

ANNUAL REPORT

(ACHIEVEMENT)



(Year 2014-15)

**DIRECTORATE GENERAL AGRICULTURE
(FIELD) PUNJAB, AGRICULTURE HOUSE,
21 - DAVIS ROAD, LAHORE**

A. **ROLE / FUNCTIONS OF FIELD WING**

Field Wing of Agriculture Department undertakes activities to achieve the overall objectives of sustainable agricultural development through vertical as well as horizontal approach. The Field Wing through different activities is striving to help the nation not only to attain self-sufficiency in food production but also to export the surplus agricultural commodities to earn foreign exchange. Different areas in which Field Wing is making earnest efforts to achieve the stated objectives are briefly described below;

i. **Land Resources Development Services**

The increase in production per unit area has limitations and is not sufficient to fulfill the food requirement of the ever increasing population. Therefore the horizontal and accelerated way to increase the food production is by increasing the area under cultivation through development of culturable wasteland with the use of bulldozers. A culturable waste land of approximately 3.954 million acres is available for development in Punjab which is 12.80% of cultivated area. A fleet of approximately 500 bulldozers in good working condition is required for several years to reclaim this culturable wasteland.

Presently the Field Wing has only 332 in operation. The operational bulldozers are used to a) develop culturable waste land, b) improve the existing cultivated land and c) reclamation of eroded and gullied lands. These bulldozers are provided to the farmers on subsidized rates. In addition to this, the bulldozers are also deployed for other resources development such as construction of mini dams, water storage tanks, fish ponds, desilting of canals, defense works, plugging of canal breaches and rehabilitation of flood affected areas.

ii. **Water Resources Development Services**

Timely and adequate availability of water is extremely important and pre-requisite to increase agricultural production and to ensure sustainability of agriculture. The surface water resources of Punjab are finite and potential for increasing water supplies is limited. Most of the agriculture in the Punjab is irrigated as it is the more economical and remunerative and supply more than 90% of agricultural production. The horizontal expansion in cultivated area and increased cropping intensity has resulted in a net irrigation water deficit of about 50%. In order to meet the growing irrigation water demand, the surface water supplies is supplemented through exploitation of groundwater. The groundwater has a vital role in the development of agricultural and rural economy. For exploitation of ground water resources, Field Wing of Agriculture Department is maintaining well drilling machinery and equipment consisting of 19 Nos. Power Drilling Rigs, 170 Nos. Hand Boring Plants, 9 Nos. Electric Resistivity Meters and 2 Nos. Geo-loggers for exploration of

groundwater resources. The services of well Drilling machinery and equipment are provided to the farmers for agricultural purpose on subsidized rates.

iii. **Soil and Water Conservation Services**

A dry, barren, often sand covered area of land is waterless and without vegetation cover. The common features of such land are; low precipitation, high temperature, high evaporation, low humidity, poor rain water efficiency, water percolation and low productivity. These lands are called Barani and arid lands but still are not considered wastelands as these can be used for cultivation and crop production through soil and water conservation activities.

Soil and water conservation services are provided by the Field Wing in the Barani and hill torrent areas of the Punjab. Some of the works being undertaken for soil and water conservation purpose are; construction of mini dams, water storage tanks, construction of water outlet structures, retaining walls, land reclamation through gully plugging, stream bank training and moisture conservation practices such as terrace forming and deep ploughing. Soil and water conservation services to the farmers for agricultural purpose are provided through District Officers Soil Conservation on subsidized rates.

iv. **Research and Development Services**

The existing potential for increasing food production requires the application of appropriate agricultural machinery and equipment, seeds for good quality, optimum use of chemicals and fertilizers. Agricultural machinery is of special importance in increasing agriculture yields and production as it improves the quality of work, enables carrying out work on schedule and reduces labour.

Agricultural Mechanization Research Institute, Multan is undertaking R&D for low cost and appropriate agricultural machinery and farm mechanization technologies. The institute is providing industrial extension service to the local agricultural machinery manufactures for production of standardized and quality machinery and implements. It also imparts technical guidance to the farmers for proper selection, operation and maintenance of agricultural machinery and equipment. The institute provides technical assistance to provincial and districts agriculture wings for selection and procurement of agricultural machinery & equipment.

B. PERFORMANCE / ACHIEVEMENTS DURING LAST FIVE YEARS

The performance / achievements of Field Wing of Agriculture Department during the last five years are as under;

i. Land Resources Development Services

Description	2009-10	2010-11	2011-12	2012-13	2013-14
Hour Worked (Nos.)	324144	318918	499567	469010	470001
Area developed (ac)	12966	12757	19983	18760	18800
Beneficiaries (Nos.)	1589	1563	2449	2299	2304
Economic impact (M.Rs.)	64.83	63.78	99.91	93.80	94.00
Value of land added (M.Rs.)	43.22	42.52	66.61	62.53	62.67
Income from hiring services (M. Rs.)	175.671	170.317	138.587	157.504	149.201

ii. Water Resources Development Services

Description	2009-10	2010-11	2011-12	2012-13	2013-14
Tubewells bores (Nos.)	3437	3146	3117	3352	3397
Beneficiaries (Nos.)	3437	3146	3117	3352	3397
Amount of water added (MAF)	0.522	0.478	0.473	0.509	0.516
ERM Surveys (Nos)	1030	907	915	669	698
Economic Impact (M. Rs.)	257.78	235.96	233.78	251.41	254.78
Income (M. Rs.)	14.915	11.950	12.707	13.449	14.396

iii. Soil and Water Conservation Services

Description	2009-10	2010-11	2011-12	2012-13	2013-14
Water outlets (Nos.)	158	233	214	25	220
Mini dams (Nos.)	44	40	36	48	62
Water storage tanks / ponds (Nos.)	54	44	25	10	91
Lift pumps (Nos.)	-	-	-	-	-
Dug wells (Nos.)	53	177	29	46	50
Lift irrigation system (Nos.)	-	6	83	40	-
Spurs (Nos.)	1	-	-	-	-
Retaining walls (Nos.)	7	-	-	-	-
Embankments structures (Nos.)	120	-	-	-	-
Embankments length (KM)	10	-	-	-	-
Gully plugging structures (Nos.)	74	100	90	29	-
Area reclaimed / levelled (acres)	4874	4355	2657	1139	2761
Stream bank training (KM)	22	17	11	3	5
Afforestation (Acres)	460	638	535	165	533
Establishment of Nurseries (Nos.)	5	2	-	-	-
Fish Ponds Development (Nos.)	77	15	-	-	-
Check Dams (Nos.)	-	60	40	-	-

iv. **Research and Development Services**

Description	2009-10	2010-11	2011-12	2012-13	2013-14
Machines/implement design & development					
i. AMRI alone	5	2	3	1	5
ii. With manufacturer collaboration	2	2	1	2	1
Machines/implement tested					
i. Local made	6	10	6	9	5
ii. Imported	1	1	0	6	1
Machines/implement demonstrated					
i. In Field	12	10	10	12	15
ii. At exhibitions	33	25	20	18	20
Manufacturer guided for industrial extension and fabrications of machinery	50		40	60	45
Farmers guided in selection and operation of machinery required	65	100	60	80	130
Prototypes commercialized	3	-	1	1	1
Reports	6	6	10	6	5

Machines / Implements Commercialized

1. Modified Bed & Furrow shapper planter
2. Tree pruner
3. Fruit picker
4. Power winch
5. Orchard sprayer
6. Fodder cutter
7. Coulter type furrow opener seed drill
8. Mobile bhosa baler (horizontal type)
9. Orchard sprinkler (mobile rain gun)
10. Stubble shaver
11. Rota drill
12. Sugarcane ridger
13. Wheat straw copper collector
14. Cotton ridger with fertilizer attachment
15. Mealy bug lance
16. Small rotary breter culter

C. **ADP / DEVELOPMENT PROJECTS**

i. **Promotion of Bio Gas Supplemented Tubewells For Irrigation Purposes in Punjab (A Pilot Project)**

Under the project 50 biogas plants have been installed for the operation of diesel tubewells i.e. 25 Nos. of 25 m³ size at small farms (5-12.5 acre) and 25 Nos. of 40 m³ size at medium farms (12.5-25 acre) on cost sharing basis. The project has been implanted in 11 selected districts of Punjab.

ii. **Adaptation of Biogas Technology to Mitigate the Energy Crises**

Under the project 1500 biogas plants (15 m³) has to be installed in all district of Punjab. The project stands completed on 30.06.2013 and the year wise detail of plants installed is given below;

Year	Achievement (Nos.)
2009-10	50
2010-11	0
2011-12	686
2012-13	740
Total	1476

iii. **Farm Mechanization for Food Security**

Under this project 9542 numbers of machines & implements have delivered to the farmers in all over the Punjab on cost sharing basis. Amount of subsidy is Rs. 314.693 million.

vi. **Promotion of Mechanized Multi-crop Farming in Mixed Cropping Zone of the Punjab**

Under this project 3995 numbers of machines & implements have delivered to the farmers in all over the Punjab on cost sharing basis. Amount of subsidy is Rs. 141.380 million

v. **Wheat Straw Management in Wheat Growing Areas of Punjab**

Under the project 180 wheat straw chopper blowers have been delivered to the farmers in 25 selected district of the Punjab. Amount of subsidy is Rs. 29.750 million.

E. **AUCTION OF UN-SERVICEABLE MACHINERY AND STORES**

Sanction of 198 un-serviceable bulldozers have been got from Agriculture Department and out of this 174 bulldozers have been auctioned. Revenue generated from this auction values to Rs. 145.331 million.