesh. All the districts of Punjab, major paddy growing districts of Haryana and potential areas for end use of crop residue (particularly of paddy straw) have been identified and will be covered. The ultimate aim was to enhance the climate resilience among farmers by strengthening soil fertility, organic carbon, lesser use of chemical fertiliser and enhanced income through diversified farming like dairy activities in drought prone areas.

Title of Project

Climate Resilience Building among Farmers through Crop Residue Management

Project Objectives

- ✓ To lower Green House Gases Emissions in project areas by i). creating awareness among farmers through crop residue management and by ii). Promoting alternate uses of crop residue.
- ✓ To promote implementable and sustainable entrepreneurship models in rural areas by engaging FCs/ FPOs /PACs/ JLGs/Dairy Cooperatives/ Water Users Associations/ Individual entrepreneurs for effective crop residue management through upscaling successful initiatives and innovative ideas.
- ✓ To enhance the climate resilience and income of the farmers through alternative uses of crop residue management in project areas.
- ✓ To identify the other co-benefits and suggest policy intervention.

Supporting Agency

National Bank for Agriculture and Rural Development (NABARD)

Beneficiaries:

Farmers and community women and children

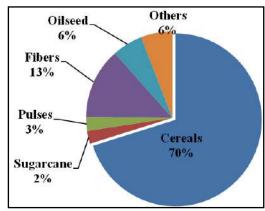
Project Location:

Bathinda, Punjab

Problem Statement:

Agricultural Produce

India produces more than 500 million tons (Mt) of crop residues annually. Among different crops, cereals generate 352 Mt residue followed by fibres (66 Mt), oilseed (29 Mt), pulses (13 Mt) and sugarcane (12 Mt) (Fig. 1). The cereal crops (rice, wheat, maize, millets) contribute 70% while rice crop alone contributes 34% of crop residues . Wheat ranks second with 22% of residues whereas fibre crops contribute 13% of



residues generated from all crops. Among fibres, cotton generates maximum (53 Mt) with 11% of crop residues. Coconut ranks second among fibre crops with 12 Mt of residue generation. Sugarcane residues comprising tops and leaves generates 12 Mt i.e., 2% of crop residues in India (Source; MNRE).

Generation of cereal residues is highest in Uttar Pradesh (53 Mt) followed by Punjab (44 Mt) and West Bengal (33 Mt). Maharashtra contributes maximum to the generation of residues of pulses (3 Mt) while residues from fibre crop is dominant in Andhra Pradesh (14 Mt). Gujarat and Rajasthan generate about 6 Mt each of residues from oilseed crops. Processing of agricultural produce through milling and packaging also produces substantial amount of residues. Crop residues are natural resources with tremendous value to farmers. These residues are used as animal feed, composting, thatching for rural houses and fuel for domestic and industrial use.

Various studies have brought to the forefront the quantity of crop stubble generated in India. As per different studies, the residues of rice and wheat crops are major contributors in the total stubble loads in India. One such study by Garg (2008) estimates the contribution of rice and wheat stubble loads in the total stubble as 36 and 41 %, respectively in the year 2000, while the contribution of Punjab in the total burnt stubble of rice and wheat to be 11 and 36 %, respectively during the same time period. According to Mandal (2004), the total amount of crop residue generated in India is estimated at 350 \times 106 kg year–1 of which wheat residue constitutes about 27 % and rice residue about 51 %. According to Gupta (2004), the total crop residue produced in India during 2000 was 347 million tonnes, of which rice and wheat crop residues together constituted more than 200 million tonnes.

Production and consumption activities generate pollution and waste, and atmospheric environment can absorb pollution/waste upto a limit. Agriculture is one of the important production activities and it generates huge amount of crop residues. A large portion of the residues, about 140 million tonnes, is burned in field primarily to clear the field from straw and stubble after the harvest of the

preceding crop which generates a significant amount of air pollution. The problem is severe in irrigated agriculture, particularly in the mechanized rice-wheat system. Atmospheric environment can absorb this pollution in a particular geographic region given its assimilative capacity. If the burning activities remain confined within the assimilative capacity, the pollution does not create harmful effects. Therefore, in the initial stages when the production and burning activities are limited, pollution caused through these activities is not considered a problem. However, due to technological advancements in the agricultural sector, the extent and management of Crop Stubble waste concentration has gone beyond the assimilative capacity of the environmental limit, thereby distorting the balance.

State wise Generation of Crop Residue

Estimated total crop residue surplus in India is 84-141 Mt yr-1 where cereals and fibre crops contribute 58% and 23%, respectively. Remaining 19% is from sugarcane, pulses, oilseeds and other crops. Out of 82 Mt surplus residues from the cereal crops, 44 Mt is from rice followed by 24.5 Mt of wheat which is mostly burned in fields (Table 1). In case of fibre crops (33 Mt of surplus residue) approximately 80% is cotton residue that is subjected to burning. The surplus residues i.e., total residues generated less residues used for various purposes, are typically burned in the field or used to meet household energy needs by farmers.

States	Residue generation (MNRE, 2009)	Residue surplus (MNRE, 2009)	Residue burned (IPCC coeff.)	Residue burned (Pathak et al. 2010)
Andhra Pradesh	43.89	6.96	5.73	2.73
Arunachal Pradesh	0.4	0.07	0.06	0.04
Assam	11.43	2.34	1.42	0.73
Bihar	25.29	5.08	3.77	3.19
Chhattisgarh	11.25	2.12	1.84	0.83
Goa	0.57	0.14	0.08	0.04
Gujarat	28.73	8.9	6.69	3.81
Haryana	27.83	11.22	5.45	9.06
Himachal Pradesh	2.85	1.03	0.20	0.41
Jammu and Kashmir	1.59	0.28	0.35	0.89
Jharkhand	3.61	0.89	1.11	1.10
Karnataka	33.94	8.98	2.85	5.66
Kerala	9.74	5.07	0.40	0.22
Madhya Pradesh	33.18	10.22	3.46	1.91
Maharashtra	46.45	14.67	6.27	7.41
Manipur	0.9	0.11	0.14	0.07
Meghalaya	0.51	0.09	0.10	0.05

Mizoram	0.06	0.01	0.01	0.01
Nagaland	0.49	0.09	0.11	0.08
Orissa	20.07	3.68	2.57	1.34
Punjab	50.75	24.83	8.94	19.62
Rajasthan	29.32	8.52	3.58	1.78
Sikkim	0.15	0.02	0.01	0.01
Tamil Nadu	19.93	7.05	3.55	4.08
Tripura	0.04	0.02	0.22	0.11
Uttarakhand	2.86	0.63	13.34	21.92
Uttar Pradesh	59.97	13.53	0.58	0.78
West Bengal	35.93	4.29	10.82	4.96
<u>India</u>	<u>501.76</u>	<u>140.84</u>	<u>83.66</u>	<u>92.81</u>

Major Reasons for Burning Crop Residues in Field by Farmers

Increased mechanization, particularly use of combine, declining number of livestock, long period required for composting and no economically viable alternate use of residues are some of the reasons for residues being burnt in field. The number of combine harvester in the country, particularly in the IGP has increased dramatically from nearly 2000 in 1986 to 10000 in 2010. North-Western part (Punjab, Haryana and western Uttar Pradesh) of the IGP has about 75% of the cropped area under combine harvesting. Combine harvesters are used extensively in central and eastern Uttar Pradesh, Uttarakhand, Bihar, Rajasthan, Madhya Pradesh and southern states as well for harvesting rice and wheat. The major reasons for increase in use of combine are labour shortage, high wage during harvesting season, ease of harvesting and thrashing and uncertainty of weather. With combine harvesting, however, about 80% of the residues are left in the field as loose straw that finally ends up being burnt. It is estimated that about 15 Mt rice straws are burned every year in Punjab alone.

Outline the Economic, Social Development and Climate Change

Burning of agricultural biomass residue, or Crop Residue Burning (CRB) has been identified as a major health hazard. In addition to causing exposure to extremely high levels of Particulate Matter concentration to people in the immediate vicinity, it is also a major regional source of pollution, contributing between 12 and 60 per cent of PM concentrations as per various source apportionment studies. In addition, it causes loss of vital components such as nitrogen, phosphorus, sulphur and potassium from the topsoil layer, making the land less fertile and unviable for agriculture in the long run. About 25% of nitrogen, 25% phosphorus, 50% of sulphur and 75% of potassium uptake by cereal crops are retained in residues, making them valuable sources of nutrients.

Economic Impact

Crop residue is not a waste but rather a useful natural resource. About 25 % of nitrogen (N) and phosphorus (P), 50 % of sulphur (S) and 75 % of potassium (K) uptake by cereal crops are retained in crop residues, making them valuable nutrient sources. Sidhu et al. (2007) estimated the quantity of nutrients available in rice. According to his study, the paddy straw has 39 kg/ha N, 6 kg/ha P, 140 kg/ ha K and 11 kg/ha S. Sidhu and Beri (2005) shared their experience with managing rice residues in intensive rice-wheat cropping system in Punjab. According to them, the approximate amount of the nutrients present in the straw, which was burnt in 2003-2004 were 106, 65 and 237 thousand tonnes respectively of N, P2O5 and K2O in addition to secondary and micronutrients. The removal of the paddy stalk that remains on the field is a labour-intensive process. With labour being unavailable and the time window for preparing the field for wheat cultivation being limited, the options that the farmer has are either investing in expensive and rarely used agricultural implements, or burning the residue right on the field. Of the two, the latter is both cheaper and requires less effort.

Social Impact

Health Impact - Burning of crop stubble has severe adverse impacts especially for those people suffering from respiratory disease, cardiovascular disease. Pregnant women and small children are also likely to suffer from the smoke produced due to stubble burning. Inhaling of fine particulate matter of less than PM2.5 μg triggers asthma and can even aggravate symptoms of bronchial attack. According to Singh et al. (2008), more than 60 % of the population in Punjab live in the rice growing areas and is exposed to air pollution due to burning of rice stubbles. As per the same study, medical records of the civil hospital of Jira, in the rice-wheat belt showed a 10 % increase in the number of patients within 20–25 days of the burning period every season.

Climate Change Impact

Agricultural crop residue burning contribute towards the emission of greenhouse gases (CO2, N2O, CH4), air pollutants (CO, NH3, NOx, SO2, NMHC, volatile organic compounds), particulates matter and smoke having direct influence on global warming. Furthermore, it depletes the soil of its organic matter, major nutrients and reduces microbial biomass in soil that ultimately impairs the efficacy of organic matter application in the next cropping season. It is estimated that burning of one tonne of rice straw accounts for loss of 5.5 kg of nitrogen, 2.3 kg of phosphorus, 25 kg of potassium and 1.2 kg of sulphur. The heat generated elevates the temperature of soil and thus, killing fungi, pests, reptiles and the like that are otherwise beneficial for the crops. (The Times of India, May, 10, 2015). So concentration of GHGs in the region lead to rise in temperature or local warming which ultimately affect the various climatic parameter in the region.

Efforts Taken so Far

In terms of efforts being made to reduce crop residue burning, the following approaches have been used by various state and central administrations and regulatory bodies so far:

Banning Crop Residue Burning

Crop residue burning was notified as an offence under the Air Act of 1981, the Code of Criminal Procedure, 1973 and various appropriate Acts. In addition, a penalty is being imposed on any offending farmer. Village and block-level administrative officials are being used for enforcement.

Detection and Prevention

A combination of remote sensing technology—use of satellite imagery—and a team comprising local officials—Sub-Divisional Magistrates, Tehsildars, Block Development Officers, Patwaris and village-level workers—is being used to detect occurrences of crop residue burning in real-time and to prevent them from taking place.

Establishment of a Market Place for Crop Residue Burning

Efforts are being made to increase the avenues for the alternate usage of paddy straw and other crop residue. For instance, paddy straw has a considerable calorific value, making it suitable for use as a fuel in biomass-based power plants. Similarly, it can be utilised for the preparation of bio-fuels, organic fertilisers and in paper and cardboard making industries. The strategy, broadly, is to assign a real economic and commercial value to the agricultural residue and making burning it an economic loss to the farmer.

Outreach and Public Awareness Campaigns

There are ongoing efforts to highlight the health effects of crop residue burning. It produces extremely high levels of toxic particulates, which affect the health of the people in the direct vicinity of the burning. In addition, efforts are also being made through kisaan camps, trainings and workshops, apart from campaigns through various print media, televised shows and radio jingles, in informing farmers about the alternative usage of crop residue.

Subsidy on Agri-Implements

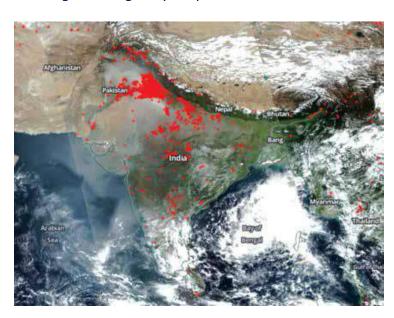
The state governments, in collaboration with the Centre, has rolled out schemes for providing subsidy on mechanical implements that help tillage of soil, so that the crop residue can be retained in the soil, adding to its fertility, or alternately, collection of crop residue for putting it to commercial usage. However, the high cost of these implements means that in spite of subsidies, only a small number of farmers have access to these implements at the moment.

Crop Diversification

There are various ongoing, long-term efforts at diversification of cropping techniques, such that crop residue burning can be effectively prevented. This is being attempted through cultivation of alternate crops (apart from rice/paddy and wheat) that produce less crop residue and have greater gap periods between cropping cycles.

Adverse Impacts of Crop Residue Burning

The problem of crop residue burning has been intensifying over time and spreading across the Indian Sub-continent. The NASA satellite images of early November 2016 (peak period of rice residue burning) depicts the burning hot spots across south Asia and shows that the intensity of crop residue burning in Punjab, Haryana, western Uttar Pradesh and Uttarakhand is very high, resulting in deterioration of air quality in vast geographical area. Crop residue is contributing to atmospheric pollution that has serious environment, soil, and human health as well as economic implications due to release of large amounts of air pollutants. Therefore, a concerted collective action to solve the problem of crop residue burning was urgently required.



NASA satellite images (November 03, 2016) showing intensity of rice residue burning (shown in red dots) in North-West India.

Environment

The major pollutants emitted by crop residue burning - CO2 , CO, CH4 , N2 O, NOx, SO2 , black carbon, non-methyl hydrocarbons (NMHC), volatile organic compounds (VOC) and particulate matter (PM2.5 and PM 10), contribute enormously to global warming. Extensive crop burning, resulted in Delhi air becoming the most polluted in the World in the first week of November 2016, compelling the Government to declare Delhi air pollution an emergency (www.theguardian.com/World/India). It is estimated that one tonne rice residue on burning releases 13 kg particulate matter, 60 kg CO, 1460 kg CO2 , 3.5 kg NOx, 0.2 kg SO2 3 . The black carbon emitted during residue burning warms the

lower atmosphere and it is the second most important contributor to global warming after CO2 .

Soil Health

Apart from the damage caused by air pollution, burning of rice residue also results in loss of soil organic Policy Brief to Reduce Air Pollution Caused by Rice Crop Residue Burning 3 matter and plant nutrients and adversely affects soil health. About 90% of N and S and 15-20% of P and K contained in rice residue are lost during burning. Burning of 23 million tonnes of rice residues in NW India leads to a loss of about 9.2 million tonnes of C equivalent (CO2 -equivalent of about 34 million tonnes) per year and a loss of about 1.4×105 t of N (equivalent to Rs 200 crores) annually. In addition, in-field burning of crop residues also destroys the beneficial micro-flora and fauna of soil causing adverse impact on soil health.

Human & Animal Health

According to Gadde (2009), open burning of crop stubble results in the emissions of harmful chemicals like polychlorinated dibenzo-p-dioxins, polycyclic aromatic hydrocarbons (PAH's) and polychlorinated dibenzofurans (PCDFs). These air pollutants have toxicological properties and are potential carcinogens. Furthermore, the release of carbon dioxide in the atmosphere due to crop stubble burning results in the depletion of the oxygen layer in the natural environment causing greenhouse effect. Burning of crop waste also has adverse implications on the health of milk producing animals. Air pollution can result in the death of animals, as the high levels of CO2 and CO in the blood can convert normal haemoglobin into deadly haemoglobin. There can also be a potential decrease in the yield of the milk producing animals.

Increase in the concentration of PM 2.5 and PM10 during the large scale burning of rice residues is a major health hazard. For example, the children are more sensitive to air pollution (smog), as rice residue burning poses some unrecoverable influence on their pulmonary functions. The emission of high levels of PM2.5 and PM10 in the air causes chronic diseases like cardiopulmonary disorders irrecoverable lung capacity or asthma in human population of NW India. The survey and economic evaluation showed a clear increase in medical and health-related expenditure and workdays lost during the rice residue-burning period (September–November) each year in Punjab. These health-related expenditures tend to be higher for children, older people and farm workers who are directly exposed to rice residue burning. The human health costs from rice residue burning in rural areas of Punjab are estimated at Rs. 7.61 crores annually. The costs would be much higher if expenses on averting activities, productivity loss due to illness, monetary value of discomfort, etc., are also included.

Status of Punjab - District Bathinda

It was observed that straw burnt area in 2015 was around 17.93 lakh ha and district wise status is given below;

Name of Districts	Burnt Area 2014	Burnt Area 2015
Amritsar	100.95	78.92
Barnala	98.92	89.82
<u>Bathinda</u>	<u>98.31</u>	<u>77.49</u>
Faridkot	87.09	75.35
Fatehgarh Sahib	58.01	57.26
Fazilka	74.21	58.11
Firozpur	165.74	144.99
Gurdaspur	78.59	61.26
Hoshiarpur	46.13	22.23
Jalandhar	82.01	67.16
Kapurthala	81.27	78.69
Ludhiana	180.52	170.18
Mansa	59.79	41.88
Moga	155.83	141.21
Muktsar	105.6	85.18
Pathankot	12.62	9.99
Patiala	165.29	138.55
Rupnagar	14.87	13.59
Sangrur	227.21	202.83
SAS Nagar	23.12	14.45
SBS Nagar	32.08	28.75
Tarn Taran	147.79	134.61
State	2095.95	1792.51

Demographic Details of Punjab

Punjab is a one of the prosper State in northern India, the state bordered by the Indian states of Jammu and Kashmir to the north, Himachal Pradesh the to Haryana to the south and southeast, Rajasthan to the southwest, and the Pakistani province of Punjab to the west. The state covers an area of 50,362 square KM, 1.53% of India's total geographical area. The state Chandigarh, capital is Union Territory and also the capital of the neighbouring state of Haryana. The five rivers from which the region took its name were Sutlej, Ravi, Beas, Chenab and Jhelum; Sutlej, Ravi and Beas are part of the Indian Punjab.



Punjab is the home to 2.77 crore (2011 Census) people, constituting 2.29% of the total population, covering 1.54% surface area of the country. 62.52% of the State's population lives in rural areas. Males outnumber the females in Punjab with the sex ratio of 895 females to every 1,000 males, with the highest sex ratio in Hoshiarpur (961) and lowest in Bathinda (868). The State is more densely populated (551 persons/km2) than the country's average (382 persons/km2). About 75.8% of the State's population is literate as against the national average of 74%. Though agriculture is the predominant economic activity in the State, it engages only 36% of the State's work force as against about two third at national level. Migration of rural people to foreign countries in search of jobs has resulted in reduction in the workforce available for agriculture. Shortage of farm labour has prompted farmers of the State to go for farm mechanization in a big way.

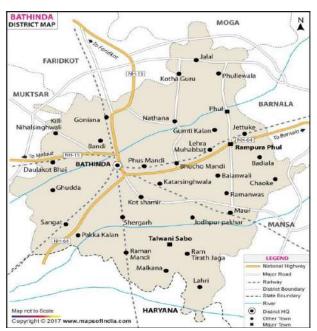
Punjab (the five rivers region) is one of the most fertile regions on earth. The region is ideal for growing wheat crop. Rice, sugar cane, fruits and vegetables are also grown. Indian Punjab is called the "Granary of India" or "India's breadbasket." Many records mistakenly mention that it produces 43% of India's wheat, but that is actually its contribution to the national pool. It produces 17% of India's wheat, and 11% of India's rice (2013 data). The total area of Punjab is just 1.4% of total area of India, but it produces roughly 12% of the cereals produced in the country.[8] The largest grown crop is wheat. Other important crops are rice, cotton, sugarcane, pearl millet, maize, barley and fruits. The principal crops of Punjab are barley, wheat, rice, maize and sugarcane. Among the fodder crops are bajra and jowar. In the category of fruits, it produces abundant stock of kinnow. The main sources of irrigation are canals and tube wells. The rabi or the spring

harvest consists of wheat, gram, barley, potatoes and winter vegetables. The Kharif or the autumn harvest consists of rice, maize, sugarcane, cotton and pulses. Agriculture sector is the largest contributor to the gross state domestic product (GSDP) of Punjab. According to 2013-14 data, the contribution of agriculture and allied industries in GSDP at factor cost is 28.13%.

Rice, which occupied around 6.87 per cent of the gross cropped area in 1970-71, increased to over 33.15 per cent in 2007-08, and then rose further to around 35.85 per cent in 2010-11. The increase in wheat cultivation has been at the cost of gram, rapeseed and mustard, while that of rice has been obtained by shifting the area from maize, groundnut, millets and cotton. Total food grain production over this period increased by more than three and half times. Yields of wheat, paddy and total food grains nearly doubled over this period of time (1971 to 2011). Besides, production of cotton, potato and milk during this period has been gone up by 1.76, 7.24 and 4.47 times, respectively. On the other hand, the production of pulses and oilseeds went down drastically over this period and that of sugarcane with some variations remained almost same. The reason of decline of production of these crops was the drastic decline of area under these crops due to encroachment by paddy and wheat.

District Bathinda

According to "Ainai-Barar Bathinda was built by Bhati Rao, son of Bal Band, who became ruler of Punjab in 336 Bikrami Sambat. He also founded Bhatner. It was also called Whatinda and Bitunda which finally become known as Bhatinda. But its name was changed to Bathinda on the authority of Survey of India to conform to the phonetical expression as locally pronounced. In recent times the town was conquered by Maharaja Ala Singh (near about 1754 AD) and since then it followed the history of erstwhile princely state of Patiala. With the dawn of indendence and



merger of Patiala and East Punjab States into a division styled at PEPSU, Bathinda become full-fledged district which states has combined even after the merger of PEPSU with erstwhile Punjab State in 1956.

According to 2011 Census of India, Bathinda district ranks 9th in Punjab with a population of 1388525 which is 19.98 % of the total population of Punjab State. The sex ratio according to census 2011 is 868 females per thousand Male in district which is 19 less than observed in 2001 census, which was 870. Though the rate

of population growth is meagre yet the density of population has increased which is 414 per square Kilometer as compared to 353 by 2001 census. Labour Force Participation Rate is 44.32%. Main source of income in the district is from the agriculture sector and per capita income is Rs. 94,666. Total cropped area is 5,54,552 in hectares and the forest area is 47 in sq km (2015).

Amongst the States & UTs, Punjab ranks 13th in terms of literacy. Bathinda district have 15th rank in the field of literacy in the state. 68.30% population is literate whereas the rate for male and female literacy is 73.80 % and 61.90% respectively according to Census 2011.District is divided into 9 development blocks namely Bathinda, Sangat, Nathana, Rampura, Phul, Maur, Goniana, Bhagta Bhaika and Talwandi Sabo.

Agriculture and Irrigation

Wheat, paddy and cotton are the main crops of the districts. The other crops grown in the area are oilseeds, gram, vegetables, etc. Main horticulture crops are viz., Grapes, Kinnow, Ber, Guava, etc. Cotton is an important kharif crop playing a key role in economic development of the district.

Canals are the main source of irrigation in the district, supplemented by the tube-wells. The total irrigated area is 297,123 hectares, which constitutes 100 % of the Net sown area. The share of the canals is 217,000 hectares while 80,123 hectares is irrigated using tube-wells & wells.

Nearly 83.2% of the net irrigated area of the area is exclusively irrigated by canals. Besides, due to presence of highly saline, brackish, fluoride rich subsurface water in the area, the canal water are largely exploited from domestic needs

Source of Information: Central Ground Water Board

District Highlights

- Bathinda District ranks 6thin area and 9thin population.
- Bathinda is most populous and Talwandi sabo is least populous tahsil.
- The average population size of village in the district (3,187) is greater than that of the state (1,425).
- Bhai Rupa (14,841) is the largest village by population size followed by Ramsara (13,959) in the district.
- 44 villages in the district are large sized with a population of 5,000 or more.
- The decadal population growth rate in the district (17.3%) is greater than the state average (13.9%).
- Bathinda district is relatively less urbanized (36.0%) than the state (37.5%) and it ranks 6th in the state.

"Source of Information: Census 2011"

District Level Training Programme

Abhivyakti Foundation in collaboration with National Bank for Agriculture and Rural Development (NABARD) organized one-day training cum orientation programme for village level workers for the district level officials of Bathinda at Rasoi on dated 26th September 2018 under Crop Residue Management Campaign 2018 "Prali Bachao Fasal Vadhao"

List of Dignitaries joined the Training Programme

- 1. Mr. B.S Gill, Director, PNB Farmer Training Centre
- 2. Dr. Jasveer Singh, ADO, Agriculture Department Bathinda
- 3. Mr. Sukhdev Singh Horticulture Development Officer, Horticulture Department
- 4. Mr. Gurpreet Singh, Social Worker, Bathinda
- 5. Mr. Vikas Mittal, AGM NABARD, Bathinda
- 6. Dr. Rajinder Singh, FDO, Animal Husbandry Department Bathinda

Inauguration Session:

In the inaugural session the programme began with the registration of guests followed by the introduction and activities briefed by Mr. Amritpal Singh, Regional Director Abhivyakti Foundation formally welcome all the dignitaries & participants and discussed about this campaign and share the brief objective of this campaign. The role and the strategy for the campaign pertaining to the proposed campaign by Abhivyakti Foundation shared in details for the effective participation of the lined district officials to make this programme successful.

In the first session Mr. Vikas Mittal, DDM Bathinda discussed about this campaign in detail. He shared the role of NABARD and the programme pertaining to farmers and environmental concerns to achieve the desired development results apart from channelizing and accelerating agriculture credit. He shares that before this campaign NABARD partnering with NGOs, has piloted a few initiatives to discourage farmers from crop residue (paddy straw) burning. Further Mr. Mittal shared the problems related to straw burning and provided information on the campaign stages and discussed the roles and responsibility of Village Level Workers (VLW) and the proposed activities at the village cluster level Programs.

Training of Village Level Workers

The session was undertaken by Mr. Amritpal Singh, Regional Director Abhivykati Foundation who discussed about health-related issues due the straw burning. He shared about the Stubble burning that creates harmful and dangerous air pollution that causes adverse health effects in majority of population. This practice largely produces high levels of toxic particulates, which affect the health of the people in the direct vicinity of the burning. Stubble burning has led to a remarkable increase in respiratory problems, especially asthma and chronic obstructive pulmonary disease (COPD) among the large population of the district.

Advocating on the ill-effect of stubble burning Mr. B.S Gill, Director PNB Farmer Training Centre Mehraj district Bathinda who appreciated the initiate being taken by NABARD to curb stubble burning issue and practices Punjab. He shares the problem related to the stubble burning and considered one of the biggest problems

in agriculture and climate change. As per Dr. Gill the problem is increasing day by day and it is the need of the hour to make farmers aware about the ill-effects of stubble burning. Further Mr. Gill shared that efforts are also being made through kisan camps, trainings and workshops, apart from campaigns through various print media, televised shows and radio jingles, in informing farmers about the alternative usage of crop residue.

Dr. Jasveer Singh, ADO Agriculture Department shared the best alternative available to burning of crop residue is in-situ incorporation. He also explained about in-situ Management of straw – benefits and savings. He shared the benefits and saving in economic terms that farmers can get through in-situ management of straw. He added that the state governments, in collaboration with the Centre, has rolled-out schemes for providing subsidy on mechanical implements that help tillage of soil, so that the crop residue can be retained in the soil, adding to its fertility, or alternately, collection of crop residue for putting it to commercial usage. However, the high cost of these implements means that in spite of subsidies, only a small number of farmers have access to these implements at the moment. He also shared that affords are being made to increase the avenues for the alternate usage of paddy straw and other crop residue. For instance, paddy straw has a considerable calorific value, making it suitable for use as a fuel in biomass-based power plants. Similarly, it can be utilized for the preparation of bio-fuels, organic fertilizers and in paper and cardboard making industries. In strategy, broadly, is to assign a real economic and commercial value to the agricultural residue and making burning it an economic loss to the farmer.

Dr. Rajinder Singh, FDO, Animal Husbandry Department Bathinda discussed about usage of paddy straw for animal as a CHARA. He also shares the methods for the same so that message can be delivered at field level through village level workers. In the on-going training session Mr. Sukhdev Singh, HDO Horticulture department also share schemes of horticulture for farmers pertain to the wise use of stubble burning and management.

The session ended with the vote of thanks by the regional director and thanks all the district officials who participated and shred their view and requested to facilitate and support the on- going programme of farm residue management.

Block Level Training Programme Bathinda

Abhivyakti Foundation in collaboration with National Bank for Agriculture and Rural Development organized Block Level Programme under Crop Residue Management Campaign 2018 "Prali Bachao Fasal Vadhao" for Block Bathinda, Goniana & Sangat of district Bathinda at Bathinda on dated 8th October 2018.

List of Dignitaries joined the Block Level Programme

- 1. Mr. Sukhpreet Singh Sidhu, Additional Deputy Commissioner, Bathinda
- 2. Mr. Guruditta Singh, CAO, Agriculture Department Bathinda
- 3. Mr. Gurtej Singh, Agriculture officer, Bathinda
- 4. Mr. Manav Maity, Area Program Manager, Ambuja Cement Foundation
- 5. Mr. Vikas Mittal, AGM NABARD, Bathinda
- 6. Dr. Rajinder Singh, FDO, Animal Husbandry Department Bathinda

Minutes of Programme:

The training session began by sharing the brief introduction and sharing of objective by Mr. Amritpal Singh, Regional Director Abhivyakti Foundation who formally welcomed all the dignitaries & participants and discussed about the campaign activities.

In the opening session Mr. Vikas Mittal, DDM Bathinda discussed about the campaign in detail. He shared about the NABARD as it always taken into consideration farmers and environmental concerns to achieve the desired development results apart from channelizing and accelerating agriculture credit. He shared the activities of campaign by NABARD partnering with NGOs, has piloted a few initiatives to discourage farmers from crop residue (paddy straw) burning. Further Mr. Mittal shared problems related to Straw burning and provide information on the campaign stages and discussed that the Village Level Workers activities in the cluster level Programs. Mr. Mittal also discussed about status of machinery available at PACS level. During the interaction it was observed that some of the PACS have not received sufficient machineries till date.

As regards to issue related to the stubble burning Mr. Amritpal Singh, Regional Director Abhivykati Foundation discussed about health-related issues due the straw burning. He shared the stubble burning creates harmful and dangerous air pollution which causes adverse health effects among the majority of population. It produces extremely high levels of toxic particulates, which affect the health of the people in the direct vicinity of the burning.

Dr. Rajinder Singh, FDO, Animal Husbandry Department Bathinda discussed about usage of paddy straw for animal as a CHARA. He shares that natural fermentation of paddy straw makes it rich in protein which is useful for cattle. The State Animal Husbandry Department is making efforts to popularize this. However, demand from within the State is low due to sufficient availability of wheat straw and green fodder, therefore possibility of treatment and export to other States such as Rajasthan needs to be explored. Further, paddy straw can be effectively used as feeding material for cattle. Extensive designs have been developed for effective collection of urine and dung from hay bedding and composting/ bio-methanization of used hay bedding for manure production. PAU has developed technology for

anaerobic digestion of paddy straw for biogas production, the efficacy of which needs to be assessed in the fields. Besides extension programmes, the State Government should also needs to promote private entrepreneurs for the purpose.

In the on-going session Mr. Gurtej Singh, Agriculture officer Bathinda appreciated the initiate being taken by NABARD to curb stubble burning issues in Punjab. He shares the stubble burning problem is one of the biggest problems in agriculture field. Efforts are being made to increase the avenues for the alternate usage of paddy straw and other crop residue. For instance, paddy straw has a considerable calorific value, making it suitable for use as a fuel in biomass-based power plants. Similarly, it can be utilized for the preparation of bio-fuels, organic fertilizers and in paper and cardboard making industries. The strategy, broadly, is to assign a real economic and commercial value to the agricultural residue and making burning it an economic loss to the farmer.

Mr. Guruditta Singh, CAO, Bathinda shared the best alternative available to burning of crop residue is in-situ incorporation. He explained about in-situ management of straw – benefits and savings. He shared the benefits and saving which farmers can get through in-situ management of straw. He added that the state governments, in collaboration with the Centre, has rolled out schemes for providing subsidy on mechanical implements that help tillage of soil, so that the crop residue can be retained in the soil, adding to its fertility, or alternately, collection of crop residue for putting it to commercial usage.

Honourable ADC General Mr. Sukhpreet Singh Sidhu appreciates the efforts of NABARD in collaboration with NGO in the state of Punjab to spreading awareness on Crop Residue Management. He also share that the most preferable solution for the State is of course to diversify its cropping pattern, by reducing the area under paddy cultivation. However, it can possibly happen only when the State is able to offer some other economically viable options to its farmers. Therefore, till such time diversification of cropping pattern to reduce the area under paddy becomes reality, an effective policy for management and utilization of paddy straw needs to be put in place. Mr. Sidhu ensure for corporation under this project from District administration and Agriculture Department.

During the day meeting was held with honourable Deputy Commissioner Bathinda. Honourable Deputy Commissioner Bathinda appreciate the efforts of National Bank for Agriculture and Rural Development in Collaboration with Abhivyakti Foundation in the district Bathinda to curb stubble burning. He ensured to provide full support to this campaign on behalf of district administration. After that Deputy Commissioner along with ADC & SDM flagged of the awareness Auto which will cover the entire village and spread awareness on Crop Residue Management with Audio message and other IEC material developed by National Bank for Agriculture and Rural Development.

Block Level Programme Talwandi Sabho

Abhivyakti Foundation in collaboration with National Bank for Agriculture and Rural Development organized Block Level Programme under Crop Residue Management Campaign 2018 " Prali Bachao Fasal Vadhao" for Block Talwandi Sabho & Maur Mandi of district Bathinda at Talwandi Sabho on dated 9th October 2018.

List of Dignitaries joined the Block Level Programme

- 1. Mr. Varinder Singh, SDM Talwandi Sabho, Bathinda
- 2. Mr. Gurmeet Singh Singh, Agriculture officer, Bathinda
- 3. Mr. Purnoor Singh, Agriculture Sub Inspector, Bathinda
- 4. Mr. Vikas Mittal, AGM NABARD, Bathinda
- 5. Dr. Rajinder Singh, FDO, Animal Husbandry Department Bathinda
- 6. Mr. Rajeev Kumar, Branch Manager, BCCB

Minutes of Programme:

The training programme began with the brief introduction and campaign objective shared by Mr. Amritpal Singh, Regional Director Abhivyakti Foundation who formally welcomed all the dignitaries & participants and discussed about this campaign and share the activities of the campaign.

In the session Mr. Vikas Mittal, DDM Bathinda discussed about campaign Crop Residue Management 2018. Mr. Mittal shares that NABARD has always taken into consideration social and environmental concerns to achieve the desired development results apart from channelizing and accelerating agriculture credit. He shared the increased mechanization, particularly use of combine, declining number of livestock, long period required for composting and no economically viable alternate use of residues are some of the reasons for residues being burnt in field. Burning of agricultural biomass residue, or Crop Residue Burning (CRB) has been identified as the major health hazard. In addition it causes exposure to extremely high levels of particulate matter concentration to people in the immediate vicinity; it was also a major regional source of pollution. Mr. Mittal also discussed about status of machinery available at PACS level. During the interaction it was observed that some of the PACS have not received sufficient machineries till date.

As regards to utilization of crop residue Dr. Rajinder Singh shares that traditionally crop residues have numerous competing uses such as animal feed, fodder, fuel, roof thatching, packaging and composting. Cereal residues are mainly used as cattle feed. Rice straw and husk is used as domestic fuel or in boilers for boiling rice in states like West Bengal. The uses for various residues are different in different states. Farmers use residue either themselves or sell it to other landless households or intermediaries, who in turn sell the residues to industries. The remaining residues are left unused or burned in field. In states like Punjab and Haryana where rice residues are not used as cattle feed, large amount of rice straw are burned in field.

Mr. Gurmeet Singh, Agriculture officer shared that Agricultural crop residue burning contribute towards the emission of greenhouse gases, air pollutants, particulates matter and smoke having direct influence on global warming.

Furthermore, it depletes the soil of its organic matter, major nutrients and reduces microbial biomass in soil that ultimately impairs the efficacy of organic matter application in the next cropping season. It is estimated that burning of one tons of rice straw accounts for loss of 5.5 kg of nitrogen, 2.3 kg of phosphorus, 25 kg of potassium and 1.2 kg of Sulphur.

Further, he discussed the heat generated increase the temperature of soil and thus, killing fungi, humus, useful bacteria, pests, reptiles and the like that are otherwise beneficial for the crops. After that he explained about in-situ Management of straw – benefits and savings. He shared the benefits and saving which farmers can get through in-situ management of straw. He added that the state governments, in collaboration with the Centre, has rolled-out schemes for providing subsidy on mechanical implements that would help tillage of soil, so that the crop residue can be retained in the soil, adding to its fertility, or alternately, collection of crop residue for putting it to commercial usage.

Mr. Varinder Singh, Sub Divisional Magistrate Talwandi Sabhi appreciate the efforts of NABARD in collaboration with Abhivyakti Foundation in the Bathinda to spreading awareness on Crop Residue Management. Mr. Singh also shared that it is responsibility of every citizen of country to motivate the farmers regarding Crop Residue Management. He shared that stubble burning problem is one of the biggest problems in agriculture field that affords should be made to boost the avenues for the alternate usage of paddy straw and other crop residue.

Block Level Programme Rampura

Abhivyakti Foundation in collaboration with National Bank for Agriculture and Rural Development organized Block Level Programme under Crop Residue Management Campaign 2018 " Prali Bachao Fasal Vadhao" for Block Rampura & Phul of district Bathinda at Rampura on dated 10th October 2018.

List of Dignitaries join the Block Level Programme

- 1. Mr. Lajpat Rai Goyal, LDM, Bathinda
- 2. Mr. Jagdish Singh, Agriculture officer, Bathinda
- 3. Dr. J.S Brar, Director KVK, Bathinda
- 4. Mr. Vikas Mittal, AGM NABARD, Bathinda
- 5. Mr. Niranjan Singh, AM, BCCB
- 6. Mr. Charanjit Singh, AM, BCCB
- 7. Gurjeet Singhh, Branch Manager, BCCB

Minutes of Programme:

The programme began with registration of participants and Mr. Amritpal Singh, Regional Director Abhivyakti Foundation formally welcomed all the dignitaries & participants who discussed about the campaign activities and share the brief objective of this campaign.

In the session Mr. Vikas Mittal, DDM Bathinda discussed about campaign on Crop Residue Management 2018. Mr. Mittal shared that the NABARD has always taken

into consideration of farmers and environmental concerns to achieve the desired agricultural development results apart from channelizing and accelerating agriculture credit. Burning of agricultural biomass residue, or Crop Residue Burning (CRB) has been identified as a major health hazard. In addition to causing exposure to extremely high levels of particulate matter concentration to people in the immediate vicinity, it is also a major regional source of pollution. Mr. Mittal also discussed about status of machinery available at PACS level. In course of interaction with secretaries of Cooperative Society it was observed that many of the PACS have not received sufficient machineries till date.

Mr. Jagdish Singh, Agriculture officer Bathinda shared the stubble burning problem as one of the biggest problems in agriculture field. He shared as there are ongoing efforts to highlight the health effects of crop residue burning. It produces extremely high levels of toxic particulates, which affect the health of the people in the direct vicinity of the burning. In addition, efforts are also being made through kisan camps, trainings and workshops, apart from campaigns through various print media, televised shows and radio jingles, by informing farmers about the alternative usage of crop residue. He shared that efforts are being made to increase the avenues for the alternate usage of paddy straw and other crop residue. For instance, paddy straw has a considerable calorific value, making it suitable for use as a fuel in biomass-based power plants. Similarly, it can be utilized for the preparation of bio-fuels, organic fertilizers and in paper and cardboard making industries. The strategy, broadly, is to assign a real economic and commercial value to the agricultural residue and making burning it an economic loss to the farmer.

Mr. Lajpat Rai Goyal, LDM Bathinda appreciate the efforts of NABARD in collaboration with Abhivyakti Foundation in the Bathinda to spreading awareness on Crop Residue Management. Mr. Goyal ensure full corporation on behalf of Banker for this campaign. He shared the serious problems that everyone needs to take step forward towards this cause.

Dr. J.S Brar, Director KVK shared that crop residue is not a waste but rather a useful natural resource. About 25 % of nitrogen and phosphorus 50 % of sulphur and 75 % of potassium uptake by cereal crops are retained in crop residues, making them valuable nutrient sources.

The removal of the paddy stalk that remains on the field is a labour-intensive process. With labour being unavailable and the time window for preparing the field for wheat cultivation being limited, the options that the farmer has are either investing in expensive and rarely used agricultural implements, or burning the residue right on the field. Of the two, the latter is both cheaper and requires less effort. He further shared that there are various ongoing, long-term efforts at diversification of cropping techniques, such that crop residue burning can be effectively prevented. This is being attempted through cultivation of alternate crops (apart from rice/paddy and wheat) that produce less crop residue and have greater gap periods between cropping cycles.

Block Level Training programme Bhagta Bhai Ka

Abhivyakti Foundation in collaboration with National Bank for Agriculture and Rural Development organized Block Level Programme under Crop Residue Management Campaign 2018 " Prali Bachao Fasal Vadhao" for Bhagta Bhai Ka & Nathana of district Bathinda at Bhagta Bhai Ka on dated 11th October 2018.

<u>List of Dignitaries joined the Block Level Programme</u>

- 1. Mr. Dharampal Sharma, BDPO, Bhagta Bhai Ka
- 2. Mr. Narinder Pal Singh, Agriculture Development officer, Bathinda
- 3. Dr. Yadwinder Singh, Patwari, Revenue Department Bathinda
- 4. Mr. Vikas Mittal, AGM NABARD, Bathinda

Minutes of Programme:

The programme began with the brief introduction and programme objective by Mr. Amritpal Singh, Regional Director Abhivyakti Foundation who formally welcomed all the dignitaries & participants and discussed about this campaign and shared the brief action plan of this campaign.

In the session Mr. Vikas Mittal, DDM Bathinda discussed about campaign on Crop Residue Management 2018. Mr. Mittal shared the problems of crop residue burning has been intensifying over time and spreading across the Indian Sub-continent. As regards to soil health Mr. Mittal discussed that apart from the damage caused by air pollution, burning of rice residue also results in loss of soil fertility and soil health. In the interaction with secretaries of Cooperative Society it was observed that many of the PACS have not received sufficient machineries till date.

In the Block Level Programme it was observed that the many of the farmers were not satisfied with the government policy on Crop Residue Management. According to the existing scenario the Farmers in present situation does not have readymade solution to stubble burning as a result most of the farmers uses the traditional practice of parali burning.

Mr. Narinder Pal Singh, ADO shares that there are ongoing efforts to highlight the health effects of crop residue burning. In addition, efforts are also being made through kisan camps, trainings and workshops, apart from campaigns through various print media, televised shows and radio jingles, by informing farmers about the alternative usage of crop residue. He shared the affords being made to increase the avenues for the alternate usage of paddy straw and other crop residue. For instance, paddy straw has a considerable calorific value, making it suitable for use as a fuel in biomass-based power plants. Similarly, it can be utilized for the preparation of bio-fuels, organic fertilizers and in paper and cardboard making industries. The strategy, broadly, is to assign a real economic and commercial value to the agricultural residue and making burning it an economic loss to the farmer. Further Mr. Narinder Pal Singh shared the Crop residue is not a waste but rather a useful natural resource. About 25 % of nitrogen

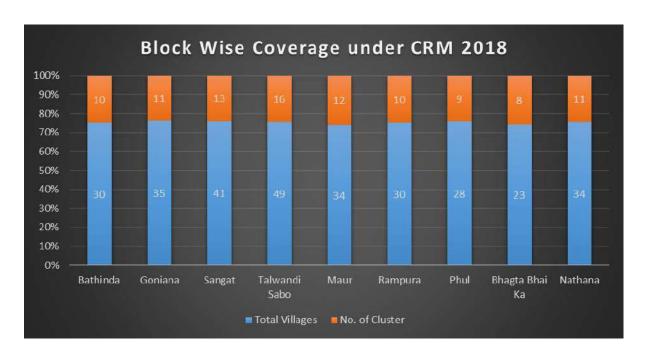
and phosphorus 50 % of sulphur and 75 % of potassium uptake by cereal crops are retained in crop residues, making them valuable nutrient sources.

Mr. Dharmpal Singh, BDPO appreciate the efforts of NABARD in collaboration with Abhivyakti Foundation in the Bathinda to spreading awareness on Crop Residue Management.

Geographical Coverage:

Crop Residue Management Campaign "Parali Bachao Fasal Vadhao" 2018 conducted in 100 cluster villages of 9 blocks of district Bathinda of Punjab. Detail of geographical area are mentioned below:

S. No	Name of the Blocks	Total Villages	No. of Cluster	Average Village covered in a cluster
1	Bathinda	30	10	3.0
2	Goniana	35	11	3.2
3	Sangat	41	13	3.2
4	Talwandi Sabo	49	16	3.1
5	Maur	34	12	2.8
6	Rampura	30	10	3.0
7	Phul	28	9	3.1
8	Bhagta Bhai Ka	23	8	2.9
9	Nathana	34	11	3.1
	<u>Total</u>	<u>304</u>	<u>100</u>	-



<u>Cluster Leve</u>	<u>ei Program</u>	ime ot Bio	ck Bathinda

Name of the Cluster: Deon, Bathinda, Bathinda

About the Village Deon

Deon is a large village located in Bathinda block of Bathinda district, Punjab with total 1363 families residing. The Deon village has population of 7139 of which 3762 are males while 3377 are females as per Population Census 2011.

In Deon village out of total population, 3841 were engaged in work activities. 71.39 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 28.61 % were involved in Marginal activity providing livelihood for less than 6 months. Of 3841 workers engaged in Main work, 1158 were cultivators (owner or co-owner) while 682 were Agricultural laborers.

Date of the campaign

12th October 2018

Name of the Villages covered under this Cluster

Basti 4,5,6 & Basti 2,3

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Zero tillage & Super SMS

Name of the Cluster: Virk Kalan, Bathinda, Bathinda

About the Village Virk Kalan

Virk Kalan is a large village located in Bathinda block of district Bathinda of Punjab with total 562 families presence. The Virk Kalan village has population of 2751 of which 1446 are males while 1305 are females as per Population Census 2011.

In Virk Kalan village out of the total population, 1770 were engaged in farm work activities. 69.27 % of workers opined that agricultural related activities as the main work (Employment or Earning more than 6 Months) while 30.73 % were involved in marginal activity providing livelihood for less than 6 months. Of 1770 workers engaged in Main work, 418 were cultivators (owner or co-owner) while 230 were Agricultural laborers.

Date of the campaign

13th October 2018

Name of the Villages covered under this Cluster

Virk Khurd, Burj Mehma & Killi Nihal Singh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bailing/selling as fodder bales/blocks

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Corn & Sugarcane are the most preferred crops.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy seeders & Baler

Name of the Cluster: Kot Shamir, Bathinda, Bathinda

About Village Kot Shamir

Kot Shamir is a large village located in Bathinda block of Bathinda district, Punjab with total 2107 families residing. The Kot Shamir village has population of 10945 of which 5821 are males while 5124 are females as per Population Census 2011.

In Kot Shamir village out of total population, 4794 were engaged in work activities. 86.63 % of workers describe their work as main work (Employment or Earning more than 6 Months) while 13.37 % were involved in marginal activity providing livelihood for less than 6 months. Of the total 4794 workers engaged in main work, 1922 were cultivators (owner or co-owner) while 1545 were agricultural laborers.

Date of the campaign

15th October 2018

Name of the Villages covered under this Cluster

Virk Khurd, Burj Mehma & Killi Nihal Singh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Composting on farm

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy seeders & Baler

Name of the Cluster: Balluana, Bathinda, Bathinda

About Village Balluana

Baluana is a large village located in Bathinda block of Bathinda district, Punjab with total 947 families residing. The Baluana village has population of 4871 of which 2541 are males while 2330 are females as per Population Census 2011.

In Baluana village out of total population, 2494 were engaged in work activities. 59.78 % of workers describe their work as main work (Employment or Earning more than 6 Months) while 40.22 % were involved in marginal activity providing livelihood for less than 6 months. Of 2494 workers engaged in main work, 648 were cultivators (owner or co-owner) while 535 were agricultural laborers.

Date of the campaign

16th October 2018

Name of the Villages covered under this Cluster

Chuge Kalan, Chuge Khurd & Karamgarh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with Happy seeders

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy seeders & Reaper

Name of the Cluster: Bhisiana, Bathinda, Bathinda

About Village Bhisiana

Bhisiana is a Village in Bathinda Tehsil of Bathinda District of Punjab State, India. It is located 22 KM towards west from District headquarters Bathinda. 21 KM from Bathinda and 233 KM from State capital Chandigarh.

Kothe Phula Singh Wale ($3\ KM$) , Burj Mehma ($4\ KM$) , Virk Khurd ($4\ KM$) , Karamgarh Satran ($6\ KM$) , Mehma Bhagwana ($8\ KM$) are the nearby Villages to Bhisiana . Bhisiana is surrounded by Bathinda Tehsil towards East , Sangat Tehsil towards South , Kot Kapura Tehsil towards North , Malout Tehsil towards west .

Date of the campaign

17th October 2018

Name of the Villages covered under this Cluster

Bhisiana

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Zero tillage & Super SMS

Name of the Cluster: Behman Diwana, Bathinda, Bathinda

About Village Behman Diwana

Behman Dewana is a large village located in Bathinda block of Bathinda district, Punjab with total 1076 families residing. The Behman Dewana village has population of 5841 of which 3034 are males while 2807 are females as per Population Census 2011.

In Behman Dewana village out of total population, 2153 were engaged in work activities. 75.01 % of workers describe their work as main work (Employment or Earning more than 6 Months) while 24.99 % were involved in marginal activity providing livelihood for less than 6 months. Of 2153 workers engaged in Main work, 561 were cultivators (owner or co-owner) while 413 were agricultural laborers.

Date of the campaign

19th October 2018

Name of the Villages covered under this Cluster

Bazigar Basti, Budhlada Wala & Birbehman

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with Happy seeders

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy seeders & Reaper

Name of the Cluster: Teona, Bathinda, Bathinda

About Village Teona

Teona is a large village located in Bathinda block of Bathinda district, Punjab with total 760 families residing. The Teona village has population of 3994 of which 2089 are males while 1905 are females as per Population Census 2011.

In Teona village out of total population, 2203 were engaged in work activities. 55.29 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 44.71 % were involved in marginal activity providing livelihood for less than 6 months. Of 2203 workers engaged in Main work, 570 were cultivators (owner or co-owner) while 444 were Agricultural laborers.

Date of the campaign

23rd October 2018

Name of the Villages covered under this Cluster

Maltania & Mian

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Jodhpur Romana, Bathinda, Bathinda

About Village Jodhpur Romana

Jodhpur Romana is a large village located in Bathinda Tehsil of Bathinda district, Punjab with total 458 families residing. The Jodhpur Romana village has population of 2348 of which 1215 are males while 1133 are females as per Population Census 2011.

In Jodhpur Romana village out of total population, 1051 were engaged in work activities. 58.71 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 41.29 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1051 workers engaged in Main work, 338 were cultivators (owner or co-owner) while 113 were Agricultural laborers.

Date of the campaign

24th October 2018

Name of the Villages covered under this Cluster

Jodhpur Romana

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Kinnow & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Jassi Pauwali, Bathinda, Bathinda

About Village Jassi Pauwali

Jassi Pauwali is a large village located in Bathinda block of Bathinda district, Punjab with total 554 families residing. The Jassi Pauwali village has population of 2863 of which 1492 are males while 1371 are females as per Population Census 2011.

In Jassi Pauwali village out of total population, 1383 were engaged in work activities. 85.90 % of workers describe their work as main work (Employment or Earning more than 6 Months) while 14.10 % were involved in marginal activity providing livelihood for less than 6 months. Of 1383 workers engaged in Main work, 351 were cultivators (owner or co-owner) while 225 were Agricultural laborers.

Date of the campaign

24th October 2018

Name of the Villages covered under this Cluster

Phoos & Mandi Bhagu

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Kinnow & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Jhumba, Bathinda, Bathinda

About Village Jhumba

Jhumba is a large village located in Bathinda block of Bathinda district, Punjab with total 907 families residing. The Jhumba village has population of 4495 of which 2338 are males while 2157 are females as per Population Census 2011.

In Jhumba village out of total population, 2404 were engaged in work activities. 72.09 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 27.91 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2404 workers engaged in Main work, 743 were cultivators (owner or co-owner) while 661 were Agricultural laborers.

Date of the campaign

24th October 2018

Name of the Villages covered under this Cluster

Maltania & Mian

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

No , Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Khemuana, Goniana, Bathinda

About Village Khemuana

Khemuana is a large village located in Goniana block of Bathinda district, Punjab with total 603 families residing. The Khemuana village has population of 3104 of which 1625 are males while 1479 are females as per Population Census 2011.

In Khemuana village out of total population, 1248 were engaged in work activities. 76.44 % of workers describe their work as main work (Employment or Earning more than 6 Months) while 23.56 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1248 workers engaged in Main work, 399 were cultivators (owner or co-owner) while 270 were Agricultural laborers.

Date of the campaign

11th October 2018

Name of the Villages covered under this Cluster

Kothe Sandhuan & Kothe Budh Singh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Other

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Corn & Sugarcane are the most preferred crops.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Jeeda, Goniana, Bathinda

About Village Jeeda

Jeeda is a large village located in Goniana block of Bathinda district, Punjab with total 1058 families residing. The Jeeda village has population of 5574 of which 2990 are males while 2584 are females as per Population Census 2011.

In Jeeda village out of total population, 2406 were engaged in work activities. 74.61 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 25.39 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2406 workers engaged in Main work, 740 were cultivators (owner or co-owner) while 486 were Agricultural laborers.

Date of the campaign

12th October 2018

Name of the Villages covered under this Cluster

Kothe Inder Singh & Balahar Mehma

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bailing/selling as fodder bales/blocks

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Bhokra, Goniana, Bathinda

About Village Bhokra

Bhokhra is a large village located in Goniana block of Bathinda district, Punjab with total 782 families residing. The Bhokhra village has population of 4399 of which 2257 are males while 2142 are females as per Population Census 2011.

In Bhokhra village out of total population, 1808 were engaged in work activities. 86.34 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 13.66 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1808 workers engaged in Main work, 461 were cultivators (owner or co-owner) while 479 were Agricultural laborers.

Date of the campaign

13th October 2018

Name of the Villages covered under this Cluster

Khialiwala & Mehma Sawai

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bailing/selling as fodder bales/blocks

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Corn, Cotton & Sugarcane are the most preferred crops.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Har Raipur, Goniana, Bathinda

About Village Har Raipur

Har Raipur is a large village located in Goniana block of Bathinda district, Punjab with total 813 families residing. The Har Raipur Urf Bhokhri village has population of 4352 of which 2312 are males while 2040 are females as per Population Census 2011.

In Har Raipur village out of total population, 2554 were engaged in work activities. 47.77 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 52.23 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2554 workers engaged in Main work, 720 were cultivators (owner or co-owner) while 305 were Agricultural laborers.

Date of the campaign

13th October 2018

Name of the Villages covered under this Cluster

Jandewala & Amarghar

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bailing/selling as fodder bales/blocks

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Goniana Kalan, Goniana, Bathinda

About Village Goniana Kalan

Goniana Kalan is a large village located in Goniana block of Bathinda district, Punjab with total 391 families residing. The Goniana Kalan village has population of 2059 of which 1089 are males while 970 are females as per Population Census 2011.

In Goniana Kalan village out of total population, 779 were engaged in work activities. 77.41 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 22.59 % were involved in Marginal activity providing livelihood for less than 6 months. Of 779 workers engaged in Main work, 382 were cultivators (owner or co-owner) while 105 were Agricultural laborers.

Date of the campaign

14th October 2018

Name of the Villages covered under this Cluster

Goniana Khurd, Chak Goniana Khurd & Chak Goniana Kalan

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Mehma Sarja, Goniana, Bathinda

About Village Mehma Sarja

Mehma Sarja is a large village located in Goniana block of Bathinda district, Punjab with total 1573 families residing. The Mehma Sarja village has population of 7991 of which 4291 are males while 3700 are females as per Population Census 2011.

In Mehma Sarja village out of total population, 2841 were engaged in work activities. 95.28 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 4.72 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2841 workers engaged in Main work, 1088 were cultivators (owner or co-owner) while 1058 were Agricultural laborers.

Date of the campaign

16th October 2018

Name of the Villages covered under this Cluster

Kothe Nathiana, Mehma Sarkari & Mehma Bhagwana

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bailing/selling as fodder bales/blocks

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Nehianwala, Goniana, Bathinda

About Village Nehianwala

Nehianwala is a large village located in Goniana block of Bathinda district, Punjab with total 1348 families residing. The Nehianwala village has population of 6911 of which 3609 are males while 3302 are females as per Population Census 2011.

In Nehianwala village out of total population, 2512 were engaged in work activities. 80.85 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 19.15 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2512 workers engaged in Main work, 428 were cultivators (owner or co-owner) while 438 were Agricultural laborers.

Date of the campaign

16th October 2018

Name of the Villages covered under this Cluster

Blahar Vinju

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bailing/selling as fodder bales/blocks

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Ablu, Goniana, Bathinda

About Village Ablu

Ablu is a large village located in Goniana block of Bathinda district, Punjab with total 1423 families residing. The Ablu village has population of 7880 of which 4153 are males while 3727 are females as per Population Census 2011.

In Ablu village out of total population, 3105 were engaged in work activities. 84.96 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 15.04 % were involved in Marginal activity providing livelihood for less than 6 months. Of 3105 workers engaged in Main work, 1453 were cultivators (owner or co-owner) while 724 were Agricultural laborers.

Date of the campaign

17th October 2018

Name of the Villages covered under this Cluster

Kothe Kaur Singh, Kothe Phulla Singh & Kothe Lal Singh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with Happy seeders

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy seeders & Super SMS

Name of the Cluster: Sibian, Goniana, Bathinda

About Village Sibian

Sibian is a large village located in Goniana block of Bathinda district, Punjab with total 1199 families residing. The Sibian village has population of 6021 of which 3127 are males while 2894 are females as per Population Census 2011.

In Sibian village out of total population, 2600 were engaged in work activities. 68.12 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 31.88 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2600 workers engaged in Main work, 562 were cultivators (owner or co-owner) while 434 were Agricultural laborers.

Date of the campaign

21st October 2018

Name of the Villages covered under this Cluster

Gill Patti & Kothe Natha Singh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Other

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Aklia Kalan, Goniana, Bathinda

About Village Aklia Kalan

Akalia Kalan is a large village located in Goniana block of Bathinda district, Punjab with total 838 families residing. The Akalia Kalan village has population of 4622 of which 2431 are males while 2191 are females as per Population Census 2011.

In Akalia Kalan village out of total population, 1647 were engaged in work activities. 81.85 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 18.15 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1647 workers engaged in Main work, 499 were cultivators (owner or co-owner) while 441 were Agricultural laborers.

Date of the campaign

25th October 2018

Name of the Villages covered under this Cluster

Aklia Khurd & Kothe Lakhi Jangal

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with Happy seeders

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Barkandi, Goniana, Bathinda

About Village Barkhandi

Barkandi is a medium size village located in Goniana block of Bathinda district, Punjab with total 250 families residing. The Warkandi village has population of 1484 of which 791 are males while 693 are females as per Population Census 2011.

In Barkandi village out of total population, 524 were engaged in work activities. 91.03 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 8.97 % were involved in Marginal activity providing livelihood for less than 6 months. Of 524 workers engaged in Main work, 161 were cultivators (owner or co-owner) while 185 were Agricultural laborers.

Date of the campaign

25th October 2018

Name of the Villages covered under this Cluster

Dan Singh Wala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Other

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Cluster Level Programme Block Sangat	

Name of the Cluster: Jai Singh Wala, Sangat, Bathinda

About Village Jai Singh Wala

Jai Singh Walais a large size village located in Sangat block of Bathinda district, Punjab with total 998 families residing. The Jai Singhwala village has population of 5108 of which 2626 are males while 2482 are females as per Population Census 2011.

In Jai Singh Wala village out of total population, 2671 were engaged in work activities. 63.76 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 36.24 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2671 workers engaged in Main work, 727 were cultivators (owner or co-owner) while 515 were Agricultural laborers.

Date of the campaign

11th October 2018

Name of the Villages covered under this Cluster

Phullo Mithi, Sangat Kalan & Sangat Kothe

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Vegetables & Corn are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Bhagwangarh, Sangat, Bathinda

About Village Bhagwangarh

Bhagwangarhis a large village located in Sangat block of Bathinda district, Punjab with total 506 families residing. The Bhagwangarh village has population of 2659 of which 1413 are males while 1246 are females as per Population Census 2011.

In Bhagwangarh village out of total population, 1727 were engaged in work activities. 93.11 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 6.89 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1727 workers engaged in Main work, 517 were cultivators (owner or co-owner) while 228 were Agricultural laborers.

Date of the campaign

12th October 2018

Name of the Villages covered under this Cluster

Dunewala, Malwala & Shergarh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Raike Kalan, Sangat, Bathinda

About Village Raike Kalan

Raie Kalan is a large village located in Sangat block of Bathinda district, Punjab with total 1035 families residing. The Raike Kalan village has population of 5200 of which 2700 are males while 2500 are females as per Population Census 2011.

In Raike Kalan village out of total population, 2402 were engaged in work activities. 72.90 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 27.10 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2402 workers engaged in Main work, 659 were cultivators (owner or co-owner) while 653 were Agricultural laborers.

Date of the campaign

12th October 2018

Name of the Villages covered under this Cluster

Bambiha & Bhadurgarh Jandian

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil Incorporation and burning of some part of the residue

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton and Sugarcane are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Chak Ruldu Singh Wala, Sangat

About Village Chak Ruldu Singh Wala

Chak Ruldu Singh Wala is a large village located in Sangat block of Bathinda district, Punjab with total 692 families residing. The Chak Ruldu Singhwala village has population of 3346 of which 1753 are males while 1593 are females as per Population Census 2011.

In Chak Ruldu Singh Wala village out of total population, 1746 were engaged in work activities. 62.49 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 37.51 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1746 workers engaged in Main work, 255 were cultivators (owner or co-owner) while 572 were Agricultural laborers.

Date of the campaign

13th October 2018

Name of the Villages covered under this Cluster

Phallaur & Doomwali

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton are more preferred crop by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Jassi Bagwali, Sangat, Bathinda

About Village Jassi Bagwali

Jassi Bagwali is a large village located in Sangat block of Bathinda district, Punjab with total 703 families residing. The Jassi Bagwali village has population of 3622 of which 1888 are males while 1734 are females as per Population Census 2011.

In Jassi Bagwali village out of total population, 1713 were engaged in work activities. 62.46 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 37.54 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1713 workers engaged in Main work, 675 were cultivators (owner or co-owner) while 166 were Agricultural laborers.

Date of the campaign

13thOctober 2018

Name of the Villages covered under this Cluster

Mohalla & Kuti Kishanpura

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Ghudha, Sangat, Bathinda

About Village Ghudha

Ghudha is a large village located in Sangat block of Bathinda district, Punjab with total 1023 families residing. The Ghudda village has population of 5320 of which 2785 are males while 2535 are females as per Population Census 2011.

In Ghudha village out of total population, 2755 were engaged in work activities. 68.20 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 31.80 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2755 workers engaged in Main work, 835 were cultivators (owner or co-owner) while 452 were Agricultural laborers.

Date of the campaign

14thOctober 2018

Name of the Villages covered under this Cluster

Bajak & Kot Guru

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bailing/selling as fodder bales/blocks

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Pakka Kalan, Sangat, Bathinda

About Village Pakka Kalan

Pakka Kalan is a large village located in Sangat block of Bathinda district, Punjab with total 1632 families residing. The Pakka Kalan village has population of 8677 of which 4526 are males while 4151 are females as per Population Census 2011.

In Pakka Kalan village out of total population, 3020 were engaged in work activities. 91.82 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 8.18 % were involved in Marginal activity providing livelihood for less than 6 months. Of 3020 workers engaged in Main work, 1244 were cultivators (owner or co-owner) while 925 were Agricultural laborers.

Date of the campaign

14th October 2018

Name of the Villages covered under this Cluster

Gurthdi, Sekhu & Phallar

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Kal Jharani, Sangat, Bathinda

About Village Kal Jharani

Kal Jharani is a large village located in Sangat block of Bathinda district, Punjab with total 761 families residing. The Kal Jharani village has population of 4029 of which 2114 are males while 1915 are females as per Population Census 2011.

In Kal Jharani village out of total population, 2287 were engaged in work activities. 66.29 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 33.71 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2287 workers engaged in Main work, 640 were cultivators (owner or co-owner) while 541 were Agricultural laborers.

Date of the campaign

15th October 2018

Name of the Villages covered under this Cluster

Chak Attar Singh & Faridkot

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation and burning

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Nandgarh, Sangat, Bathinda

About Village Nandgarh

Nandgarh is a medium size village located in Sangat block of Bathinda district, Punjab with total 340 families residing. The Nandgarh village has population of 1832 of which 973 are males while 859 are females as per Population Census 2011.

In Nandgarh village out of total population, 664 were engaged in work activities. 93.83 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 6.17 % were involved in Marginal activity providing livelihood for less than 6 months. Of 664 workers engaged in Main work, 276 were cultivators (owner or co-owner) while 253 were Agricultural laborers.

Date of the campaign

15th October 2018

Name of the Villages covered under this Cluster

Dhunike & Gurusar Sainewala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with burning some part of crop residue

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Sangat, Sangat, Bathinda

About Village Sangat

Sangat is a Municipal Council city in district of Bathinda, Punjab. The Sangat city is divided into 9 wards for which elections are held every 5 years. The Sangat Municipal Council has population of 2,744 of which 1,458 are males while 1,286 are females as per report released by Census India 2011.

Out of total population, 931 were engaged in work or business activity. Of this 814 were males while 117 were females. In census survey, worker is defined as person who does business, job, service, and cultivator and labour activity. Of total 931 working population, 92.80 % were engaged in Main work while 7.20 % of total workers were engaged in Marginal Work.

Date of the campaign

18th October 2018

Name of the Villages covered under this Cluster

Gehri Buttar&Chak Hira Singh Wala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Mehta, Sangat, Bathinda

About Village Mehta

Mehta is a large village located in Sangat block of Bathinda district, Punjab with total 595 families residing. The Mehta village has population of 3082 of which 1624 are males while 1458 are females as per Population Census 2011.

In Mehta village out of total population, 1290 were engaged in work activities. 74.81 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 25.19 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1290 workers engaged in Main work, 421 were cultivators (owner or co-owner) while 294 were Agricultural laborers.

Date of the campaign

19th October 2018

Name of the Villages covered under this Cluster

Machhana

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with burning of some part of the residue

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Corn are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Jangirana, Sangat, Bathinda

About Village Jangirana

Jangirana is a large village located in Sangat block of Bathinda district, Punjab with total 811 families residing. The Janghi Rana village has population of 4158 of which 2171 are males while 1987 are females as per Population Census 2011.

In Jangirana village out of total population, 1926 were engaged in work activities. 80.32 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 19.68 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1926 workers engaged in Main work, 665 were cultivators (owner or co-owner) while 291 were Agricultural laborers.

Date of the campaign

20th October 2018

Name of the Villages covered under this Cluster

Lool Bhai & Raike Khurd

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Fodder and burning of some part of the residue

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Corn& Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy seeders &Super SMS

Name of the Cluster: Pathrala, Sangat, Bathinda

About Village Pathrala

Pathrala is a large village located in Sangat block of Bathinda district, Punjab with total 1323 families residing. The Pathrala village has population of 7197 of which 3776 are males while 3421 are females as per Population Census 2011.

In Pathrala village out of total population, 3754 were engaged in work activities. 59.27 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 40.73 % were involved in Marginal activity providing livelihood for less than 6 months. Of 3754 workers engaged in Main work, 931 were cultivators (owner or co-owner) while 825 were Agricultural laborers.

Date of the campaign

22nd October 2018

Name of the Villages covered under this Cluster

Nar Singh Colony & Bandi

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil Incorporation and burning

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Zero tillage & Super SMS

Cluster Level Programme Block Tal	wandi Sabho

Name of the Cluster: Bangi Ruldu, Talwandi, Bathinda

About Village Bangi Ruldu

Bangi Rulduis a medium size village located in Talwandi Sabho block of Bathinda district, Punjab with total 835 families residing. The Bangi Ruldu village has population of 4376 of which 2296 are males while 2080 are females as per Population Census 2011.

In Bangi Ruldu village out of total population, 1500 were engaged in work activities. 92.20 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 7.80 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1500 workers engaged in Main work, 645 were cultivators (owner or co-owner) while 401 were Agricultural laborers.

Date of the campaign

11th October 2018

Name of the Villages covered under this Cluster

Bangi Raghu&Bangi Nihal Singh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Bhagi Wander, Talwandi, Bathinda

About Village Bhagi Wander

Bhagi Wanderis a large village located in Talwandi Sabho block of Bathinda district, Punjab with total 1382 families residing. The Bhagibandar village has population of 7489 of which 3921 are males while 3568 are females as per Population Census 2011.

In Bhagi Wander village out of total population, 2775 were engaged in work activities. 92.43 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 7.57 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2775 workers engaged in Main work, 1138 were cultivators (owner or co-owner) while 888 were Agricultural laborers.

Date of the campaign

12th October 2018

Name of the Villages covered under this Cluster

Bangi Raghu & Bangi Nihal Singh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Laleana, Talwandi, Bathinda

About Village Laleana

Laleana is a large village located in Talwandi Sabho block of Bathinda district, Punjab with total 682 families residing. The Leleana village has population of 3654 of which 1942 are males while 1712 are females as per Population Census 2011.

In Laleana village out of total population, 1738 were engaged in work activities. 81.70 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 18.30 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1738 workers engaged in Main work, 557 were cultivators (owner or co-owner) while 479 were Agricultural laborers.

Date of the campaign

12th October 2018

Name of the Villages covered under this Cluster

Jajjal & Gatwali

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Chathewala, Talwandi, Bathinda

About Village Chathewala

Chathewala is a large village located in Talwandi Sabho block of Bathinda district, Punjab with total 530 families residing. The Chathewala village has population of 2758 of which 1481 are males while 1277 are females as per Population Census 2011.

In Chathewala village out of total population, 954 were engaged in work activities. 82.18 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 17.82 % were involved in Marginal activity providing livelihood for less than 6 months. Of 954 workers engaged in Main work, 429 were cultivators (owner or co-owner) while 181 were Agricultural laborers.

Date of the campaign

13th October 2018

Name of the Villages covered under this Cluster

Fatehgarh Nau Abadh & Lelewala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Vegetables and Corn are more preferred crop by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Jagga Ram Tirath, Talwandi

About Village Jagga Ram Tirath

Jagga Ram Tirath is a large size village in Talwandi block of district of Bathinda, Punjab with total 1230 families residing. The Ram Tirath Jaga village has population of 6465 of which 3475 are males while 2990 are females as per Population Census 2011.

In Jagga Ram Tirat village out of total population, 2339 were engaged in work activities. 82.09 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 17.91 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2339 workers engaged in Main work, 1013 were cultivators (owner or co-owner) while 557 were Agricultural laborers.

Date of the campaign

13thOctober 2018

Name of the Villages covered under this Cluster

Jamber Basti & Gurusar Jagga

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with Happy seeders

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Corn, Sugarcane and Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy seeders & Super SMS

Name of the Cluster: Phullo Khari, Talwandi, Bathinda

About Village Phullo Khari

Phullo Khari is a large village located in Talwandi Sabho block of Bathinda district, Punjab with total 420 families residing. The Phulo Khari village has population of 2120 of which 1196 are males while 924 are females as per Population Census 2011.

In Phullo Khari village out of total population, 834 were engaged in work activities. 98.56 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 1.44 % were involved in Marginal activity providing livelihood for less than 6 months. Of 834 workers engaged in Main work, 392 were cultivators (owner or co-owner) while 125 were Agricultural laborers.

Date of the campaign

14thOctober 2018

Name of the Villages covered under this Cluster

Kanakwal & Teona Pujrian

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Raman Mandi, Talwandi, Bathinda

About Village Raman Mandi

Raman is a Municipal Council city in district of Bathinda, Punjab. The Raman city is divided into 13 wards for which elections are held every 5 years. The Raman Municipal Council has population of 22,553 of which 12,009 are males while 10,544 are females as per report released by Census India 2011.

Out of total population, 7,662 were engaged in work or business activity. Of this 6,925 were males while 737 were females. In census survey, worker is defined as person who does business, job, service, and cultivator and labor activity. Of total 7662 working population, 95.22 % were engaged in Main work while 4.78 % of total workers were engaged in Marginal Work.

Date of the campaign

14th October 2018

Name of the Villages covered under this Cluster

Bhaga, Jogewala & Raman

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Behman Kaur Singh, Talwandi

About Village Behman Kaur Singh

Behman Kaur Singhis a media village located in Talwandi Sabho block of Bathinda district, Punjab with total 436 families residing. The Behman Kaur Singh village has population of 2239 of which 1199 are males while 1040 are females as per Population Census 2011.

In Behman Kaur Singh village out of total population, 710 were engaged in work activities. 80.14 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 19.86 % were involved in Marginal activity providing livelihood for less than 6 months. Of 710 workers engaged in Main work, 313 were cultivators (owner or co-owner) while 215 were Agricultural laborers.

Date of the campaign

15th October 2018

Name of the Villages covered under this Cluster

Sangat Khurd&Behman Jassa Singh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane &Corn are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Sheikpura, Talwandi, Bathinda

About Village Sheikpura

Sheikpurais a medium size village located in Talwandi Sabho block of Bathinda district, Punjab with total 1037 families residing. The Shekhpura village has population of 5420 of which 2894 are males while 2526 are females as per Population Census 2011.

In Sheikpur is a village out of total population, 1945 were engaged in work activities. 93.26 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 6.74 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1945 workers engaged in Main work, 882 were cultivators (owner or co-owner) while 725 were Agricultural laborers.

Date of the campaign

15th October 2018

Name of the Villages covered under this Cluster

Bhagwanpura & Burj

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with Happy Seeders

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Nasibpura, Talwandi, Bathinda

About Village Nasibpura

Nasibpura is a medium size village in Mour block in district of Bathinda, Punjab with total 780 families residing. The Nasibpura village has population of 4401 of which 2313 are males while 2088 are females as per Population Census 2011.

In Nasibpuravillage out of total population, 1999 were engaged in work activities. 80.74 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 19.26 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1999 workers engaged in Main work, 765 were cultivators (owner or co-owner) while 545 were Agricultural laborers.

Date of the campaign

16thOctober 2018

Name of the Villages covered under this Cluster

Jeon Singh Wala & Nangla

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers arein favour of Crop diversification. Cotton & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Kot Bhaktu, Talwandi, Bathinda

About Village Kot Bhaktu

Kot Bhaktu is a large village located in Talwandi Sabho block of Bathinda district, Punjab with total 892 families residing. The Kot Bakhtu village has population of 4789 of which 2536 are males while 2253 are females as per Population Census 2011.

In Kot Bhaktu village out of total population, 1815 were engaged in work activities. 83.42 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 16.58 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1815 workers engaged in Main work, 717 were cultivators (owner or co-owner) while 264 were Agricultural laborers.

Date of the campaign

16thOctober 2018

Name of the Villages covered under this Cluster

Mannwala & Kambo

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane &Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Malkana, Talwandi Sabho

About Village Malkana

Malkana is a large size village located in Talwandi Sabho block of Bathinda district, Punjab with total 900 families residing. The Malkana village has population of 4714 of which 2523 are males while 2191 are females as per Population Census 2011.

In Malkana village out of total population, 2360 were engaged in work activities. 72.84 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 27.16 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2360 workers engaged in Main work, 897 were cultivators (owner or co-owner) while 386 were Agricultural laborers.

Date of the campaign

17th October 2018

Name of the Villages covered under this Cluster

Giana

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton& Sugarcane are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Lehri, Talwandi, Bathinda

About Village Lehri

Lehri is a medium size village located in Talwandi Sabho block of Bathinda district, Punjab with total 569 families residing. The Lehri village has population of 2934 of which 1532 are males while 1402 are females as per Population Census 2011.

In Lehri village out of total population, 1135 were engaged in work activities. 86.78 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 13.22 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1135 workers engaged in Main work, 409 were cultivators (owner or co-owner) while 439 were Agricultural laborers.

Date of the campaign

18th October 2018

Name of the Villages covered under this Cluster

Singho, Nangla & Mirjeana

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane& Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Ramsara, Talwandi, Bathinda

About Village Ramsara

Ramsara is a large size village located in Talwandi Sabho block of Bathinda district, Punjab with total 4030 families residing. The Ramsara village has population of 13959 of which 12311 are males while 1648 are females as per Population Census 2011.

In Ramsara village out of total population, 12148 were engaged in work activities. 62.87 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 37.13 % were involved in Marginal activity providing livelihood for less than 6 months. Of 12148 workers engaged in Main work, 1028 were cultivators (owner or co-owner) while 466 were Agricultural laborers.

Date of the campaign

23th October 2018

Name of the Villages covered under this Cluster

Sukhladi & Tarkhanwala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Zero tillage & Super SMS

Name of the Cluster: Kalalwala, Talwandi, Bathinda

About Village Kalalwala

Kalalwala is a large size village located in Talwandi Sabho block of Bathinda district, Punjab with total 481 families residing. The Kalalwala village has population of 2548 of which 1344 are males while 1204 are females as per Population Census 2011.

In Kalalwala village out of total population, 798 were engaged in work activities. 95.74 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 4.26 % were involved in Marginal activity providing livelihood for less than 6 months. Of 798 workers engaged in Main work, 427 were cultivators (owner or co-owner) while 235 were Agricultural laborers.

Date of the campaign

26th October 2018

Name of the Villages covered under this Cluster

Koreana & Golewala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil Incorporation and burning of some residue

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane& Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Kaureana, Talwandi, Bathinda

About Village Kaureana

Kaureana is a large size village located in Talwandi Sabho block of Bathinda district, Punjab with total 402 families residing. The Kaureana village has population of 2056 of which 1088 are males while 968 are females as per Population Census 2011.

In Kaureana village out of total population, 704 were engaged in work activities. 97.16 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 2.84 % were involved in Marginal activity providing livelihood for less than 6 months. Of 704 workers engaged in Main work, 474 were cultivators (owner or co-owner) while 95 were Agricultural laborers.

Date of the campaign

26th October 2018

Name of the Villages covered under this Cluster

Natheha & Gehlewala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane& Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Cluster Level Programme Block Maur

Name of the Cluster: Swaich, Maur, Bathinda

About Village Swaich

Swaich is a medium size village located in Maur block of Bathinda district, Punjab with total 243 families residing. The Swaich village has population of 1404 of which 740 are males while 664 are females as per Population Census 2011.

In Swaich village out of total population, 654 were engaged in work activities. 51.68 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 48.32 % were involved in Marginal activity providing livelihood for less than 6 months. Of 654 workers engaged in Main work, 232 were cultivators (owner or co-owner) while 28 were Agricultural laborers.

Date of the campaign

11th October 2018

Name of the Villages covered under this Cluster

Mari, Tahla Sahib

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Vegetables & Sugercane are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Kamalu, Maur, Bathinda

About Village Kamalu

Kamalu is a large village located in Maur block of Bathinda district, Punjab with total 378 families residing. The Kamalu village has population of 2069 of which 1074 are males while 995 are females as per Population Census 2011.

In Kamalu village out of total population, 948 were engaged in work activities. 43.25 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 56.75 % were involved in Marginal activity providing livelihood for less than 6 months. Of 948 workers engaged in Main work, 301 were cultivators (owner or co-owner) while 37 were Agricultural laborers.

Date of the campaign

12th October 2018

Name of the Villages covered under this Cluster

Kotli Khurd & Rajgarh Kube

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Mansa kalan, Maur, Bathinda

About Village Mansa kalan

Mansa Kalan is a large village located in Maur block of Bathinda district, Punjab with total 587 families residing. The Mansa Kalan village has population of 3190 of which 1713 are males while 1477 are females as per Population Census 2011.

In Mansa kalan village out of total population, 1519 were engaged in work activities. 58.13 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 41.87 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1519 workers engaged in Main work, 520 were cultivators (owner or co-owner) while 167 were Agricultural laborers.

Date of the campaign

13th October 2018

Name of the Villages covered under this Cluster

Jodhpur Pakhar & Burj Sema & Burj

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton and Sugarcane are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Kot Bhara, Maur, Bathinda

About Village Kot Bhara

Kot Bhara is a large village located in Maur block of Bathinda district, Punjab with total 530 families residing. The Kot Bhara village has population of 2636 of which 1380 are males while 1256 are females as per Population Census 2011.

In Kot Bhara village out of total population, 1035 were engaged in work activities. 72.75 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 27.25 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1035 workers engaged in Main work, 468 were cultivators (owner or co-owner) while 113 were Agricultural laborers.

Date of the campaign

14th October 2018

Name of the Villages covered under this Cluster

Bhai Bakhtaur

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with Happy Seeders

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Vegetables and Corn are more preferred crop by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy Seeders & Super SMS

Name of the Cluster: Kot Fatta, Maur, Bathinda

About Village Kot Fatta

Kot Fatta is a Municipal Council city in district of Bathinda, Punjab. The Kot Fatta city is divided into 11 wards for which elections are held every 5 years. The Kot Fatta Municipal Council has population of 7,412 of which 3,912 are males while 3,500 are females as per report released by Census India 2011.

Out of total population, 2,400 were engaged in work or business activity. Of this 2,152 were males while 248 were females. In census survey, worker is defined as person who does business, job, service, and cultivator and labour activity. Of total 2400 working population, 91.75 % were engaged in Main work while 8.25 % of total workers were engaged in Marginal Work.

Date of the campaign

15thOctober 2018

Name of the Villages covered under this Cluster

Raikhana & Dhan Singh Khana

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton and Sugarcane are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy Seeders & Super SMS

Name of the Cluster: Chanarthal, Maur, Bathinda

About Village Chanarthal

Chanarthal is a large village located in Maur block of Bathinda district, Punjab with total 498 families residing. The Kishangarh Urf Chinarthal village has population of 2581 of which 1341 are males while 1240 are females as per Population Census 2011.

In Chanarthal village population of children with age 0-6 is 309 which makes up 11.97 % of total population of village. Average Sex Ratio of Kishangarh Urf Chinarthal village is 925 which is higher than Punjab state average of 895. Child Sex Ratio for the Kishangarh Urf Chinarthal as per census is 1060, higher than Punjab average of 846.

Date of the campaign

16thOctober 2018

Name of the Villages covered under this Cluster

Maiserkhana Gehribarasingh & Ghaso Khana

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Maur Khurd, Maur, Bathinda

About Village Maur Khurd

Maur Khurd is a large village located in Maur block of Bathinda district, Punjab with total 527 families residing. The Maur village has population of 2670 of which 1440 are males while 1230 are females as per Population Census 2011.

In Maur Khurd village out of total population, 850 were engaged in work activities. 99.18 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 0.82 % were involved in Marginal activity providing livelihood for less than 6 months. Of 850 workers engaged in Main work, 337 were cultivators (owner or co-owner) while 356 were Agricultural laborers.

Date of the campaign

18th October 2018

Name of the Villages covered under this Cluster

Maur & Thamangarh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Composting on farm

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Bagher Charat Singh, Maur

About Village Bagher Charat Singh

Bagher Charat Singhis a media village located in Maur block of Bathinda district, Punjab with total 281 families residing. The Bangher Charat Singh village has population of 1424 of which 755 are males while 669 are females as per Population Census 2011.

In Bagher Charat Singh village out of total population, 508 were engaged in work activities. 85.63 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 14.37 % were involved in Marginal activity providing livelihood for less than 6 months. Of 508 workers engaged in Main work, 151 were cultivators (owner or co-owner) while 107 were Agricultural laborers.

Date of the campaign

20th October 2018

Name of the Villages covered under this Cluster

Sukha Singh Wala & Bhager Mohabat

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Ramgarh Bhunder, Maur, Bathinda

About Village Ramgarh Bhunder

Ramgarh Bhunderis a medium size village located in Maur block of Bathinda district, Punjab with total 373 families residing. The Ramgarh Bhundar village has population of 1912 of which 993 are males while 919 are females as per Population Census 2011.

In Ramgarh Bhunder village out of total population, 1015 were engaged in work activities. 49.75 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 50.25 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1015 workers engaged in Main work, 231 were cultivators (owner or co-owner) while 150 were Agricultural laborers.

Date of the campaign

21stOctober 2018

Name of the Villages covered under this Cluster

Masar Khana

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with burning some part of crop residue

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Ghuman Kalan, Maur, Bathinda

About Village Ghuman Kalan

Ghuman Kalan is a medium size village in Mour block in district of Bathinda, Punjab with total 177 families residing. The Ghuman Kalan village has population of 875 of which 467 are males while 408 are females as per Population Census 2011.

In Ghuman Kalan village out of total population, 299 were engaged in work activities. 88.63 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 11.37 % were involved in Marginal activity providing livelihood for less than 6 months. Of 299 workers engaged in Main work, 189 were cultivators (owner or co-owner) while 44 were Agricultural laborers.

Date of the campaign

23rdOctober 2018

Name of the Villages covered under this Cluster

Ghuman Khurd

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Kutiwala Kalan, Maur, Bathinda

About Village Kutiwala Kalan

Kutiwala Kalan is a large village located in Maur block of Bathinda district, Punjab with total 384 families residing. The Kutiwal Kalan village has population of 2005 of which 1042 are males while 963 are females as per Population Census 2011.

In Kutiwala Kalan village out of total population, 684 were engaged in work activities. 90.06 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 9.94 % were involved in Marginal activity providing livelihood for less than 6 months. Of 684 workers engaged in Main work, 327 were cultivators (owner or co-owner) while 96 were Agricultural laborers.

Date of the campaign

23rd October 2018

Name of the Villages covered under this Cluster

Kutiwala Khurd

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane &Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Jatri, Maur, Bathinda

About Village Jatri

Jatri is a medium size village located in Maur block of Bathinda district, Punjab with total 230 families residing. The Jatri village has population of 1181 of which 656 are males while 525 are females as per Population Census 2011.

In Jatri village out of total population, 584 were engaged in work activities. 65.75 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 34.25 % were involved in Marginal activity providing livelihood for less than 6 months. Of 584 workers engaged in Main work, 257 were cultivators (owner or co-owner) while 99 were Agricultural laborers.

Date of the campaign

24th October 2018

Name of the Villages covered under this Cluster

Maur Charat Singh Wala & Ramgarh Ghuman

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Composting on farm

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane& Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy Seeders & Super SMS

Cluster Level Programme Block Rampura

Name of the Cluster: Mandi Kalan, Rampura, Bathinda

About Village Mandi Kalan

Mandi Kalan is a medium size village located in Rampura block of Bathinda district, Punjab with 1714 families residing. The Mandi Kalan village has population of 9098 of which 4874 are males while 4224 are females as per Population Census 2011.

In Mandi Kalan village out of total population, 3069 were engaged in work activities. 79.90 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 20.10 % were involved in Marginal activity providing livelihood for less than 6 months. Of 3069 workers engaged in Main work, 1168 were cultivators (owner or co-owner) while 670 were Agricultural labors.

Date of the campaign

13th October 2018

Name of the Villages covered under this Cluster

Mandi Khurd & Dikh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Balianwali, Rampura, Bathinda

About Village Balianwali

Balianwali is a large village located in Rampura block of Bathinda district, Punjab with total 1602 families residing. The Balianwala village has population of 8194 of which 4395 are males while 3799 are females as per Population Census 2011.

In Balianwali village out of total population, 2901 were engaged in work activities. 81.87 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 18.13 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2901 workers engaged in Main work, 921 were cultivators (owner or co-owner) while 769 were Agricultural laborers.

Date of the campaign

16th October 2018

Name of the Villages covered under this Cluster

Gill Khurd & Daultpura

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Jhanduke, Rampura, Bathinda

About Village Jhanduke

Jhanduke is a large village located in Rampura block of Bathinda district, Punjab with total 489 families residing. The Jhanduke village has population of 2621 of which 1380 are males while 1241 are females as per Population Census 2011.

In Jhanduke village out of total population, 1078 were engaged in work activities. 72.45 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 27.55 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1078 workers engaged in Main work, 440 were cultivators (owner or co-owner) while 248 were Agricultural laborers.

Date of the campaign

16th October 2018

Name of the Villages covered under this Cluster

Mansa Khurd & Harkishanpura

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Composting on farm

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Bhunder, Rampura, Bathinda

About Village Bhunder

Dhade is a large village located in Rampura block of Bathinda district, Punjab with total 892 families residing. The Bhunder village has population of 4686 of which 2493 are males while 2193 are females as per Population Census 2011.

In Bhunder village out of total population, 1736 were engaged in work activities. 92.17 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 7.83 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1736 workers engaged in Main work, 942 were cultivators (owner or co-owner) while 401 were Agricultural laborers.

Date of the campaign

17th October 2018

Name of the Villages covered under this Cluster

Dhade & Ram Niwas

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane &Vegetables are the most preferred crops.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy Seeders & Super SMS

Name of the Cluster: Pitho, Rampura, Bathinda

About Village Pitho

Pitho is a large village located in Rampura block of Bathinda district, Punjab with total 1076 families residing. The Pitho village has population of 5835 of which 3085 are males while 2750 are females as per Population Census 2011.

In Pitho village out of total population, 2188 were engaged in work activities. 82.82 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 17.18 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2188 workers engaged in Main work, 1012 were cultivators (owner or co-owner) while 399 were Agricultural laborers.

Date of the campaign

22ndOctober 2018

Name of the Villages covered under this Cluster

Gill Kalan & Jeond

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Other (Soil incorporation & burning of some part)

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

Which two machineries/equipments are required?

[&]quot;Sufficient Machineries are not available in the villages for management of Crop Residue"

Name of the Cluster: Pirkot, Rampura, Bathinda

About Village Pirkot

Pirkot is a large village located in Rampura block of Bathinda district, Punjab with total 283 families residing. The Pirkot village has population of 1556 of which 810 are males while 746 are females as per Population Census 2011.

In Pirkot village out of total population, 690 were engaged in work activities. 75.22 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 24.78 % were involved in Marginal activity providing livelihood for less than 6 months. Of 690 workers engaged in Main work, 187 were cultivators (owner or co-owner) while 224 were Agricultural laborers.

Date of the campaign

23rdOctober 2018

Name of the Villages covered under this Cluster

Chauke & Bhaini Chuhad

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Composting on farm

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Zero tillage & Super SMS

Name of the Cluster: Badiala, Rampura, Bathinda

About Village Badiala

Badiala is a large village located in Rampura block of Bathinda district, Punjab with total 401 families residing. The Badlala village has population of 1962 of which 1070 are males while 892 are females as per Population Census 2011.

In Badiala village out of total population, 665 were engaged in work activities. 98.05 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 1.95 % were involved in Marginal activity providing livelihood for less than 6 months. Of 665 workers engaged in Main work, 288 were cultivators (owner or co-owner) while 191 were Agricultural laborers.

Date of the campaign

24thOctober 2018

Name of the Villages covered under this Cluster

Jaid & Jethuke

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation & burning of some part

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy Seeders & Super SMS

Name of the Cluster: Balloh, Rampura, Bathinda

About Village Balloh

Balloh is a large village located in Rampura block of Bathinda district, Punjab with total 872 families residing. The Balloh village has population of 4446 of which 2349 are males while 2097 are females as per Population Census 2011.

In Balloh village out of total population, 1928 were engaged in work activities. 75.00 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 25.00 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1928 workers engaged in Main work, 640 were cultivators (owner or co-owner) while 386 were Agricultural laborers.

Date of the campaign

24th October 2018

Name of the Villages covered under this Cluster

Khokhar & Chotian

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Jeondan, Rampura, Bathinda

About Village Jeondan

Jeondan is a large village located in Rampura block of Bathinda district, Punjab with total 609 families residing. The Jeondan village has population of 3159 of which 1644 are males while 1515 are females as per Population Census 2011.

In Jeondan village out of total population, 981 were engaged in work activities. 84.20 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 15.80 % were involved in Marginal activity providing livelihood for less than 6 months. Of 981 workers engaged in Main work, 407 were cultivators (owner or co-owner) while 227 were Agricultural laborers.

Date of the campaign

24th October 2018

Name of the Villages covered under this Cluster

Ghrella & Kararwala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Burj Mansa, Rampura, Bathinda

About Village Burj Mansa

Burj Mansa is a medium village located in Rampura block of Bathinda district, Punjab with total 212 families residing. The Burj Mansa village has population of 1096 of which 568 are males while 528 are females as per Population Census 2011..

In Burj Mansa village out of total population, 376 were engaged in work activities. 93.88 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 6.12 % were involved in Marginal activity providing livelihood for less than 6 months. Of 376 workers engaged in Main work, 230 were cultivators (owner or co-owner) while 28 were Agricultural laborers.

Date of the campaign

26th October 2018

Name of the Villages covered under this Cluster

Daulatpura & Nandgarh Kotra

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Composting on farm

Whether the farmers are in favour of crop diversification?

Yes, Farmers arein favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Cluster Level Programme Block Phul	

Name of the Cluster: Dhapali, Phul, Bathinda

About Village Dhapali

Dhapali is a medium size village located in Phul block of Bathinda district, Punjab with total 1227 families residing. The Dhapali village has population of 7005 of which 3683 are males while 3322 are females as per Population Census 2011.

In Dhapali village out of total population, 2217 were engaged in work activities. 93.69 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 6.31 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2217 workers engaged in Main work, 1157 were cultivators (owner or co-owner) while 432 were Agricultural laborers.

Date of the campaign

13th October 2018

Name of the Villages covered under this Cluster

Ghanda Banna & Sandhu Khurd

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Other (Soil incorporation with burning of some residue)

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Mehraj, Phul, Bathinda

About Village Mehraj

Mehraj is a large village located in Phul block of Bathinda district, Punjab with total 1297 families residing. The Mehraj village has population of 6598 of which 3545 are males while 3053 are females as per Population Census 2011.

In Mehraj village out of total population, 2323 were engaged in work activities. 75.46 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 24.54 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2323 workers engaged in Main work, 839 were cultivators (owner or co-owner) while 446 were Agricultural laborers..

Date of the campaign

16th October 2018

Name of the Villages covered under this Cluster

Kothe Himmatpura & Patti Sahnewal

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Composting on farm

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Phul, Phul, Bathinda

About Village Phul

Phul is a large village located in Phul block of Bathinda district, Punjab with total 1745 families residing. The Rampura village has population of 8970 of which 4774 are males while 4196 are females as per Population Census 2011.

In Phul village out of total population, 3338 were engaged in work activities. 89.39 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 10.61 % were involved in Marginal activity providing livelihood for less than 6 months. Of 3338 workers engaged in Main work, 828 were cultivators (owner or co-owner) while 949 were Agricultural laborers.

Date of the campaign

16th October 2018

Name of the Villages covered under this Cluster

Alike & Burj Gill

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Composting on farm

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Gumti Kalan, Phul, Bathinda

About Village Gumti Kalan

Gumti Kalanis a large village located in Phul block of Bathinda district, Punjab with total 1110 families residing. The Gumti Kalan village has population of 5714 of which 3016 are males while 2698 are females as per Population Census 2011.

In Gumti Kalan village out of total population, 2120 were engaged in work activities. 84.53 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 15.47 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2120 workers engaged in Main work, 922 were cultivators (owner or co-owner) while 447 were Agricultural laborers.

Date of the campaign

17th October 2018

Name of the Villages covered under this Cluster

Kauloke, Kothe Maha Singh & Phulewala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation and burning some residue

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Sailbrah, Phul, Bathinda

About Village Sailbrah

Sailbrah is a large village located in Phul block of Bathinda district, Punjab with total 939 families residing. The Selbrah village has population of 5016 of which 2660 are males while 2356 are females as per Population Census 2011.

In Sailbrah village out of total population, 2091 were engaged in work activities. 83.21 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 16.79 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2091 workers engaged in Main work, 837 were cultivators (owner or co-owner) while 610 were Agricultural laborers.

Date of the campaign

18thOctober 2018

Name of the Villages covered under this Cluster

Kaloke & Harnam Singh Wala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Salabatpura, Phul, Bathinda

About Village Salabatpura

Salabatpura is a large village located in Phul block of Bathinda district, Punjab with total 400 families residing. The Salabatpura village has population of 2032 of which 1064 are males while 968 are females as per Population Census 2011.

In Salabatpura village out of total population, 957 were engaged in work activities. 71.37 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 28.63 % were involved in Marginal activity providing livelihood for less than 6 months. Of 957 workers engaged in Main work, 140 were cultivators (owner or co-owner) while 196 were Agricultural laborers.

Date of the campaign

21stOctober 2018

Name of the Villages covered under this Cluster

Rajgarh Khurd & Kothe Piple

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil Incorporation and burning of some residue

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Bhai Rupa, Phul, Bathinda

About Village Bhai Rupa

Bhai Rupa is a large village located in Phul block of Bathinda district, Punjab with total 2832 families residing. The Bhai Rupa village has population of 14841 of which 7726 are males while 7115 are females as per Population Census 2011.

In Bhai Rupavillage out of total population, 6129 were engaged in work activities. 84.06 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 15.94 % were involved in Marginal activity providing livelihood for less than 6 months. Of 6129 workers engaged in Main work, 1696 were cultivators (owner or co-owner) while 1059 were Agricultural laborers.

Date of the campaign

22ndOctober 2018

Name of the Villages covered under this Cluster

Dullewala & Rajgarh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Composting on farm

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Raiya, Phul, Bathinda

About Village Raiya

Raiyais a large village located in Phul block of Bathinda district, Punjab with total 865 families residing. The Raiya Urf Hardaspura village has population of 4558 of which 2397 are males while 2161 are females as per Population Census 2011.

In Raiya village out of total population, 2180 were engaged in work activities. 67.39 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 32.61 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2180 workers engaged in Main work, 592 were cultivators (owner or co-owner) while 488 were Agricultural laborers.

Date of the campaign

24th October 2018

Name of the Villages covered under this Cluster

Dhingar & Patti Sandli

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with Happy Seeders

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Sadhana, Phul, Bathinda

About Village Sadhana

Sadhanais a large village located in Phul block of Bathinda district, Punjab with total 396 families residing. The Sadhana village has population of 2050 of which 1100 are males while 950 are females as per Population Census 2011.

In Sadhana village out of total population, 628 were engaged in work activities. 68.79 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 31.21 % were involved in Marginal activity providing livelihood for less than 6 months. Of 628 workers engaged in Main work, 275 were cultivators (owner or co-owner) while 69 were Agricultural laborers.

Date of the campaign

24th October 2018

Name of the Villages covered under this Cluster

Burj Mansa & Bugrran

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

<u>Cluster</u>	<u>Level Pro</u>	ogramme	e Block I	Bhagta B	hai Ka

Name of the Cluster: Hakam Singh wala, Bhagta

About Village Hakam Singh wala

Hakam Singh wala is a medium size village located in Bhagta block of Bathinda district, Punjab with total 314 families residing. The Hakam Singhwala village has population of 1603 of which 862 are males while 741 are females as per Population Census 2011.

In Hakam Singh wala village out of total population, 483 were engaged in work activities. 65.01 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 34.99 % were involved in Marginal activity providing livelihood for less than 6 months. Of 483 workers engaged in Main work, 169 were cultivators (owner or co-owner) while 35 were Agricultural labourers.

Date of the campaign

11th October 2018

Name of the Villages covered under this Cluster

Koir Singh Wala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Other

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Vegetables & Sugarcane are the most preferred crops.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Bhagta, Bhagta Bhai Ka, Bathinda

About Village Bhagta

Bhagta Bhai Ka is a Nagar Panchayat city in district of Bathinda, Punjab. The Bhagta Bhai Ka city is divided into 13 wards for which elections are held every 5 years. The Bhagta Bhai Ka Nagar Panchayat has population of 14,467 of which 7,682 are males while 6,785 are females as per report released by Census India 2011.

Population of Children with age of 0-6 is 1707 which is 11.80 % of total population of Bhagta Bhai Ka (NP). In Bhagta Bhai Ka Nagar Panchayat, Female Sex Ratio is of 883 against state average of 895. Moreover Child Sex Ratio in Bhagta Bhai Ka is around 834 compared to Punjab state average of 846. Literacy rate of Bhagta Bhai Ka city is 71.23 % lower than state average of 75.84 %. In Bhagta Bhai Ka, Male literacy is around 74.67 % while female literacy rate is 67.37 %.

Date of the campaign

12th October 2018

Name of the Villages covered under this Cluster

Burj Ladhe Singh, Nawankesor Singh wala & Gurusar mehraj

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

Which two machineries/equipments are required?

[&]quot;Sufficient Machineries are not available in the villages for management of Crop Residue"

Name of the Cluster: Maluka, Bhagta Bhai Ka, Bathinda

About Village Maluka

Maluka is a large village located in Bhagta block of Bathinda district, Punjab with total 1249 families residing. The Maluka village has population of 6651 of which 3538 are males while 3113 are females as per Population Census 2011.

In Maluka village out of total population, 2798 were engaged in work activities. 80.56 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 19.44 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2798 workers engaged in Main work, 823 were cultivators (owner or co-owner) while 785 were Agricultural laborers.

Date of the campaign

13th October 2018

Name of the Villages covered under this Cluster

Maluka Khurd & Sriawala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Other

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Vegetables & Sugarcane are the most preferred crops.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Bhodipura, Bhagta Bhai Ka

About Village Bhodipura

Bhodipura is a large village located in Bhagta block of Bathinda district, Punjab with total 667 families residing. The Bhodipura village has population of 3525 of which 1850 are males while 1675 are females as per Population Census 2011.

In Bhodipura village out of total population, 1004 were engaged in work activities. 84.66 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 15.34 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1004 workers engaged in Main work, 395 were cultivators (owner or co-owner) while 209 were Agricultural laborers.

Date of the campaign

14th October 2018

Name of the Villages covered under this Cluster

Jalal

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bailing/selling as fodder bales/blocks

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Gurusar, Bhagta Bhai Ka, Bathinda

About Village Gurusar

Gurusar is a large village located in Bhagta block of Bathinda district, Punjab with total 443 families residing. The Gurusar village has population of 2305 of which 1241 are males while 1064 are females as per Population Census 2011.

In Gurusar village out of total population, 849 were engaged in work activities. 72.67 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 27.33 % were involved in Marginal activity providing livelihood for less than 6 months. Of 849 workers engaged in Main work, 330 were cultivators (owner or co-owner) while 168 were Agricultural laborers.

Date of the campaign

15th October 2018

Name of the Villages covered under this Cluster

Aklia & Nawan Kesar SW

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Other

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Corn & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Hamirgar, Bhagta Bhai Ka

About Village Hamirgar

Hamirgar is a large village located in Bhagta block of Bathinda district, Punjab with total 575 families residing. The Hamirgarh village has population of 3212 of which 1655 are males while 1557 are females as per Population Census 2011.

In Hamirgarh village out of total population, 1319 were engaged in work activities. 63.68 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 36.32 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1319 workers engaged in Main work, 383 were cultivators (owner or co-owner) while 227 were Agricultural laborers.

Date of the campaign

15th October 2018

Name of the Villages covered under this Cluster

Surjeet Pura & Kangarh

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with Happy Seeders

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Happy Seeders & Reaper

Name of the Cluster: Kotha Guru, Bhagta Bhai Ka

About Village Kotha Guru

Kotha Guru is a large village located in Bhagta block of Bathinda district, Punjab with total 1857 families residing. The Kotha Guru village has population of 9748 of which 5111 are males while 4637 are females as per Population Census 2011.

In Kotha Guru village out of total population, 3260 were engaged in work activities. 93.62 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 6.38 % were involved in Marginal activity providing livelihood for less than 6 months. Of 3260 workers engaged in Main work, 1319 were cultivators (owner or co-owner) while 760 were Agricultural laborers.

Date of the campaign

21st October 2018

Name of the Villages covered under this Cluster

Dyalpur Mirja

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Other

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Dialpura Bhai Ka, Bhagta

About Village Dialpura Bhai Ka

Dialpura Bhai Ka is a large village located in Bhagta block of Bathinda district, Punjab with total 984 families residing. The Dyalpura Bhaika village has population of 5066 of which 2734 are males while 2332 are females as per Population Census 2011.

In Dyalpura Bhaika village out of total population, 1881 were engaged in work activities. 81.87 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 18.13 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1881 workers engaged in Main work, 536 were cultivators (owner or co-owner) while 544 were Agricultural laborers.

Date of the campaign

26th October 2018

Name of the Villages covered under this Cluster

New Dialpura & Gousnpura

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Other

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane and Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Cluster Level	<u>Programme Bl</u>	ock Nathana

Name of the Cluster: Bajoana, Nathana, Bathinda

About Village Bajoana

Bajoana is a medium size village located in Nathana block of Bathinda district, Punjab with total 367 families residing. The Bajoana village has population of 1974 of which 1068 are males while 906 are females as per Population Census 2011.

In Bajoana village out of total population, 858 were engaged in work activities. 91.14 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 8.86 % were involved in Marginal activity providing livelihood for less than 6 months. Of 858 workers engaged in Main work, 335 were cultivators (owner or co-owner) while 183 were Agricultural laborers.

Date of the campaign

16th October 2018

Name of the Villages covered under this Cluster

Bhaini

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bailing/selling as fodder bales/blocks

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are the most preferred crops.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Bhucho Kalan, Nathana, Bathinda

About Village Bhucho Kalan

Bhucho Kalan is a large village located in Nathana block of Bathinda district, Punjab with total 1514 families residing. The Bhucho Kalan village has population of 7854 of which 4128 are males while 3726 are females as per Population Census 2011.

In Bhucho Kalan village out of total population, 2895 were engaged in work activities. 94.96 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 5.04 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2895 workers engaged in Main work, 834 were cultivators (owner or co-owner) while 815 were Agricultural laborers.

Date of the campaign

17th October 2018

Name of the Villages covered under this Cluster

Sema, Poohli & Poohla

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with Happy Seeders

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Ganga, Nathana, Bathinda

About Village Ganga

Ganga is a large village located in Nathana block of Bathinda district, Punjab with total 585 families residing. The Ganga village has population of 3249 of which 1696 are males while 1553 are females as per Population Census 2011.

In Ganga village out of total population, 1449 were engaged in work activities. 59.63 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 40.37 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1449 workers engaged in Main work, 551 were cultivators (owner or co-owner) while 53 were Agricultural laborers.

Date of the campaign

19th October 2018

Name of the Villages covered under this Cluster

Giddhar

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bailing/selling as fodder bales/blocks

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Kalyan Sukha, Nathana, Bathinda

About Village Kalyan Sukha

Kalyan Sukha is a large village located in Nathana block of Bathinda district, Punjab with total 802 families residing. The Kalian Sukha village has population of 4410 of which 2340 are males while 2070 are females as per Population Census 2011.

In Kalyan Sukha village out of total population, 1482 were engaged in work activities. 90.76 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 9.24 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1482 workers engaged in Main work, 616 were cultivators (owner or co-owner) while 364 were Agricultural laborers.

Date of the campaign

20th October 2018

Name of the Villages covered under this Cluster

Kalyan Malka, Kalyan Sadda & Nathpura

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bailing/selling as fodder bales/blocks

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane &Vegetables are the most preferred crops.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Nathana, Nathana, Bathinda

About Village Nathana

Nathana is a large village located in Nathana block of Bathinda district, Punjab with total 1515 families residing. The Nathana village has population of 7738 of which 4104 are males while 3634 are females as per Population Census 2011.

In Nathana village out of total population, 2796 were engaged in work activities. 86.80 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 13.20 % were involved in Marginal activity providing livelihood for less than 6 months. Of 2796 workers engaged in Main work, 989 were cultivators (owner or co-owner) while 770 were Agricultural laborers.

Date of the campaign

23rdOctober 2018

Name of the Villages covered under this Cluster

Kothe Gobind Nagar & Burj Dhalla

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Corn & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Tungwali, Nathana, Bathinda

About Village Tungwali

Tungwali is a large village located in Bathinda Tehsil of Bathinda district, Punjab with total 1376 families residing. The Tungwali village has population of 7451 of which 3936 are males while 3515 are females as per Population Census 2011.

In Tungwali village out of total population, 3374 were engaged in work activities. 86.96 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 13.04 % were involved in Marginal activity providing livelihood for less than 6 months. Of 3374 workers engaged in Main work, 969 were cultivators (owner or co-owner) while 1244 were Agricultural laborers.

Date of the campaign

23rdOctober 2018

Name of the Villages covered under this Cluster

Bhucho Khurd

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Zero tillage & Super SMS

Name of the Cluster: Gobindpura, Nathana, Bathinda

About Village Gobindpura

Gobindpura is a large village located in Nathana block of Bathinda district, Punjab with total 1415 families residing. The Gobindpura village has population of 7826 of which 4132 are males while 3694 are females as per Population Census 2011.

In Gobindpura village out of total population, 3120 were engaged in work activities. 85.03 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 14.97 % were involved in Marginal activity providing livelihood for less than 6 months. Of 3120 workers engaged in Main work, 1056 were cultivators (owner or co-owner) while 913 were Agricultural laborers.

Date of the campaign

21st October 2018

Name of the Villages covered under this Cluster

Dhilwan

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with rotavator and plough

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane & Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Lehra Mohabat, Nathana, Bathinda

About Village Lehra Mohabat

Lehra Mohabat is a large village located in Nathana block of Bathinda district, Punjab with total 1949 families residing. The Lehra Mohabat village has population of 9792 of which 5212 are males while 4580 are females as per Population Census 2011.

In Lehra Mohabat village out of total population, 3859 were engaged in work activities. 82.40 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 17.60 % were involved in Marginal activity providing livelihood for less than 6 months. Of 3859 workers engaged in Main work, 886 were cultivators (owner or co-owner) while 922 were Agricultural laborers.

Date of the campaign

24th October 2018

Name of the Villages covered under this Cluster

Lehra Saundha, Kothe Pipli, Bath & Lehra Dhurkot

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with Happy Seeders

Whether the farmers are in favour of crop diversification?

Yes, Farmers are in favour of Crop diversification. Cotton, Sugarcane and Vegetables are preferred crops by the farmers.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Bhucho Mandi, Nathana, Bathinda

About Village Bhucho Mandi

Bhucho Mandi is a large village located in Nathana block of Bathinda district, Punjab with total 935 families residing. The Bhucho Khurd village has population of 4973 of which 2630 are males while 2343 are females as per Population Census 2011.

In Bhucho Mandi village out of total population, 1824 were engaged in work activities. 79.28 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 20.72 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1824 workers engaged in Main work, 334 were cultivators (owner or co-owner) while 466 were Agricultural laborers.

Date of the campaign

25th October 2018

Name of the Villages covered under this Cluster

Kothe Kartarpur Thande, Chak Bhaktu & Lehra Bega

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bailing/selling as fodder bales/blocks

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Name of the Cluster: Bibi Wala, Nathana, Bathinda

About Village Bibi Wala

Bibi Wala is a large village located in Nathana block of Bathinda district, Punjab with total 597 families residing. The Bibiwala village has population of 3366 of which 1998 are males while 1368 are females as per Population Census 2011.

In Bibi Wala village out of total population, 1310 were engaged in work activities. 89.54 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 10.46 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1310 workers engaged in Main work, 180 were cultivators (owner or co-owner) while 37 were Agricultural laborers.

Date of the campaign

26th October 2018

Name of the Villages covered under this Cluster

Mehma, Joganand

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Soil incorporation with Happy Seeders

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Zero tillage & Super SMS

Name of the Cluster: Chak Fateh Singh Wala, Nathana

About Village Chak Fateh Singh Wala

Chak Fateh Singh Walais a large village located in Nathana block of Bathinda district, Punjab with total 859 families residing. The Chak Fateh Singhwala village has population of 4299 of which 2243 are males while 2056 are females as per Population Census 2011.

In Chak Fateh Singh Wala village out of total population, 1735 were engaged in work activities. 71.24 % of workers describe their work as Main work (Employment or Earning more than 6 Months) while 28.76 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1735 workers engaged in Main work, 360 were cultivators (owner or co-owner) while 561 were Agricultural laborers.

Date of the campaign

26th October 2018

Name of the Villages covered under this Cluster

Chak Ram Singh Wala & Bhai Harjoginder Singh Wala

Whether farmers were convinced that crop residue burning is economic loss to them?

Yes

Name of Villages where crop residue is not burning

NA

Which alternative method of CRM was more acceptable to farmers?

Bales to bio-energy units

Whether the farmers are in favour of crop diversification?

No, Farmers are not in favour of Crop diversification.

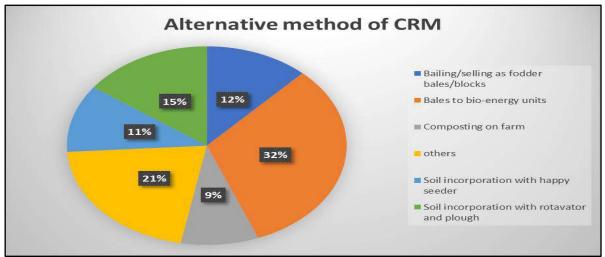
"Sufficient Machineries are not available in the villages for management of Crop Residue"

Which two machineries/equipments are required?

Zero tillage & Super SMS

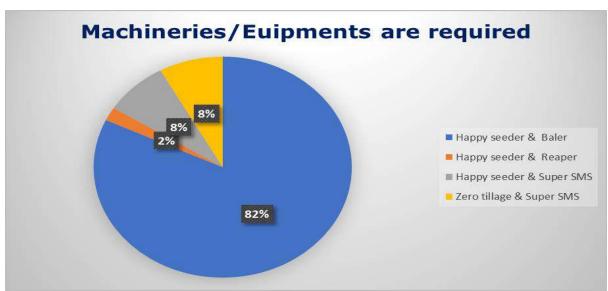
Feedback Compilation of the Campaign

Alternative method of CRM was more acceptable by the farmers			
Particular	No. of Responses (100)	Percentage	
Bailing/selling as fodder bales/blocks	12	12	
Bales to bio-energy units	32	32	
Composting on farm	9	9	
Others	21	21	
Soil incorporation with Happy Seeders	11	11	
Soil incorporation with rotavator and plough	15	15	



The perfeedback received from the farmers in course of the campaign shows that the converson of farm residue to Bales and sending to the bio-energy units is the best alternative method of Crop Residue Management. As the farmers have very less time in between the harvesting of the crop and sowing of the new crop. On the other hand the feedback received reveals that the majority of farmers beleifs that residue burning is the only solution to deal with the existing problem, the adoption of other methods takes lot of time to deal with the residue in its proper management.

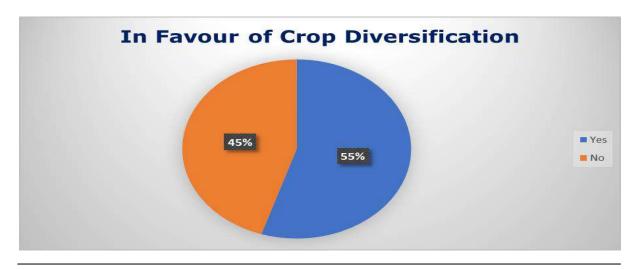
Machineries/Equipments required –			
Particular	No. of Responses (100)	Percentage	
Happy Seeders & Baler	82	82	
Happy Seeders & Reaper	2	2	
Happy Seeders & Super SMS	8	8	
Zero tillage & Super SMS	8	8	



From the above table the feedback received from the farmers reveals that 82% of villages have requirement of Happy Seeders & Baler. Further, farmers also share that there should also be the provision of subsidy on rotavator as many farmer demanded that they have requirement of rotavator but the government is not providing subsidy on rotavator.

In Favour of Crop Diversification			
Particular	No. of Responses (100)	Percentage	
Yes	55	55	
No	45	45	

The data anylysis of the feedbacck received from the farmer shows that about 55% of the villages are in favour of Crop diversification. Cotton, Sugarcane, Corn and Vegetables are preferred crops by the farmers. However, about 45% of the farmers are not ready to adopt the crop diversification because as they think non availabilty of availble market and price it is difficult to adopt diversification. The minimum support price (MSP) for wheat and paddy is known but before diverting farming towards such crops government should prepare a proper market plan for this.



Farmers Opinions

- The shorter cropping window of 20 days between paddy and wheat does not allow the paddy straw to decompose in the soil through the natural process, leading the farmer to burn and prepare the field for the next crop.
- Paddy transplanting was delayed and started on June 20. As a result maturing of the crop will be delayed by a fortnight, leaving a shorter window for wheat sowing.
 Farmers will be desperate to get rid of their stubble.
- Migrant labour availability challenges have led to large-scale mechanization or increased use of combine harvesters. The combines operate 50-60 cm above the ground and leave behind standing stubble. This was not the case with manual labour that uprooted the entire stalk. Low availability of options such as Happy Seeders and Super SMS have the farmers worried.
- Farmers prefer to burn stubble and pay penalty rather than weed out the stubbles. And the reason for this is that the cost of stubble burning is cheaper as penalty works out to be around Rs 2,500 per acre. But if they don't burn it then the stubble processing cost comes around Rs 6,000-7,000 per acre.
- Machinaries such as rotavators, Happy Seederss, Balers, Zere tilers, Super SMS etc. availability hasn't kept up with demand.
- The farm residue machinery manufacturers have now increased the cost of machineries subsidy announced by the state government on such machines.
- Rising fuel prices have also compelled farmers to avoid machinery.
- Many farmers share that paddy sowing policy, under which sowing is prohibited before June 20, is not as per ground realities and the problems being faced by the farmers due to late sowing. Further due to late sowing, moisture contents in ripe crop will be around 24 per cent whereas the government has fixed maximum permissible limit at 17 per cent. Not only this, the yield of paddy has also gone down by 5-7 quintal which has caused financial loss.
- The farmers who adopt environmental friendly alternatives regarding the issue must be rewarded economically to give boost to their efforts and to encourage more farmers to implement those ideas. Sometime farmers avoid the use of alternative due to increase inthe cost of management. Some kind of financial incentives may help in the use of alternatives.
- Fixing of responsibility of the Biomass based power plant operators to collect cropresidue from the farmers within specified areas near the plant.

Conclusion and Reccomendations

In course of the campaign and the feedback taken from the farmers and villagers revealed that there is a serious problem of Crop residue burning in the district Bathinda. A general perception is that only farmers are responsible for this problem but the reality is that the modern system of agriculture, the less availability of labourers and the challenging climatic conditions and procedures and ineffective implementation mechanism, are also widely responsible for it. Further on the basis of the experience from the field the following suggestions are being reccomended:

- Happy Seeders is a machine would be the best alternative to solve the problem of CRB with immediate results. With the help of this machine farmers can sow wheat crop directly after harvesting paddy without burning the paddy residue. As it saves time, water as well as is environmental friendly way to the problem of crop residue burning and management and for this proper orientation and training needed to motivated the farmers to adopt this methods
- Baler machine, which bundled/bricks the crop residue may be given to cooperative-societies in enough number for use on nominal cost. And state should bear the purchase cost of these machines, while the running cost may be collected from the farmers. Further there is a good scope to use crop residue as fuel for biomass power plants. But the problem is of transportation of crop residue from the fields of the farmers to biomass plant. Crop residue is lighter in weight and bulky thus the transportation cost is high as compared to price of the residue. The management of such biomass plants can be instructed to collect the crop residue from the fields specified by the authorities.
- The farmers who adopt environmental friendly alternatives regarding the issue must be rewarded economically to give boost to their efforts and to encourage more farmer to implement those ideas. Sometime farmers avoid the use of alternative due to increase in the cost of management.
- Government should need to think on Paddy transplanting time period.
- More focus on public awareness regarding the issue of crop residue burning.
- Short duration varities of rice may be promoted.
- Crop diversification is the need of the hour but for that the government needed to take other crops (apart from paddy and wheat) in the ambit of MSP (minimum support price) in a proper manner with setting time period of percurement or FPOs can be formed.

Annexure: 1. Photographs of District Level Training Programme



Annexure: 1 A. Photographs of Block Level Programme Bathinda



Annexure: 1 B. Photographs of Block Level Programme Talwandi Sabho



Annexure: 1 C. Photographs of Block Level Programme Rampura



Annexure: 1 D. Photographs of Block Level Programme Bhagta Bhai Ka



Annexure: 1 E. Cluster Level Programme Photographs





Display of Pham plates on Crop Residue Management at Cooperative Society in District Bathinda



KATPUTLI Show on Crop residue Management in District Bathinda

पराली न जलाने को किया प्रेरित

जागरण संवाददाता, बिंडा : पराली बचाओ, फसल बचाओं के तहत नाबार्ड की ओर से अभिव्यक्ति फाउंडेशन के सहयोग से जिला स्तर की मीटिंग का आयोजन किया गया। इस संबंधी नाबार्ड के डीडीएम विकास मिलल ने कहा कि अभिव्यक्ति फाउंडेशन की ओर जिले में 100 कैंपों का आयोजन किया जाएगा। इसके तहत सभी गावों में किसानों को जागरूक किया जाएगा कि वह पराली का निपटारा खेत में ही करें। जबकि पराली को आग लगाने के कारण जमीन को पर्यावरण से जो नकसान हो रहा है. उसकी भी जानकारी दी गई।

इस दौरान नाबार्ड की विभिन्न स्कीमों की जानकारी भी दी गई। प्रोग्राम का उद्देश्य किसानों को पराली के संबंध में जागरूक करना था। जिसके चलते सभी



पराली संबंधी किसानों को जागरूक करने के लिए वालंटियर्स को जानकारी दी गई 🏽 जागरण

विभागों की स्कीमों के बारे में वालंटियर्स गिल, पश पालन विभाग के एफडीओ को जानकारी दी गई। इस मौके पर र्राजंदर सिंह, नाबार्ड के डीडीएम विकास खेतीबाडी विभाग के एडीओ टेनिंग मित्तल, अभिव्यक्ति फाउंडेशन के डॉ. जसवीर सिंह, बागवानी विकास अधिकारी सुखदेव सिंह, पीएनबी फार्मर फाउंडेशन के रीजनल डायरेक्टर अमृत टेनिंग सेंटर मेहराज से डायरेक्टर बीएस पाल सिंह उपस्थित थे।

महासचिव एसके सिंह, अभिव्यक्ति

"Danik Jagran Newspaper of dated 28th September 2018"

ਪਰਾਲੀ ਬਚਾਓ, ਫ਼ਸਲ ਵਧਾਓ ਪਰਾਲੀ ਸੁਰੱਖਿਆ ਅਭਿਆਨ ਤਹਿਤ ਨਾਬਾਰਡ ਵਲੋਂ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰੀ ਮੀਟਿੰਗ

ਬਠਿੰਡਾ, 27 ਸਤੰਬਰ (ਅੰਮ੍ਰਿਤਪਾਲ ਵਲ੍ਹਾਣ)-ਨਾਬਾਰਡ ਅਭੀਵਿਅਕਤੀ ਫਾਉਂਡੇਸ਼ਨ ਦੇ ਸਹਿਯੋਗ ਨਾਲ ਬਠਿੰਡਾ ਵਿਚ ਪਰਾਲੀ ਸੁਰੱਖਿਆ ਅਭਿਆਨ ਤਹਿਤ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰੀ ਮੀਟਿੰਗ ਕੀਤੀ।'ਪਰਾਲੀ ਬਚਾਓ, ਫਸਲ ਵਧਾਓ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿੱਤੀ ਗਈ। ਇਸ ਸਬੰਧੀ ਜਾਣਕਾਰੀ ਦਿੰਦਿਆਂ ਨਾਬਾਰਡ ਦੇ ਡੀ.ਡੀ.ਐਮ ਸ਼ੀ ਵਿਕਾਸ ਮਿੱਤਲ ਨੇ ਦੱਸਿਆ ਕਿ ਅਭੀਵਿਅਕਤੀ ਫਾਉਂਡੇਸ਼ਨ ਵਲੋਂ ਨਾਬਾਰਡ ਦੇ ਸਹਿਯੋਗ ਨਾਲ 100 ਕੈਂਪ ਬਠਿੰਡਾ ਜ਼ਿਲ੍ਹੇ ਵਿਚ ਕਰਵਾਏ ਜਾਣੇ ਹਨ ਅਤੇ ਜਿਸ ਦੌਰਾਨ ਸਾਰੇ ਪਿੰਡਾਂ ਨੂੰ ਕਵਰ ਕੀਤਾ ਜਾਵੇਗਾ। ਉਨ੍ਹਾਂ ਦੱਸਿਆ ਕਿ ਇਸ ਅਭਿਆਨ ਦਾ ਮੁੱਖ ਉਦੇਸ਼ ਕਿਸਾਨਾਂ ਨੂੰ ਜਾਗਰੂਕ ਕਰਨਾ ਹੈ ਕਿ ਪਰਾਲੀ ਦਾ ਨਿਪਟਾਰਾ ਖੇਤ ਵਿਚ ਹੀ ਕੀਤਾ ਜਾਵੇ ਅਤੇ ਪਰਾਲੀ ਨੂੰ ਅੱਗ ਲਗਾਉਣ ਕਾਰਨ ਜ਼ਮੀਨ ਤੇ ਵਾਤਾਵਰਨ ਦਾ ਜੋ ਨਕਸਾਨ ਹੋ ਰਿਹਾ ਹੈ ਉਸ ਨੂੰ ਘੱਟ ਕੀਤਾ ਜਾ ਸਕੇ। ਇਸ

ਮੌਕੇ ਬੋਲਦਿਆਂ ਉਨ੍ਹਾਂ ਨਾਬਾਰਡ ਦੀਆਂ ਵੱਖ-ਵੱਖ ਸਕੀਮਾਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿੱਤੀ ਅਤੇ ਦੱਸਿਆ ਕਿ ਇਸ ਪੋਗਰਾਮ ਦਾ ਮੁੱਖ ਮੰਤਵ ਕਿਸਾਨਾਂ ਨੂੰ ਜਾਗਰੂਕ ਕਰਨਾ ਹੈ। ਉਨ੍ਹਾਂ ਸਾਰੇ ਮਹਿਮਾਨਾਂ ਨੂੰ ਆਪਣੇ-ਆਪਣੇ ਵਿਭਾਗਾਂ ਦੀਆਂ ਸਕੀਮਾਂ ਦੀ ਜਾਣਕਾਰੀ ਵਲੰਟੀਅਰਜ਼ ਨੂੰ ਦਿੱਤੀ। ਇਸ ਮੌਕੇ ਡਾ. ਜਸਵੀਰ ਸਿੰਘ. ਏ.ਡੀ.ਓ ਟ੍ਰੇਨਿੰਗ, ਖੇਤੀਬਾੜੀ ਵਿਭਾਗ, ਸਖਦੇਵ ਸਿੰਘ, ਬਾਗਬਾਨੀ ਵਿਕਾਸ ਅਫਸਰ, ਬਾਗਬਾਨੀ ਵਿਭਾਗ, ਬੀ.ਐਸ ਡਾਇਰੈਕਟਰ, ਪੀ.ਐਨ.ਬੀ, ਫਾਰਮਰ ਟੇਨਿੰਗ ਸੈਂਟਰ , ਮਹਿਰਾਜ , ਰਜਿੰਦਰ ਸਿੰਘ , ਐਫ ਡੀ .ਓ , ਪਸ਼ੂ ਪਾਲਣ ਵਿਭਾਗ, ਵਿਕਾਸ ਮਿੱਤਲ, ਡੀ. ਡੀ. ਐਮ. ਨਾਬਾਰਡ ਬਠਿੰਡਾ, ਐਸ.ਕੇ ਸਿੰਘ, ਸੈਕਰੇਟਰੀ ਅਭੀਵਿਅਕਤੀ ਵਾਉਂਡੇਸ਼ਨ ਅਤੇ ਅੰਮਿਤਪਾਲ ਸਿੰਘ ਰੀਜਨਲ ਡਾਇਰੈਕਟਰ ਅਭੀਵਿਅਕਤੀ ਫਾਉਂਡੇਸ਼ਨ ਵਿਸ਼ੇਸ਼ ਤੌਰ 'ਤੇ ਪਹੁੰਚੇ।

"Daily Ajit Newspaper of dated 28th September 2018"

ਪਰਾਲੀ ਸੁਰੱਖਿਆ ਮੁਹਿੰਮ ਤਹਿਤ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰੀ ਮੀਟਿੰਗ



ਬਠਿੰਡਾ, 27 ਸਤੰਬਰ (ਸੁਖਜਿੰਦਰ ਮਾਨ) : ਨਾਬਾਰਡ ਵਾਉਂਡੇਸ਼ਨ ਦੇ ਸਹਿਯੋਗ ਨਾਲ ਬਠਿੰਡਾ ਵਿਚ ਪਰਾਲੀ ਸੁਰੱਖਿਆ ਅਭਿਆਨ ਤਹਿਤ ਜ਼ਿਲਾ ਪੱਧਰੀ ਮੀਟਿੰਗ ਦਾ ਆਯੋਜਨ ਕੀਤਾ ਗਿਆ। 'ਪਰਾਲੀ ਬਚਾਓ, ਫਸਲ ਵਧਾਓ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿੱਤੀ ਗਈ। ਇਸ ਸਬੰਧੀ ਜਾਣਕਾਰੀ ਦਿੰਦਿਆਂ ਨਾਬਾਰਡ ਦੇ ਡੀ.ਡੀ.ਐਮ ਸ਼ੀ ਵਿਕਾਸ ਮਿੱਤਲ ਨੇ ਦੱਸਿਆ ਕਿ ਅਭੀਵਿਅਕਤੀ ਫਾਉਂਡੇਸ਼ਨ ਵਲੋਂ ਨਾਬਾਰਡ ਦੇ ਸਹਿਯੋਗ ਨਾਲ 100 ਕੈਂਪ ਬਠਿੰਡਾ ਜ਼ਿਲ੍ਹੇ ਵਿਚ ਕਰਵਾਏ ਜਾਣੇ ਹਨ ਅਤੇ ਜਿਸ ਦੌਰਾਨ ਸਾਰੇ ਪਿੰਡਾਂ ਨੂੰ ਕਵਰ ਕੀਤਾ ਜਾਵੇਗਾ। ਉਨ੍ਹਾਂ ਦੱਸਿਆ ਕਿ ਇਸ ਅਭਿਆਨ ਦਾ ਮੁੱਖ ਉਦੇਸ਼ ਕਿਸਾਨਾਂ ਨੂੰ ਜਾਗਰਕ ਕਰਨਾ ਹੈ ਕਿ ਪਰਾਲੀ ਦਾ ਨਿਪਟਾਰਾ ਖੇਤ ਵਿਚ ਹੀ ਕੀਤਾ ਜਾਵੇ ਅਤੇ ਪਰਾਲੀ ਨੂੰ ਅੱਗ ਲਗਾਉਣ ਕਾਰਨ ਜ਼ਮੀਨ ਤੇ ਵਾਤਾਵਰਨ ਦਾ ਜੋ ਨੁਕਸਾਨ ਹੋ ਰਿਹਾ ਹੈ ਉਸ ਨੂੰ ਘੱਟ ਕੀਤਾ ਜਾ ਸਕੇ। ਇਸ ਮੌਕੇ ਬੋਲਦਿਆਂ ਉਨਾਂ ਨਾਬਾਰਡ ਦੀਆਂ ਵੱਖ-ਵੱਖ ਸਕੀਮਾਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿੱਤੀ ਅਤੇ ਦੱਸਿਆ ਕਿ ਇਸ ਪ੍ਰੋਗਰਾਮ ਦਾ ਮੁੱਖ ਮੇਤਵ ਕਿਸਾਨਾਂ ਨੂੰ ਜਾਗਰਕ ਕਰਨਾ ਹੈ। ਉਨ੍ਹਾਂ ਸਾਰੇ ਮਹਿਮਾਨਾਂ ਨੂੰ ਆਪਣੇ-ਆਪਣੇ ਵਿਭਾਗਾਂ ਦੀਆਂ ਸਕੀਮਾਂ ਦੀ ਜਾਣਕਾਰੀ ਵਲੰਟੀਅਰਜ਼ ਨੂੰ ਦਿੱਤੀ। ਇਸ ਮੌਕੇ ਡਾ. ਜਸਵੀਰ ਸਿੰਘ, ਏ.ਡੀ.ਓ ਟੇਨਿੰਗ, ਖੇਤੀਬਾੜੀ ਵਿਭਾਗ, ਸੁਖਦੇਵ ਸਿੰਘ, ਬਾਗਬਾਨੀ ਵਿਕਾਸ ਅਵਸਰ, ਬਾਗਬਾਨੀ ਵਿਭਾਗ, ਬੀ.ਐਸ ਗਿੱਲ ਡਾਇਰੈਕਟਰ, ਪੀ.ਐਨ.ਬੀ, ਵਾਰਮਰ ਟ੍ਰੇਨਿੰਗ ਸੈਂਟਰ, ਮਹਿਰਾਜ, ਰਜਿੰਦਰ ਸਿੰਘ, ਐਵ.ਡੀ.ਓ, ਪਸ਼ ਪਾਲਣ ਵਿਭਾਗ, ਵਿਕਾਸ ਮਿੱਤਲ, ਡੀ.ਡੀ.ਐਮ ਨਾਬਾਰਡ ਬਠਿੰਡਾ, ਐਸ.ਕੇ ਸਿੰਘ, ਜਨਰਲ ਸੈਕਰੇਟਰੀ ਅਭੀਵਿਅਕਤੀ ਵਾਉਂਡੇਸ਼ਨ ਅਤੇ ਅੰਮ੍ਰਿਤਪਾਲ ਸਿੰਘ ਰੀਜਨਲ ਡਾਇਰੈਕਟਰ ਅਭੀਵਿਅਕਤੀ ਫਾਉਂਡੇਸ਼ਨ ਵਿਸ਼ੇਸ਼ ਤੌਰ 'ਤੇ ਪਹੁੰਚੇ।

"Rozana Spokesman of dated 28th September 2018"

'ਪਰਾਲੀ ਨਾ ਸ

ਨੂੰ ਹਰੀ ਝੰਡੀ ਦੇ ਕੇ ਡਿਪਟੀ ਕਮਿਸ਼ਨਰ ਨੇ ਕੀਤਾ ਰਵਾਨਾ

ਤੇਜਿੰਦਰਪਾਲ ਸਿੰਘ, ਬਠਿੰਡਾ

ਰਾਸ਼ਟਰੀ ਖੇਤੀਬਾੜੀ ਅਤੇ ਪੇਂਡੂ ਵਿਕਾਸ ਬੈਂਕ ਨੇ ਅਭੀਵਿਅਕਤੀ ਫਾਉਂਡੇਸ਼ਨ ਦੇ ਸਹਿਯੋਗ ਨਾਲ ਬਠਿੰਡਾ ਵਿਚ ਪਰਾਲੀ ਸੁਰੱਖਿਆ ਮਹਿੰਮ 2018 ਤਹਿਤ ਬਲਾਕ ਪੱਧਰੀ ਮੀਟਿੰਗ ਕਰਵਾਈ ਗਈ। ਇਸ ਦੌਰਾਨ ਡਿਪਟੀ ਕਮਿਸ਼ਨਰ ਪਰਨੀਤ ਨੇ ਪਰਾਲੀ ਨਾ ਜਲਾਉਣ ਦੇ ਸਬੰਧ ਵਿਚ ਜਾਗਰਕਤਾ ਵੈਨ ਨੂੰ ਹਰੀ ਝੰਡੀ ਦਿੱਤੀ, ਜਿਹੜੀ ਪਿੰਡ ਪਿੰਡ ਜਾ ਕੇ ਲੋਕਾਂ ਨੂੰ ਪਰਾਲੀ ਨਾ ਜਲਾਉਣ ਲਈ ਜਾਗਰੁਕ ਕਰੇਗੀ। ਇਸ ਦੌਰਾਨ ਉਨ੍ਹਾਂ ਨੇ ਇਸ ਪ੍ਰੋਗਰਾਮ ਦੀ ਸ਼ਲਾਘਾ ਕਰਦੇ ਹੋਏ ਦੱਸਿਆਂ ਕਿ ਜ਼ਿਲ੍ਹਾ ਪ੍ਰਸ਼ਾਸਨ ਵਲੋਂ ਪੂਰਨ ਸਹਿਯੋਗ ਦੇਣ ਦਾ ਭਰੋਸਾ ਦਿਵਾਇਆ। ਇਸ ਤੋਂ ਉਪਰੰਤ ਵਧੀਕ ਡਿਪਟੀ ਕਮਿਸ਼ਨਰ (ਜਨਰਲ) ਸੁਖਪੀਤ ਸਿੰਘ ਸਿੱਧੁ ਨੇ ਦੱਸਿਆ ਕਿ ਪਰਾਲੀ ਜਲਾਉਣ ਨਾਲ ਜੋ ਨੁਕਸਾਨ ਹੁੰਦੇ ਹਨ ਉਹ ਸਾਰਿਆਂ ਨੂੰ ਹੀ ਹੁੰਦੇ ਹਨ ਇਸ



ਵਰੀਕਲ ਨੂੰ ਝੰਡੀ ਦੇ ਕੇ ਰਵਾਨਾ ਕਰਦੇ ਹੋਏ ਡਿਪਟੀ ਕਮਿਸ਼ਨਰ ਪਰਨੀਤ।

ਲਈ ਸਾਰਿਆਂ ਦਾ ਫਰਜ਼ ਹੈ ਕਿ ਇਸ ਮਹਿੰਮ ਦੱਸਿਆ ਕਿ ਨੈਸ਼ਨਲ ਅਡੇਪਟੇਸ਼ਨ ਫੰਡ ਵਿਚ ਸਾਥ ਦਈਏ ਅਤੇ ਇਸ ਮੁਹਿਮ ਨੂੰ ਕਾਮਯਾਬ ਕਰੀਏ।

ਇਸ ਸਬੰਧੀ ਜਾਣਕਾਰੀ ਦਿੰਦੇ ਹੋਏ ਡੀਡੀਐੱਮ ਨਾਬਾਰਡ ਵਿਕਾਸ ਮਿੱਤਲ ਨੇ ਜਾਵੇਗਾ ਅਤੇ ਇਸ ਤਹਿਤ ਬਠਿੰਡਾ ਵਿਚ

ਫਾਰ ਕਲਾਈਮੇਟ ਚੇਜ ਦੇ ਤਹਿਤ ਫ਼ਸਲਾਂ ਦੀ ਰਹਿੰਦ ਖੁਹਦ ਦੇ ਪ੍ਰਬੰਧ ਸਬੰਧੀ ਜਾਗਰੁਕਤਾ ਪ੍ਰੋਗਰਾਮ ਜ਼ਿਲ੍ਹੇ ਦੇ ਸਾਰੇ ਪਿੰਡਾਂ ਵਿਚ ਕੀਤਾ

100 ਕਲੱਟਰਾਂ ਵਿਚ ਪਰਾਲੀ ਸਰੱਖਿਆ ਅਭਿਆਨ ਤਹਿਤ "ਪਰਾਲੀ ਬਚਾਓ ਫ਼ਸਲ ਵਧਾਓ" ਪੁੱਗਰਾਮ ਕੀਤੇ ਜਾਣਗੇ ਅਤੇ ਲੋਕਾਂ ਨੂੰ ਜਾਂਗਰੁਕ ਕੀਤਾ ਜਾਵੇਗਾ। ਇਸ ਮੌਕੇ ਸੈੰਸਥਾ ਦੇ ਰੀਜਨਲ ਡਾਇਰੈਕਟਰ ਅਮ੍ਰਿਤਪਾਲ ਸਿੰਘ ਨੇ ਦੱਸਿਆ ਕਿ ਇਸੇ ਅਭਿਆਨ ਤਹਿਤ ਅੱਜ ਬਲਾਕ ਪੱਧਰੀ ਮੀਟਿੰਗ ਕਰਵਾਈ ਗਈ ਹੈ ਜਿਸ ਵਿਚ ਵੱਖ ਵੱਖ ਵਿਭਾਗਾਂ ਤੋਂ ਆਏ ਮਾਹਿਰਾਂ ਵਲੋਂ ਵਿਚਾਰ ਸਾਂਝੇ ਕੀਤੇ ਗਏ। ਇਸ ਦੌਰਾਨ ਸਲਿੰਦਰ ਕੁਮਾਰ ਸਿੰਘ ਜਨਰਲ ਸੈਕਟਰੀ ਅਭਿਵਿਕਅਤੀ ਫਾਉਂਡੇਸ਼ਨ ਮੁੱਖ ਖੇਤੀਬਾੜੀ ਅਫ਼ਸਰ ਗੁਰੁਦਿੱਤਾ ਸਿੰਘ, ਖੇਤੀਬਾੜੀ ਅਫ਼ਸਰ ਗੁਰਤੇਜ ਸਿੰਘ, ਐੱਫਡੀਓ ਪਸ਼ ਪਾਲਣ ਵਿਭਾਗ, ਡਾ. ਰਜਿੰਦਰ ਸਿੰਘ ਮਾਨਵ ਮਾਈਤੀ ਏਰੀਆ ਪ੍ਰੋਗਰਾਮ ਅਫ਼ਸਰ ਅੰਬੁਜਾ ਫਾਉਂਡੇਸ਼ਨ ਨੇ ਵਿਸ਼ੇਸ਼ ਤੌਰ 'ਤੇ ਇਸ ਪ੍ਰੋਗਰਾਮ ਵਿਚ ਸ਼ਮੂਲੀਅਤ ਕੀਤੀ ਅਤੇ ਆਪਣੇ ਵਿਚਾਰ ਕੀਤੇ।

"Punjabi Jagran Newspaper of dated 8th October 2018"

ਪਰਾਲੀ ਨਾ ਸਾੜਨ

ਲਈ ਜਾਗਰੁਕਤਾ

ਵੈਨ ਨੂੰ ਹੂਰੀ ਝੰਡੀ ਦੇ

ਕੇ ਕੀਤਾ ਰਵਾਨਾ

ਬਠਿੰਡਾ, 8 ਅਕਤੂਬਰ (ਬਲਵਿੰਦਰ)- ਦੀ ਰਹਿੰਦ-ਖੂੰਹਦ ਦੇ ਪ੍ਰਬੰਧ ਸਬੰਧੀ ਜਾਗਰੂਕਤਾ ਰਾਸ਼ਟਰੀ ਖੇਤੀਬਾੜੀ ਤੇ ਪੇਂਡੂ ਵਿਕਾਸ ਬੈਂਕ ਨੇ ਪ੍ਰੋਗਰਾਮ ਜ਼ਿਲੇ ਦੇ ਸਾਰੇ ਪਿੰਡਾਂ ਵਿਚ ਕੀਤਾ

ਅਭੀਵਿਅਕਤੀ ਵਾਉਂਡੇਸ਼ਨ ਦੇ ਸਹਿਯੋਗ ਨਾਲ ਬਠਿੰਡਾ 'ਚ ਪਰਾਲੀ ਸੁਰੱਖਿਆ ਅਭਿਆਨ-2018 ਤਹਿਤ ਬਲਾਕ ਪੱਧਰੀ ਮੀਟਿੰਗ ਦਾ ਆ ਯੋਜਨ ਕੀਤਾ।ਇਸ

ਦੌਰਾਨ ਡਿਪਟੀ ਕਮਿਸ਼ਨਰ ਪ੍ਨੀਤ ਨੇ ਪਰਾਲੀ ਨਾ ਸਾੜਨ ਦੇ ਸਬੰਧ ਵਿਚ ਜਾਗਰੁਕਤਾ ਵੈਨ ਨੂੰ ਹਰੀ ਝੰਡੀ ਦਿੱਤੀ , ਜਿਹੜੀ ਪਿੰਡ-ਪਿੰਡ ਜਾ ਕੇ ਲੋਕਾਂ ਨੂੰ ਪਰਾਲੀ ਨਾ ਸਾੜਨ ਲਈ ਜਾਗਰੁਕ ਕਰੇਗੀ। ਇਸ ਤੋਂ ਉਪਰੰਤ ਵਧੀਕ ਡਿਪਟੀ ਕਮਿਸ਼ਨਰ (ਜਨਰਲ) ਸੁਖਪੀਤ ਸਿੰਘ ਸਿੱਧੂ ਨੇ ਦੱਸਿਆ ਕਿ ਪਰਾਲੀ ਨੂੰ ਅੱਗ ਲਾਉਣ ਨਾਲ ਵਾਤਾਵਰਣ ਨੂੰ ਭਾਰੀ ਨੁਕਸਾਨ ਹੁੰਦਾ ਹੈ, ਜੋ ਸਾਡੇ ਲਈ ਬਹੁਤ ਖਤਰਨਾਕ ਹੈ। ਇਸ ਲਈ ਸਾਡਾ ਸਾਰਿਆਂ ਦਾ ਫਰਜ਼ ਹੈ ਕਿ ਇਸ ਮੁਹਿੰਮ 'ਚ ਵਧ-ਚੜ੍ਹ ਕੇ ਹਿੱਸਾ ਲੈ ਕੇ ਇਸ ਨੂੰ ਕਾਮਯਾਬ ਕਰੀਏ। ਇਸ ਸਬੰਧੀ ਜਾਣ ਕਾਰੀ ਦਿੰਦੇ ਹੋਏ ਡੀ. ਡੀ. ਐੱਮ. ਨਾਬਾਰਡ ਵਿਕਾਸ ਮਿੱਤਲ ਨੇ ਦੱਸਿਆ ਕਿ ਨੈਸ਼ਨਲ ਅਡੈਪਟੇਸ਼ਨ ਫੰਡ ਫਾਰ ਕਲਾਈਮੇਟ ਚੇਂਜ_ਤਹਿਤ ਫ਼ਸਲਾਂ

ਜਾਵੇਗਾ ਤੇ ਇਸ ਤਹਿਤ ਬਠਿੰਡਾ 'ਚ 100 ਕਲਸਟਰਾਂ 'ਚ ਪਰਾਲੀ ਸਰੱਖਿਆ ਅਭਿਆਨ ਤਹਿਤ 'ਪਰਾਲੀ ਬਚਾਓ ਫ਼ਸਲ ਵਧਾਓ' ਪੋਗਰਾਮ ਕੀਤੇ ਜਾਣਗੇ ਤੇ

ਲੋਕਾਂ ਨੂੰ ਜਾਗਰੂਕ ਕੀਤਾ ਜਾਵੇਗਾ।ਇਸਮੌਕੇ ਸੰਸਥਾ ਦੇ ਰਿਜਨਲ ਡਾਇਰੈਕਟਰ ਅੰਮ੍ਰਿਤਪਾਲ ਸਿੰਘ ਨੇ ਦੱਸਿਆ ਕਿ ਇਸੇ ਅਭਿਆਨ ਤਹਿਤ ਅੱਜ ਬਲਾਕ ਪੱਧਰੀ ਮੀਟਿੰਗ ਦਾ ਆਯੋਜਨ ਕੀਤਾ ਗਿਆ ਹੈ, ਜਿਸ 'ਚ ਵੱਖ-ਵੱਖ ਵਿਭਾਗਾਂ ਤੋਂ ਆਏ ਮਾਹਿਰਾਂ ਵਲੋਂ ਵਿਚਾਰ ਸਾਂਝੇ ਕੀਤੇ ਗਏ। ਇਸ ਦੌਰਾਨ ਸਲਿੰਦਰ ਕਮਾਰ ਸਿੰਘ ਜਨਰਲ ਸੈਕਟਰੀ ਅਭੀਵਿਕਅਤੀ ਫਾਉਂਡੇਸ਼ਨ ਮੁੱਖ ਖੇਤੀਬਾੜੀ ਅਫ਼ਸਰ ਗੁਰੂਦਿੱਤਾ ਸਿੰਘ, ਖੇਤੀਬਾੜੀ ਅਫ਼ਸਰ ਗੁਰਤੇਜ਼ ਸਿੰਘ, ਐੱਫ. ਡੀ.ਓ.ਪਸ਼ੁਪਾਲਣ ਵਿਭਾਗ,ਡਾ.ਰਜਿੰਦਰ ਸਿੰਘ ਏਰੀਆ ਪ੍ਰੋਗਰਾਮ ਅਫ਼ਸਰ ਅੰਬੂਜਾ ਫਾਉਂਡੇਸ਼ਨ ਨੇ ਵਿਸ਼ੇਸ਼ ਤੌਰ 'ਤੇ ਇਸ ਪ੍ਰੋਗਰਾਮ **'ਚ ਸ਼ਮਲੀਅਤ ਕੀਤੀ ਤੇ ਆਪਣੇ ਵਿਚਾਰ** ਪੇਸ਼ ਕੀਤੇ।

Tue, 09 October 2018 jagbani.epapr.in/c/32958113



पराली जलाने से एक को नहीं, हरेक व्यक्ति को होता है नुकसान : एडीसी

पराली न जलाने के लिए जागरूकता वैन की रवाना

बठिंडा राष्ट्रीय खेतीबाड़ी व ग्रामीण विकास बैंक ने अभिव्यक्ति फाउंडेशन के सहयोग से बठिंडा में पराली सुरक्षा अभियान 2018 के तहत सोमवार को ब्लॉकस्तरीय बैठक की। डीसी परनीत भारद्वाज ने पराली न जलाने के संबंध में जागरूकता बैन को झंडी दिखाकर रवाना किया। यह बैन गांव-गांव जाकर लोगों को पराली न जलाने के लिए जागरूक करेगी। डीसी ने इस प्रोग्राम की प्रशंसा करते जिला प्रशासन की ओर से पूर्ण सहयोग का भरोसा दिया।

एडीसी जनरल सुखप्रीत सिंह सिधू ने बताया कि पराली जलाने से किसी एक व्यक्ति विशेष का का नहीं बल्कि हरेक व्यक्ति को

नुकसान पहुंचता है, इसलिए सभी का फर्ज है कि इस मुहिम में साथ देकर कामयाब बनाएं और पराली न जलाएं। नाबार्ड के डीडीएम विकास मित्तल ने बताया कि नेशनल एडेप्शन फंड फॉर क्लाइमेट चेंज के तहत फसलों की वेस्टेज के प्रबंधन संबंधी जागरूकता प्रोग्राम जिले के सभी गांवों में चलाया जाएगा। इसके तहत वठिंडा में 100 कलस्टरों में पराली बचाओ फसल बढ़ाओ प्रोग्राम किए जाएंगे। इस मौके पर संस्था के रीजनल डायरेक्टर अमृतपाल सिंह, अभिन्यक्ति फाउंडेशन के महासचिव सलिंदर कुमार सिंह, मुख्य खेतीबाड़ी अफसर गुरुदिता सिंह, एफडीओ गुरतेज सिंह, डॉ. राजिंदर सिंह ने भी अपने विचार पेश किए।

"Danik Bhaskar Newspaper of dated 9th October 2018"

ਪਰਾਲੀ ਨਾ ਸਾੜਨ ਲਈ ਕੀਤਾ ਪ੍ਰੇਰਿਤ

ਗੁਰਤੇਜ ਸਿੰਘ ਸਿੱਧੂ, ਬਠਿੰਡਾ

ਨਾਬਾਰਡ ਵੱਲੋਂ ਅਭੀ ਵਿਅਕਤੀ ਫ਼ਾਉਂਡੇਸ਼ਨ ਤੇ 'ਜਾਗਰਣ' ਗਰੁੱਪ ਦੇ ਸਹਿਯੋਗ ਨਾਲ ਤਲਵੰਡੀ ਸਾਬੋ ਵਿਖੇ ਪਰਾਲੀ ਸੁਰੱਖਿਆ ਮੁਹਿਮ 2018 ਤਹਿਤ ਬਲਾਕ ਪੱਧਰੀ ਪ੍ਰੋਗਰਾਮ ਕਰਵਾਇਆ ਗਿਆ। ਇਸ ਦੌਰਾਨ ਐੱਸਡੀਐੱਮ ਤਲਵੰਡੀ ਸਾਬੋ ਵਰਿੰਦਰ ਸਿੰਘ ਨੇ ਮੁੱਖ ਮਹਿਮਾਨ ਦੇ ਤੌਰ 'ਤੇ ਸ਼ਿਰਕਤ ਕੀਤੀ। ਉਨ੍ਹਾਂ ਨੇ ਪੋਗਰਾਮ ਦੀ ਸ਼ਲਾਘਾ ਕਰਦੇ ਹੋਏ, ਪ੍ਰਸ਼ਾਸਨ ਵੱਲੋਂ ਪੂਰਨ ਸਹਿਯੋਗ ਦੇਣ ਦੀ ਗੱਲ ਕੀਤੀ ਅਤੇ ਕਿਹਾ ਕਿ ਨੌਜਵਾਨਾਂ ਨੂੰ ਪਰਾਲੀ ਨਾ ਸਾੜਨ ਲਈ ਵੱਧ ਤੋਂ ਵੱਧ ਪ੍ਰੇਰਿਤ ਕਰਨਾ ਚਾਹੀਦਾ ਹੈ। ਇਸ ਉਪਰੰਤ ਡੀਡੀਐੱਮ ਨਾਬਾਰਡ ਵਿਕਾਸ ਮਿੱਤਲ ਨੇ ਦੱਸਿਆ ਕਿ ਨੈਸ਼ਨਲ ਅਡੈਪਟੇਸ਼ਨ ਫੰਡ ਫ਼ਾਰ ਕਲਾਈਮੇਟ ਚੇਜ ਦੇ ਤਹਿਤ ਫਸਲਾਂ ਦੀ ਰਹਿੰਦ-ਖੁੰਹਦ ਦੇ ਪ੍ਰਬੰਧ ਸਬੰਧੀ ਜਾਗਰੁਕਤਾ ਪ੍ਰੋਗਰਾਮ ਜ਼ਿਲ੍ਹੇ ਦੇ ਸਾਰੇ ਪਿੰਡਾਂ ਵਿੱਚ ਕੀਤਾ ਜਾਵੇਗਾ। ਇਸੇ ਤਹਿਤ ਬਠਿੰਡਾ ਵਿੱਚ 100 ਕਲੱਟਰਾਂ ਵਿੱਚ ਪਰਾਲੀ ਸਰੱਖਿਆ ਅਭਿਆਨ



ਜਾਣਕਾਰੀ ਦਿੰਦੇ ਹੋਏ ਅਧਿਕਾਰੀ।

ਤਹਿਤ 'ਪਰਾਲੀ ਬਚਾਓ ਫਸਲ ਵਧਾਓ'
ਪ੍ਰੋਗਰਾਮ ਕੀਤੇ ਜਾ ਰਹੇ ਹਨ ਤੇ ਲੋਕਾਂ ਨੂੰ
ਪਰਾਲੀ ਦੀ ਸੁਚੱਜੀ ਵਰਤੋਂ ਕਰਨ ਬਾਰੇ
ਜਾਰਜ਼ੂਕ ਕੀਤਾ ਜਾ ਰਿਹਾ ਹੈ। ਖੇਤੀਬਾੜੀ
ਅਫਸਰ ਗੁਰਮੀਤ ਸਿੰਘ ਨੇ ਕਿਸਾਨਾਂ ਨੂੰ
ਘੱਟ ਸਮਾਂ ਲੈਣ ਵਾਲੀਆਂ ਝੋਨੇ ਦੀਆਂ
ਕਿਸਮਾਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿੱਤੀ। ਉਨ੍ਹਾਂ ਦੇ
ਨਾਲ-ਨਾਲ ਡਾ. ਰਜਿੰਦਰ ਸਿੰਘ ਐੱਫਡੀਓ
ਪਸ਼ੂ ਪਾਲਣ ਵਿਭਾਗ ਨੇ ਪਰਾਲੀ ਦੀ ਪਸ਼ੂ
ਚਾਰੇ ਅਤੇ ਸੁੱਕ ਦੇ ਤੌਰ 'ਤੇ ਵਰਤਣ ਬਾਰੇ
ਜਾਣਕਾਰੀ ਦਿੱਤੀ। ਸੰਸਥਾ ਦੇ ਰੀਜਨਲ

ਡਾਇਰੈਕਟਰ ਅੰਮ੍ਰਿਤਪਾਲ ਸਿੰਘ ਨੇ ਦੱਸਿਆ ਕਿ ਇਸੇ ਅਭਿਆਨ ਤਹਿਤ ਅੱਜ ਬਲਾਕ ਪੱਧਰੀ ਮੀਟਿੰਗ ਕੀਤੀ ਗਈ ਹੈ ਜਿਸ ਵਿੱਚ ਵੱਖ-ਵੱਖ ਵਿਭਾਗਾ ਤੋਂ ਆਏ ਮਾਹਿਰਾ ਵੱਲੋਂ ਵਿਚਾਰ ਸਾਂਝੇ ਕੀਤੇ ਗਏ। ਇਸ ਦੌਰਾਨ ਸਲਿੰਦਰ ਕੁਮਾਰ ਸਿੰਘ ਜਨਰਲ ਸੈਕਰੇਟਰੀ ਅਭੀਵਿਅਕਤੀ ਫ਼ਾਊਂਡੇਸ਼ਨ ਰਾਜੀਵ ਕੁਮਾਰ, ਬੈਕ ਮੈਨੇਜਰ ਕੋ-ਆਪਰੇਟਿਵ ਬੈਂਕ ਨੇ ਵਿਸ਼ੇਸ਼ ਤੌਰ 'ਤੇ ਇਸ ਪ੍ਰੋਗਰਾਮ ਵਿੱਚ ਸ਼ਮੂਲੀਅਤ ਕੀਤੀ ਅਤੇ ਆਪਣੇ ਵਿਚਾਰ ਸਾਂਝੇ ਕੀਤੇ।



Wed, 10 October 2018 epaper.punjabijagran.com/c/32970049



"Danik Bhaskar Newspaper of dated 10th October 2018"

किसानों को कम समय में पकने वाली धान की जानकारी दी

बठिंडा नावार्ड की ओर से अभिव्यक्ति फाउंडेशन के सहयोग से मंगलवार को तलवंडी साबो में पराली सुरक्षा अभियान 2018 के तहत ब्लॉक स्तरीय बैठक की गई। विशेष तौर पर पहंचे एसडीएम तलवंडी साबो वरिंदर सिंह ने प्रोग्राम की प्रशंसा करते प्रशासन की ओर से पूर्ण सहयोग का भरोसा दिया। उन्होंने कहा कि पर्यावरण बचाव के लिए इस दिशा में नौजवानों को ज्यादा से ज्यादा प्रेरित करना चाहिए। नाबार्ड के डीडीएम विकास मित्तल ने कहा कि नेशनल एडॉप्शन फंड फॉर क्लाइमेट चेंज के तहत फसलों की वेस्टेज के प्रबंधन संबंधी



जागरूकता प्रोग्राम जिले के सभी गांवों में किया जाएगा। इसी कड़ी में बठिंडा में बनाए 100 कलस्टरों में पराली बचाओ फसल बढ़ाओ प्रोग्राम किए जा रहे हैं तथा लोगों को पराली का सदुपयोग करने के लिए जागरूक किया जा रहा है। खेतीबाड़ी अफसर गुरमीत सिंह ने किसानों को कम समय लेने वाली धान की किस्मों के बारे में जानकारी दी। इस दौरान संस्था के रीजनल डायरेक्टर अमृतपाल सिंह, अभिव्यक्ति फाउंडेशन के महासचिव सिलंदर कुमार, कोआपरेटिव बैंक के मैनेजर राजीव कुमार ने विशेष तौर पर शिरकत की।

<u>List of Human Resource Involved in the Campaign</u>

S. No	<u>Name</u>	<u>Designation</u>	Contact Number
1.	Shailendra Kumar Singh	General Secretory	9868035848
2.	Amritpal Singh	Regional Director	9988511287
3.	Ravindra Rathore	Master Trainer	7973813596
4.	Charnjeet Kaur	Village Level Worker	9501127548
5.	Jaswinder Kaur	Village Level Worker	9417978779
6.	Navjot Singh	Village Level Worker	7696525245
7.	Jasmail Singh	Village Level Worker	9878756613
8.	Rajpal Singh	Village Level Worker	7009549870
9.	Bhola Singh	Village Level Worker	9463304718
10	Gurpreet Singh	Village Level Worker	7973184976
11	Harjeet Singh	Village Level Worker	7589157801
12	Sonika Rani	Village Level Worker	6284543156
13	Paramjeet Singh	Village Level Worker	9465902586

Documentary Hindi Short Film Produced By: Abhivykati Foundation

Based on
Crop Residue Management
Campaign 2018

पराली का धुआं

Search on Youtube: www.youtube.com/watch?v=YOjbHxWCfbc

