CONSTRAINTS FACED BY DIFFERENT STAKEHOLDERS INVOLVED IN VALUE CHAIN OF BLACK GRAM IN BAPATLA DISTRICT OF ANDHRA PRADESH

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The present study focuses on major constraints related to production and marketing of black gram faced by farmers and intermediaries involved in value chain in Bapatla district of Andhra Pradesh. Primary data was collected through survey method from various categories of farmers and intermediaries. The results indicated that high labor cost was the major problem expressed by farmers in black gram production. In marketing, price fluctuations, underutilization of dal mills, competition from fellow retailers were the major constraints faced by commission agents/ traders, dal millers, retailers and wholesalers..

INTRODUCTION

Black gram (*Vigna mungo* (L.) Hepper) is one of the important pulse crop of *kharif* season or as rice fallow pulse crop in our country. India is the largest producer, consumer and also the largest importer of pulses in the world. It contributes for about 31 per cent of world area and 28 per cent of world production of pulses. Out of total food grain production of 315.7 million tons, pulses account for 25.46 million tons in India and constitute 8 per cent of the total food grain production in 2021-22. In India, total land under pulses cultivation is 28.78 M ha. Andhra Pradesh is one of the major black gram producing states in India. Black gram was grown in an area of 3.93 lakh ha with a production of 3.65 lakh tons and productivity was 929 kg ha^{-1} (Indiastat.com 2021-22). In Bapatla district it is grown in area of 26,629 ha with a production of 37,031 tons and productivity was 1343 kg ha^{-1} (District Hand Book of Statistics Bapatla, 2022). Key actors involved in value chain of black gram are producers, traders, commission agents, wholesalers and retailers. The added value of this paper is that not only are the problems identified but they have been ranked to allow for prioritization of interventions for dealing with such constraints. To identify the problems in the value chains, a pre-tested questionnaire was designed separately for identifying constraints at producer level, as well as other stakeholders involved in black gram value chain.

MATERIAL AND METHODS

The present study was conducted in Bapatla district of Andhra Pradesh with specific objective of identifying the constraints faced by value chain players in black gram. Based on highest area and production of black gram, three mandals namely Nagaram, Amarthalur, Cherukupalle were selected by purposive sampling method and from each mandal two villages were selected namely Allaparu, Pedamatlapudi from Nagaram mandal, Amarthalur, Inturu from Amarthalur mandal and Arumbaka, Rambhotlapalem from Cherukupalle mandal. From each village 15 farmers were selected by random sampling technique, thus making a total of 90 farmers. Personal interviews were conducted with growers belonging to different strata and marketing intermediaries like traders(six), commission agent(six), processors(six), wholesalers(six), and retailers(six) with specially designed questionnaire. A total of 30 market intermediaries were selected through snowball sampling technique.

Garrett ranking technique was used to study the opinions of the respondents regarding the factors that acted as constraints faced by the farmer and value chain players. The per cent position of each rank was found out by following equation.

$$\text{Per cent position} = \frac{100 \times (R_{ij} - 0.5)}{N_j}$$

where,

R$_{ij}$ = Rank given for the ith items by the jth individual and

N$_j$ = Number of items ranked by the jth individual.

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By referring to the Garrett's table, the percent positions estimated were converted into scores. Thus, for each factor the scores of the various respondents were added and the mean values were estimated. The mean values thus obtained for each of the attributes were arranged in descending order. The attributes with the highest mean value were considered as the most important one and the others followed in the order.

RESULTS AND DISCUSSIONS

Perceived Constraints Faced by Farmers in Value Chain of Black gram

It is clearly seen from garrett scores presented in the Table 1 that at the production level the greatest challenge faced by farmers was high labour cost (63.52), while inadequate rainfall (62.56) for prolonged periods of time reported as second major constraint in the production of black gram. Many of the farmers also complained about high input cost (60.29) where in several farmers cannot even afford to purchase the quantity required to increase the production of black gram, labor scarcity (57.96), lack of credit facilities (46.26) and frequency of pest and disease (42.32) were the major constraints in black gram production. Some farmers also quoted about non availability of suitable variety (30.83), low productivity of varieties (29.67) and no special schemes for production (14.60) as minor constraints.

The marketing constraints faced by the black gram farmers are presented in Table 2. The farmers complained about the lack of access to APMCs (71) as they are far away.

Many of the farmers also complained about non availability of credit in time from banks, money lenders (69.60) due to which they are not able to meet their urgent requirements. Lack of availability of market news (64.70), lack of access to processing units (56.80) due to majority of farmers sold their produce to the nearby traders at the village level, high cost towards commission agents (55.70), lack of storage facilities (46) poses as important constraints in marketing. Some minor constraints quoted by farmers were low price for produce (40.10), high transportation cost (37.40), delay in payment (36.9), faulty weighments (19.90) and presence of exploitative middle man (9.80).

The farmers encountered many problems in value chain of black gram. Looking to this, there is a need to strengthen extension activities for improving package of practices in the study area.

Perceived Constraints Faced by Other Stakeholders in Value Chain of Black gram

Among the list of constraints (Table 3) faced by the commission agents/traders, price fluctuations (63.80) were the major constraint that affected their businesses. Poor quality of produce (63.30), unlicensed traders (62), lack of storage facilities (61.50) were other major constraints faced by them. The traders also reported poor availability of transportation (47.80), less price for the produce in the market (43), shortage of labor (34.50), non-availability of loans (17.80) and problem of price setting (15.50) as other constraints. The dal millers (Table 4) in the study area reported that underutilization of their plants (63.10) as the greatest challenge. This

Table 1. Farmers perception on constraints in production of produce

S. No.	Particulars	Garrett score	Ranking
1	High labor cost	63.52	I
2	Inadequate rainfall	62.56	II
3	High input cost	60.29	III
4	Labor scarcity	57.96	IV
5	Lack of credit facilities	46.26	V
6	Frequency of pest and disease	42.32	VI
7	Non availability of suitable variety	30.83	VII
8	Low productivity of varieties	29.67	VIII
9	No special schemes for production	14.60	IX

Table 2. Farmers perception on constraints in marketing of produce

S. No.	Particulars	Garrett score	Ranking
1	AMC is far away/ or AMC is not convenient	71.00	I
2	Non-availability of credit in time from commission agents	69.60	II
3	Lack of availability of market news and intelligence	64.70	III
4	Lack of access to processing plants/units	56.80	IV
5	Commission charges are very high	55.70	V
6	Poor/lack of storage facility at local level	46.00	VI
7	Low price for the produce at the time of harvest	40.10	VII
8	High transportation cost	37.40	VIII
9	Non-payment/delay in payment	36.90	IX
10	Defective & faulty weighing	19.90	X
11	Presence of exploitative middlemen	9.80	XI

occurs due to the lack of timely availability of raw material from the farmers/traders. And other constraints were transportation bottlenecks (61.80), illegal traders in market (54.30), power shortage (50.50), poor quality of produce (35.30), shortage of labor (34) and lack of capital (9.83). The details of constraints faced by the wholesalers and retailers are mentioned in the Table 5. The table revealed that competition from fellow retailers (63) was the major constraint to them which ranks first followed by price condition in the market for procurement (48.6), high storage cost (47.5), high brokerage charges (44.3), price fluctuations in the market for value-added produce (43.75), wastage and spoilage losses (35.3) and high transportation cost (26.3) were other constraints which had a greater impact on the margins received by them.

The black gram value chain is complex and diversified. The involvement of various stakeholders and flow of main products and by-products produced through processing made the value chain a complex diversified network. The products traced along the value chain are un-husked split dal, dehusked whole dal, dehusked split dal were studied in detail which was more profitable to the stakeholders. As the value chain of black gram is complex and diversified in the study area, still there are so many opportunities exist for other value-added products and sophisticated foods. Hence, there is a need to encourage research in food processing sector to produce innovative ready-to-eat products by using black gram in the study area and export these products rather than exporting the raw material. By developing

Table 3. Constraints of trader and commission agent while purchasing produce from farmers

S. No.	Particulars	Garrett score	Ranking
1	Too much price fluctuations	63.80	I
2	Quality related problems (lack of grading)	63.30	II
3	Presence of unlicensed traders within the market	62.00	III
4	Lack of adequate storage facilities	61.50	IV
5	Poor availability of transportation means	47.80	V
6	Less price for the produce	43.00	VI
7	Shortage of labor	34.50	VII
8	Non-availability of loans from banks	17.80	VIII
9	Problem of price setting	15.50	IX

Table 4. Perception on constraints faced by processor while processing of produce into value added products

S. No.	Particulars	Garrett score	Ranking
1	Underutilization of plants	63.10	I
2	Transportation bottlenecks	61.80	II
3	Competition from illegal traders in market	54.30	III
4	Power shortage	50.50	IV
5	Poor quality produce got mixed with good ones	35.30	V
6	Shortage of labor	34.00	VI
7	Lack of capital	9.83	VII

Table 5. Wholesaler/wholesaler-cum-retailer/retailer perception on constraints faced in their business in marketing of value-added products of black gram

S. No.	Particulars	Garrett score	Ranking
1	Competition from fellow wholesalers /retailers	63.00	I
2	Price condition in market for procurement	48.60	II
3	High storage costs	47.50	III
4	High brokerage charges	44.30	IV
5	Price fluctuations of value-added products	43.75	V
6	Wastage & spoilage loss	35.30	VI
7	High transportation costs	26.30	VII

efficient market linkages that connect farmers with traders, processors and end consumers directly, farmers will be able to get better price for their produce and by investing in establishment of processing units that can produce value added products of pulses enhances the marketability of the products.

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