

Climate Change and its impact on Yield Performance of Guava in Larkana

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Abstract:

The purpose of the study was to examine Climate Change and its impact on Yield Performance of Guava in Larkana. Data were collected from 200 Guava growers from Larkana district. Data were analyzed by using E-Views-9 version. Various problems like lack of training on guava production, problem of transport, absence of experience in managing guava production, absence of agencies to support, social-personal problems, input related problems, financial problem and market problems were also assessed. If you compare the yield performance of per acre average yield of 200 farmers from 2012 to 2020 January, 2020. It was revealed that 60 percent of the production declines in 2020 which is due to climate change and rain fall in the months of Sept-to November 2019. The results of study can call for policies aimed at encouraging new entrants especially the youths who are agile and stronger to grow guava and the experienced ones to remain in guava farming. It was further revealed that due to climate change there is negative impact of Guava production in Larkana Sindh-Pakistan.

Keywords: Climate Change, Yield Performance, Guava in Larkana

Introduction:

Guava (*Psidium guajava* L.) has a place with the Myrtaceae family; it has in excess of 80 genera and 3000 species scattered all through the tropics and subtropics, for the most part in the America, Asia and Australia (Nakasone and Paull, 1998). Guava endures a wide scope of atmospheres, if they are without ice (Menzel, 1995). Guava from Larkana is most popular in the world. The guava production has tremendously been affected in Larkana district, where orchards are spread over 30,000 acres of land. Sindh Chamber of Agriculture (SCA) Larkana.

Agriculture is the principle wellspring of work for the provincial populace of the area. In urban regions individuals are occupied with different monetary exercises like exchange, administrations, private issue, and government and private jobs. Larkana falls in Rice Other Sindh Agro Climatic Zonex which is useful for rice generation with sugarcane where water system permits. The Kharif crops created in the region are rice, cotton, sugarcane, ba\jra and jawar. The Rabi crops are wheat, Barley, gram, beats and fodder. Larkana is known for its quality creation of guava.



Among the significant products of Pakistan, guava involves the third situation after Citrus and Mango as far as territory. 1,94,700 hectares are under Citrus, 90,900 hectares under Mango and 56,800 hectares under guava. Region astute it is more than the consolidated territory under Apples, and Peaches (49,000 ha). The purpose behind covering tremendous region all through the nation lays in the way that guava is the hardiest, dry spell tolerant and with stands the pH running from 4.5 to 8.5 (Singh, 1990). Creation insightful, it positions fourth after Citrus, Mango and Bananas in Pakistan. In any case, the yield of guava is very low, 8.1 tones/ha; impressively not exactly the potential yield of 25 tones/ha (Anka, 2003).



Guava is developed in every one of the areas of Punjab where atmosphere and soil are reasonable for this yield. In Sindh, brilliant pear molded guava with littler seed center is developed in Larkana. Dadu, Shikarpur and Hyderabad area. In NWFP Kohat, Bannu, Haripur, D.I. Khan and Malakand are well known for good quality guava creation. In NWFP during 2004–2005 a region of 1557 hectares was under guava development, which delivered 18570 tones of guava natural product .Of which Kohat alone created 33%.

II. MATERIALANDMETHODS

The examination was directed in the Data were gathered from 200 Guva cultivators from larkana area. Information were broke down by utilizing E-Views-9 adaptation. The measurable devices used to break

down the information is recurrence and rate through which properties of guava makers known, commitment of other cultivation harvests to rancher's salary, potential effect of guava creation, their status of living style and limitations to guava generation.

III. RESULTS AND DISCUSSION

Table 1. Respondents

Variable	Particulars	Frequency	Percentage
Age	0-46	150	75
	47-69	50	25
	69 above	0	0
Education	Illiterate	150	75
	Class 5-9	50	25
	High School	00	00
	Intermediate	00	00
	Graduation	00	00
	Post Graduation or above	00	00
Occupation	Farming only	00	00
	Enterprise	00	00
	Govt. service	00	00
	Farming+ private service	00	00

Interpretation The consequence of the investigation in Table1 shows that 75% of the respondents fall inside the age scope of 41-60 years, most of the ranchers 25% were graduated while zero had no proper instruction which is exceptionally zero of the respondents were occupied with cultivating action just and zero respondents were doing cultivating with a private activity issue had just 75% medium help. Respondents got data through rural reasonable 25% and through companions A large portion of the respondents had no proper preparing on guava generation for example 71.25

Problems and Prospects of Guava Producers in Larkana

10000 to 50000	2	2.5
50000 above	78	97.5
Less than 4acres	43	53.75
4-8 acres	31	38.75
8 acres above	6	7.5
Homestead land with pond	13	16.25
Own irrigated land	58	72.5
Land taken on lease	7	8.75
Land given on lease	2	2.5
Low	32	40.0
Medium	47	58.75
High	1	1.25
Yes	23	28.75
No	57	71.25
Regularly	4	5.0
Often	13	16.25
Moderately	35	43.75
Rarely or never	28	35.0
To achieve something through guava production	79	98.75
To be own boss	16	20.0
Use spare time	1	1.25
Financial stability	20	25.0
Saving for future	70	87.5
Additional income	30	37.5

Various problems of guava producers are displayed in Table 2 which reveals that major technical problems were lack of training on guava production (71.25%) followed by problem of transport (70%) whereas absence of experience in managing guava production (75%) and absence of agencies to support (68.75%) are some of the prominent managerial problems. Major social-personal problems were lack of support from other community members (65%) followed by lack of support from family members, lack of confidence (47.5%) and lack of confidence to opt for guava farming (35%). Majority of guava growers had difficulties in non-availability of raw material for guava farming (43.75%) followed by general difficulties in production process (37.5%), pre-assessment of the demand and non availability of raw material in market were some of the input related problems. 81.25 percent of the guava growers stated that high interest rate is one of the major financial problem, followed by inadequate loan facility (65%) and price fluctuation of the raw material (40%). Market is also found to be one of the major components for any business. In this regard 62.5%t of the respondents stated the problem that transportation cost upto the market minimizes their profit. Fluctuation in the demand of the product (47.5%) was also be one of the major market problems

Table 2. Problems faced by Guava producers N = 200

	Items	Respondents	
		Frequency*	Percentage
Technical problem	Absence of organization to guide guava producers	100	50
	Inadequate availability of land	75	33
	Lack of experience of management	25	12.5
	Problem of transport for guava growers	25	12.5

Problems and Prospects of Guava Producers in due to Climate Change

	Lack of knowledge and skills on budgeting	42	52.5
	Lack of training on guava production	57	71.25
Managerial problems	Lack of managerial skill in guava production	41	51.25
	Low productivity in guava production	18	22.5
	Lack of experience in management	60	75
	Absence of agencies to support guava production	55	68.75
Socio-personal problems	Affects family life	17	21.25
	Lack of respect for women	18	22.5
	Lack of confidence to opt for guava farming	28	35
	Lack of support by family members	38	47.5
	Lack of support from other community members	52	65
Input problems	General difficulties in production process	30	37.5
	Pre-assessment of demand for product not done	28	35.0
	Non-availability of raw material for guava farming	35	43.75
	Poor knowledge of market and competition	15	18.75
	Price of raw material	20	25.0
	Non-availability of raw material in market	22	27.5
Financial problems	Inadequate loan facility	52	65.0
	High interest rate	65	81.25
	Price fluctuation (raw material)	32	40.0
	Lack of working capital	30	37.5
	Loan repayment	22	27.5
Market problem	Lack of knowledge in guava farming practices	26	32.5
	Fluctuation in demand	38	47.5
	Low profit	12	15.0
	Transportation	50	62.5

Guava Production from 2012 to 2019-20 due to Climate Change In Larkana

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Production of Guava	240 M	260M	280M	275M	290M	300M	290M	295M	120 M
Per/Acre									

If you compare the yield performance of per acre average yield of 200 farmers from 2012 to 2020 January, 2020. It was revealed that 60 percent of the production declines in 2020 which is due to climate change and rain fall in the months of Sept-to November 2019.

IV. CONCLUSION

Based on the findings of this study, it could be concluded that guava production in the study area is profitable but there are many constraints like advantage of other horticulture crops over guava. The farm specific technique and training are not up to the mark so this can encourage farmers to remain in the guava farming that means none of the farmers achieved their maximum efficiency level to grow guava. Climate change has negative impact on the production of Guava in larkana.

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