



# Assessment of Problems Faced by Groundnut Growers of Rain fed Region of Punjab, Pakistan

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## Abstract

Groundnut (*Arachis hypogea* L.) being annual Kharif legume crop has not been given special attention in past. There are multiple uses of this crop worldwide and in Pakistan. It is an excellent cash crop for rain fed areas of Pothwar has potential to earn foreign attention to export. Present study was conducted to assess the problems faced by groundnut growers on scientific basis. Respondents (240) were interviewed from Tehsil Jand of district Attock randomly. This interview concluded that 15.83% respondents were of the view that lack of knowledge about advance varieties of groundnut, 9.58% farming community were of the argument that non availability of approved seed in market of groundnut. However, 9.58% respondents argued that access of farmers to the agriculture extension workers has not significant role whereas, 23.33% of farming community stated that access to agriculture extension worker is necessary for increasing awareness level about advance technology. Knowledge of pesticides for control pests 51.62% farming community was recorded. Another significant hindrance for lower yield is availability of fertilizer at the time of need was considered by 35.42% respondents. Government policies data depicted that 3.33% respondents were of the view that this factor don't have significance. Moreover, Lack of solid government policies was recorded as third highest weight age (830) and remained at 3<sup>rd</sup> position followed by high price of input fertilizer which was observed as fourth highest weight age (820) and got 4<sup>th</sup> position in rostrum. Additionally, lack of knowledge about advance varieties got lowest weight age (663) and got last slot of the ranking order followed by lack of mechanical facilities for harvesting problem that got second lowest weight age (674) and ranked as second from bottom of the ranking order. This study concluded that institutions should play their role to educate farmers for the solution of problems faced by the ground nut growers of this tract to get good production from this cash crop.

**Keywords:** *Arachis Hypogea* L; Groundnut; Problems of Groundnut Growers; Groundnut Growers; Punjab; Pakistan

## Introduction

Groundnut (*Arachis hypogea* L.) being an oilseed crop is commonly known as peanut, earthnut, moongphalli in Urdu. It is only cultivated species of *Arachis*. Globally, it is cultivated under arid and semiarid areas [1]. This is native to South

America [2]. This is an annual plant with erect structure. It has distribution in temperate, tropical and subtropical zones. The subtropical areas situated 45°N and 35°S at 1000 meters above sea level, are groundnut producing countries. It is said that groundnut was domesticated long time before Spanish subjugation. The Spaniards took groundnut with them

when they returned to Europe. Later the traders from Asia and Africa were the cause of spreading groundnut in both continents [3]. Overall groundnut production is associated with rainfall and susceptible to severe drought, frost and standing water. It is grown on wide range of soil types [4]. It requires light sandy soils for good growth and yield, also grown on marginal lands [1]. Soil of rain fed areas which are mostly deficient in essential nutrients, moistures and organic matters are suitable for its cultivation [5]. It has characteristic of biological nitrogen fixation process aiding in soil reclamation and improves soil fertility [6].

Pakistan is major groundnut producing country and due to various biotic and abiotic factors farming community is not able to get higher production in comparison to developed countries. During 2015-16, Rawalpindi division has an area of 190174 acres comprising of 197 acres irrigated and 188197 acres un-irrigated. Among districts of Rawalpindi division Attock has major role in production of groundnut. District Attock has total 49,679 acres among which 779 acres are irrigated while 48,900 acres are un-irrigated. Total groundnut production in Attock has 15108 tonnes (Govt. of the Punjab, 2016). Among the Tehsil of Attock, Jand has major contribution so there was need of study for training need assessment to solve the problem. The decline in groundnut production is due to social status of farming community. The groundnut producing farmers are less educated and have limited access to advanced production technologies. Meanwhile, the farming communities of groundnut producing areas have poor agronomic knowledge, and they don't have access to many of inputs required for its production. Due to less awareness about new high yielding cultivars the farmers grow old low yielding cultivars as well as they use their own field seed from the previous year which results into low crop productivity [7]. It is primary responsibility of agriculture extension workers that they should pay attention to upgrade skills of the farmers to increase production [8]. Agricultural production is much low in Pakistan as compared to many other worldwide (Rehman, 2010). The improved management practices for the production of quality groundnut include; use of quality disease free seed, land preparation, seed rate and its spacing, sowing method, fertilizer application, irrigation, weeding, disease control, harvesting, threshing, processing and storage. To perform these operation farmers need trainings in relevant field which is the primary responsibility of extension field staff [8].

Agricultural Extension workers play an impotent role in training of farmers and also promote agricultural development by providing the extension services and information to the farmer. Extension worker helps farmers to increase the productivity of their farms and improve their living standards. Extension worker has many roles to play as advisor, technician, middleman, operating between

agriculture research institution and the farmers [9]. He is a change agent helping farmers to identify their problems and solutions. Well intentional chances for partakers to gain important skill and understanding is referred as training [10]. Training plays an important role in growth of human performance under certain situations. It offers a systematic assistance to partakers to work effectively and efficiently in their given task. It is important for trainees to utilize the knowledge and skill effectively in local communities. Training fills gaps between local and modern agricultural practices [11].

A huge number of advanced technologies have been developed by different government and non-government organizations with objective of uplifting economic status of farmers. But when these new advanced technologies were tested at farmer's field level there was a big gap between yield obtained at research station and at farmer's fields. This variation in yield of field crops pointed out presence of untapped potential [12]. An extension worker can fulfill this gap by providing new and updated knowledge.

Meanwhile, the advantages of adapting new agricultural technologies were nearly neglected or poorly understood [13]. There could be many reasons of low adaptation rate of new technologies. Capital, less education, poor infrastructure would be considered the causes of low adaptation rate of new technologies [14]. Keeping in view of these conditions an interview was planned to investigate the problem for low groundnut production of this region.

## Materials and Methods

Materials and methodologies utilized in the current study were described as: Due to large area under cultivation of groundnut research was conducted in Tehsil Jand of district Attock. Total area of Tehsil Jand is 571957 acres, out of which 240952 acres is cultivated land. Remaining area is barren land and under forest. Tehsil Jand is divided in to 02 markaz (Jand and Thatta) and 16 union councils. From markaz Jand 03 union councils were selected namely Jalwal, Narra and Sagri. Similarly, from Markaz Thatta 03 union council Pind sultani, Thatta and Domail were selected. From each union council 04 villages were selected. From each village 10 respondents were interviewed. It was difficult to collect data from the whole population so convenient sampling technique was used for the present study. A sample of 240 respondents was selected for obtaining required information. Before the survey, interview schedule based on production technology and problems associated with groundnut production was prepared reflect in the knowledge level of farmers and priorities of training program. After selection of specific area, farming community was interviewed at their farms and homes. Benefits of interviews were shared with them to

clear their doubts. In order to get more precise and accurate answers from farming community they asked question were made understandable to respondents. Collected data was statistically analyzed by using Statistical Package for Social Sciences (SPSS). Conclusions and recommendations were made based on the analyzed data.

## Results and Discussion

Results concerning demographic factors and problems of groundnut growers about production technology, plant protection measures and Government policies were compiled after interviews of selected growers with the help of questionnaire. Data was analyzed, summarized and presented in tabular form. In this section results are interpreted and discussed in comparison to previous finding.

Data presented in Table 1 revealed that 15.83% respondents were of the view that lack of knowledge about advance

varieties of groundnut is an important parameter for higher yield while maximum 24.58% farming community was of view that familiarity of advance cultivars is not a big problem associated with groundnut yield. Similarly, 9.58% farming community were of the argument that non availability of approved seed in market of groundnut is considerable parameters for privileged yield whereas, 23.33 respondents were of view that it is a serious problem. Maximum respondents 29.58 % were of view that non-availability of approved seed in market is a minor problem. Utilization of farmer knowledge and experience for abandonment of newly released cultivars has positive impact on adoption rate was concluded by Moser and Barrett (2003). Availability of valuable seed and farmers' knowledge of newly released cultivars, a main reason for lower yields were assessed by Ahmad M, et al. [15], during interviewing respondents. Reduced averaged productivity was due to inefficient variety adoption decision [16].

Problems Associated	VL	L	M	H	VH	Mean	Weighed scores	Ranked Order
Lack of knowledge about advance varieties	24.58	23.75	18.33	17.50	15.83	2.763	663	11 <sup>th</sup>
Non availability of approved seed in market	27.92	29.58	20.42	12.50	9.58	2.463	591	12 <sup>th</sup>
Access of farmers to the agriculture extension workers	9.58	28.33	19.17	19.58	23.33	3.188	765	7 <sup>th</sup>
Lack of knowledge about application of fertilizer	22.92	7.92	25.83	12.92	30.42	3.200	768	6 <sup>th</sup>
Lack of knowledge about use of pesticide	13.75	6.25	0.00	28.33	51.67	3.979	943	2 <sup>nd</sup>
Non availability of fertilizer in market at appropriate time	11.67	0.00	6.25	35.42	46.67	4.054	973	1 <sup>st</sup>
High price of input fertilizer	5.00	18.75	23.33	35.42	17.50	3.417	820	5 <sup>th</sup>
Lack of mechanical facilities for agronomic practices	27.08	13.33	12.08	20.83	26.67	3.067	736	8 <sup>th</sup>
Lack of mechanical facilities for harvesting	14.58	19.58	37.92	26.25	1.67	2.808	674	10 <sup>th</sup>
Lack of solid government policies	18.75	20.00	9.58	0.00	51.67	3.458	830	3 <sup>rd</sup>
lack of support price and subsidies to the farmers	3.33	32.92	12.92	20.00	30.83	3.421	821	4 <sup>th</sup>
Low attention paid to groundnut crop by the farmers	27.08	12.92	19.58	17.92	22.50	2.958	710	9 <sup>th</sup>

VL= Very Low; L= Low; H=High; VH= Very High

**Table 1:** Problems Associated with Groundnut Production.

However, 9.58% respondents argued that access of farmers to the agriculture extension workers has not significant role

whereas, 23.33% of farming community stated that access to agriculture extension worker is necessary for increasing

awareness level about advance technology. Less knowledge (7.92%) of fertilizer application on groundnut was assessed of respondents whom consider that it has minor role in groundnut productivity. While 30.42% were of the view that nutrient application is the major reason for lower yields. Knowledge of pesticides for control pests was noted as dominant parameter for maximum yield of groundnut. Whereas, 51.62% farming community was recorded as familiarity of insects and pests has been a key element to be considered as yield reducing parameter.

Another significant hindrance for lower yield is availability of fertilizer at the time of need was considered by 35.42% respondents. Conversely 46.67% farming community was recorded as having knowledge of non-availability of fertilizer in market at time and consider it a serious problem. In case of high prices fertilizers, 35.42% farming community was observed as having knowledge of fertilizer prices in the market and its impact on groundnut yield. Lack of mechanical facilities for groundnut growers was recorded as medium importance by 12.08% respondents whereas, 26.67% farming community was not of the view that unavailability of advanced machinery for groundnut cultivation is important and has significant role in yield reduction.

Moreover, facilities regarding harvesting of groundnut reveal that 0.00% respondents were having 11.67% mechanics interventions with groundnut yield as very low value problem. While, 37.92% farming personnel were of the view that lack of advanced harvesting machinery has significant role in yield reduction. Data regarding government policies revealed that 20% farming community were not in the support of this element as yield reducing factor. Whereas, 51.67% respondents were in favor of this parameter as yield reducing parameter.

Government policies such as support price has important role in productivity of groundnut. Data presented depicted that 3.33% respondents were of the view that this factor don't have significance. Whereas, 30.83% farmers were having knowledge of significance for subsidies and support price facilities and consider this as key importance for higher groundnut yield. Farmers' intention to get more profit by growing groundnut was assessed and data revealed that 27.08% farmers were of the view that it doesn't matter for them whereas, 22.50% respondents were having knowledge of priorities for increasing groundnut yield.

Mean values of associated problems of groundnut growers depicted 4.054 as highest value for non-availability of fertilizer in market at appropriate time. However, lack of knowledge about use of pesticide was noted as second maximum mean 3.979. Moreover, non-availability of approved seed in market has lowest mean 2.463 followed by lack of knowledge about

advance varieties having mean value (2.763).

Weight age score for problems associated with farming community of groundnut reveals that non-availability of fertilizer in market at appropriate time got highest groove (973) and ranked as first position among the studied issues. Similarly, lack of knowledge about use of pesticide was calculated as second highest weightage (943) and stood on second position. Farmers knowledge was assessed by Bellon MR [17] and he further believed lack of knowledge faced by them even to identify a specific insect.

Moreover, Lack of solid government policies was recorded as third highest weightage (830) and remained at 3<sup>rd</sup> position followed by high price of input fertilizer which was observed as fourth highest weightage (820) and got 4<sup>th</sup> position in rostrum. Additionally, lack of knowledge about advance varieties got lowest weight age (663) and got last slot of the ranking order followed by lack of mechanical facilities for harvesting problem that got second lowest weight age (674) and ranked as second from bottom of the ranking order.

## Conclusion

This study concluded that institutions should play their role to educate farmers for the solution of problems faced by the ground nut growers of this tract to get good production from this cash crop. Government policies such as support price has important role in productivity of groundnut.

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