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To study the resource management behaviour of pomegranate growers in respect of planning, procurement and utilization

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Abstract
The study entitled "Resource management behaviour of pomegranate growers in Washim District". The study was conducted in two panchayat samities of Washim district in Vidarbha region of Maharashtra State. The district is located in the Vidarbha Region of Maharashtra, India. The present study was purposively conducted in Mangarulpir and Manora Panchayat samities in the Washim district on the basis of higher area under the cultivation of Pomegranate crop. The form of study was mainly to assess resource management behaviours of pomegranate growers. Hence, total 12 villages were selected from 2 panchayat samities. The respondents were selected from village by random sampling technique. 10 respondents were selected from each village. Thus 120 respondents were selected for the present study for making the sample size of 120 in total. exploratory design of social research was used. The characteristics *viz* Education (0.233) source of information (0.229), were positively significant with procurement of resources of the respondents at 0.05% level of probability. The characteristics Land holding and irrigation facility were non significant and the characteristics Age (-0.312) was negatively significant with the procurement of resource of the respondents.
Experience in pomegranate cultivation (0.226), Training received (0.189), Management orientation (0.187), Education and annual income (0.182), size of orchard (0.180) and source of information (0.179), were positively significant with Utilization of resources of the respondents at 0.05% level of probability**.**
It is observed that over half of majority (60.00%) of pomegranate growers have shown about managing the resources to moderate extent. Distribution pertaining to utilization of resources indicate that majority of the respondents (79.16%) have utilized resources for pomegranate cultivation to high extent.

Keywords: Resource management behavior, pomegranate growers, respect, planning, procurement, utilization

1. Introduction
Horticulture is a specialized branch of agriculture and significantly constitutes in the total agricultural production in India. Horticultural crops particularly fruits, have great export potential and can earn foreign exchange in the sizeable quantum.
The economic aspects of fruit production are not less important. The well established and maintained orchards can offer better yields as compared to other orchids. During non bearing stage, it is possible to grow intercrop which compensate the expenses involve in establishment a fruit grower remains engaged for the whole year and there is an opportunity for full utilization of waste land in the arid and semi arid regions for getting higher income with minimum inputs. Fruit crops occupy an important place in the international trades. Fruits can earn handsome foreign exchange. Fruit orchard adds to the aesthetic beauty of the environment, they purify the air and decrease pollution. Fruit trees affect the rain and drought and they bring improvement of soil and help in checking the soil erosion.
Pomegranate *(Punica granatum* L.) belongs to family Punnnicaceae is one of the most favorite's fruits of tropical and sub-tropical regions of the world. It is also known as Chinese apple or apple of Carthage (Hindi-Anar) Pomegranate is native to Iran (Persia) it is found from Kanyakumari to Kashmir, but It is cultivated commercially only in Maharashtra In India pomegranate is considered as a crop of the arid and semi arid regions because it withstands different soil and climatic stresses. It thrives best under hot dry summer and cold winter provided irrigation facilities are available.

The fruit is native of Ireland is extensively cultivated in Mediterranean countries like Spain, Egypt, Iran, Burma, Guinea and India. Pomegranate is grown in tropical and sub tropical regions of the World.

In Washim District area under pomegranate cultivation is more than 800 ha and among all Tahsil more area in Mangrulpir and Manora Tahsil

Table 1: Area under pomegranate crop in Washim district (Year 2015-16)

S. No	Name of Taluka	Area (000) under Pomegranate cultivation	Area (000) under Production
1	Washim	90.00	45.00
2	Mangrulpir	180.00	135.00
3	Manora	200.00	152.00
4	Risod	90.00	40.00
5	Karanja	110.00	30.00
6	Malegaon	130.00	70.00
	Total	800.00	472.00

(**Source:** S. A. O. Washim)

In Vidarbha day by day area under pomegranate cultivation increases in Yavatmal, Washim and, Amravati, district but highest area under pomegranate in Mangrulpir and Manora Tahsil of Washim districts.

1.2 Objectives

The study was highly helpful to policy makers, research scientist and extension workers to formulate the strategy to increase socio economic condition of pomegranate growers. This study will reveal current status of knowledge and extent of adoption of improved pomegranate cultivation practices by the farmers. The present study entitled "Resource management behaviour of pomegranate growers in Washim District" is undertaken with the following specific objectives.

To study the resource management behaviour of pomegranate growers in respect of planning, procurement and utilization.

1.2 Methodology

The study entitled Resource management behaviour of pomegranate growers in Washim District" was conducted in two panchayat samities of Washim district in Vidarbha region of Maharashtra State. The district is located in the Vidarbha Region of Maharashtra, India. The present study was purposively conducted in Mangarulpir and Manora Panchayat samities in the Washim district on the basis of higher area under the cultivation of Pomegranate crop. The form of present study was mainly to assess resource management behaviours of pomegranate growers. Hence, total 12 villages were selected from 2 panchayat samities.

The respondents were selected from village by random sampling technique. 10 respondents were selected from each village. Thus 120 respondents were selected for the present study for making the sample size of 120 in total. The exploratory design of social research was used in present investigation.

Table 2: List of village wise respondents selected for the study

Sr. No.	Name of village	No. of respondents
1	Wanoja	10
2	Sawargaon	10
3	Kavthal	10
4	Mangrulpir	10
5	Kasola	10
6	Mangalasa	10
7	Jamdara	10
8	Parva	10
9	Javala	10
10	Mohagavan	10
11	Amdari	10
12	Hatti	10
13	Total	120

2. Resource management behavior

Various resources necessary for cultivation of pomegranate namely inputs, pre-requisites, capital, procurement resources and Utilization of resources were studied in respect of all the dimensions mentioned above, In other words a focused of the study was on how the pomegranate growers had planned, procured, and utilized resources required for pomegranate cultivation. The data collected on this aspects have been presented on subsequent heads.

2.1 Planning of resources

Table 3: Distribution of the respondents according to their extent of planning resources

Sr. No.	Resources/items	Planned in advance		Planned in time		Not planned	
		No.	%	No	%	No	%
A	**Prerequisites**						
1	Soil testing	110	91.66	07	05.84	03	02.50
2	Digging of trenches in north-south direction	116	96.66	04	03.34	00	00.00
3	Selection of varieties for planting	120	100.00	00	00.00	00	00.00
4	Digging of pits of size 60cm x 60cm x 60cm	113	94.16	07	05.84	00	00.00
5	Planting time	112	93.33	08	06.67	00	00.00
B	**Inputs**						
1	Hired human labours	00	00.00	114	95.00	06	05.00
2	Bullock pairs	00	00.00	97	80.83	23	19.17
3	Tractor	83	69.16	21	17.50	16	13.34
4	Irrigation system	108	90.00	12	10.00	00	00.00
5	Manures	23	19.17	97	80.83	00	00.00
6	Fertilizers	102	85.00	18	15.00	00	00.00
7	Plant protection measures	28	23.34	92	76.66	00	00.00
8	Growth hormones	21	17.50	99	82.50	00	00.00
9	Farm shed	08	06.67	28	23.33	84	70.00
10	Electric pump	120	100.00	00	00.00	00	00.00
11	Wells	120	100.00	00	00.00	00	00.00
12	Residential building on farms	00	00.00	04	03.34	116	96.66

C	Capital						
1	Amount for purchasing land	00	00.00	00	00.00	120	100
2	Amount for purchasing planting material	98	81.66	22	18.34	00	00.00
3	Amount for preparatory tillage	23	19.17	97	80.83	00	00.00
4	Amount for hiring tractor	14	11.67	106	88.33	00	00.00
5	Amount for hiring bullock pairs	00	00.00	21	17.50	99	82.50
6	Amount for hired labours	36	30.00	84	70.00	00	00.00
7	Amount for purchasing FYM	31	25.83	87	72.50	02	01.67
8	Amount for purchasing manures	08	06.67	112	93.33	00	00.00
9	Amount for purchasing micronutrients	79	65.83	41	34.17	00	00.00
10	Amount for purchasing Insecticides/Fungicides	94	78.33	26	21.67	00	00.00
11		00	00.00	00	00.00	120	100
12	Amount for training/pruning operations	76	63.33	44	36.67	00	00.00
13	Amount for harvesting of pomegranate fruits	00	00.00	108	90.00	12	10.00
14	Amount for transportation of pomegranate fruits to processing Industry	00	00.00	00	00.00	120	100.00

Majority of respondents were deciding well in advance for the selection of varieties for planting (100.00%), digging of trenches in north south direction (96.66%) digging of pits size 60x60x60cm (94.16%), planting time (93.33%) and soil testing (91.66%). The data presented in Table in respect of inputs resources, indicate that majority of the respondents decided and planned well in advance for Electric pump and well (100.00%) Irrigation system (90.00%) fertilizer (85.00%) and Tractor (69.16%). Majority of the respondents decided had planned in time for hired human labour (95.00%) Growth hormone (82.50%) bullock pairs (80.53%) and plant protection measure (76.66%) less number of respondents was planned in time (23.34%), (17.50%), (15.00%) (10.00%), (3.34%) respectively. farm shed, Tractors, fertilizer, irrigation system Residential building on farms. Majority of respondents not planned for residential building (96.66%), farm shed (70.00%), Majority of respondents had decided well in advanced for keeping amount for purchasing planting material (81.66%), amount for purchasing insecticide and pesticide (78.33%) amount for purchasing micronutrients (65.83%) and amount for purchasing training/pruning operations (63.33%) , Majority of the respondents decided and planned in time for purchasing of manure (93.33%) amount for harvesting of pomegranate fruits (90.00%) amount for hiring tractor (88.33%) amount for preparatory tillage (80.83%) and for purchasing FYM (72.50%) Two-third of the respondents decided planned in time amount for hired labour (70.00%)
Majority of the respondents had not planned to keep the amount for purchasing land, purchasing pomegranate guard, and Amount for transportation of pomegranate fruits to processing Industry (100.00%), and for hiring bullock pairs (82.50%)

Table 4: Distribution of the respondents according to their level planning resources

Sl. No.	Category	Respondents (n=120)	
		Frequency	Per cent
1.	Low (Up to 33.33)	38	31.66
2.	Medium (33.33 to 66.66)	60	50.00
3.	Large (Above 66.67)	22	18.34
	Total	120	100.00

It is apparently from Table 4 that half of the respondent (50.00%) of pomegranate growers planned moderately the resources where as few of them planned at low (31.66%) and high level (18.34%) their resources. It could thus be inferred that majority of the respondents planned their resources moderately.

2.2 Procurement of resources
2.2.1 Availability of resource

Table 5: Distribution of the respondents according to their extent of Availability of resources

Sr. No.	Resources/items	Completely available		Partially available		Not available	
		No	%	No	%	No	%
1	Land	120	100	00	00.00	00	00.00
2	Capital	11	09.17	109	90.83	00	00.00
3	Varieties of planting	112	93.33	08	06.67	00	00.00
4	Tractor	24	20.00	96	80.00	00	00.00
5	Bullock pairs	97	80.83	23	19.17	00	00.00
6	Labours	31	25.84	89	74.16	00	00.00
7	Well / Bore well	116	96.66	00	00.00	04	03.34
8	Electricity	107	89.16	13	10.84	00	00.00
9	Electric motor/wire	120	100	00	00.00	00	00.00
10	Pump sets	120	100	00	00.00	00	00.00
11	Drip set	113	94.16	07	05.84	00	00.00
12	Water harvester	35	29.17	00	00.00	85	70.83
13	Manures	16	13.34	104	86.66	00	00.00
14	Fertilizers	120	100	00	00.00	00	00.00
15	Bordeaux paste	120	100	00	00.00	00	00.00
16	Insecticides / Fungicides	120	100	00	00.00	00	00.00
17	Growth hormones	108	90.00	12	10.00	00	00.00
18	Micro-nutrients	112	93.33	08	06.67	00	00.00
19	Sprayer / duster	120	100.	00	00.00	00	00.00
20	Implements for inter culture operation	108	90.00	12	10.00	00	00.00

21	Implements for pomegranate fruits harvesting	00	00.00	00	00.00	120	100.00
22	Marketing facilities	22	18.34	98	81.66	00	00.00
23	Transporting facilities	24	20.00	96	80.00	00	00.00
24	Availability pomegranate processing industry	00	00.00	00	00.00	120	100.00
25	Pomegranate guard	00	00.00	120	100	00	00.00
26	Technology for taking pomegranate in first year of plantation	108	90.00	12	10.00	00	00.00

It is observed from table 5 that equal majority of the respondents were having complete available resources viz. land, electric motor /wire pump set, fertilizer, Bordeaux paste, insecticide/fungicide and sprayer/ duster (100.00%), well/bore well (96.66%), drip set (94.16%) varieties of planting and micronutrients (93.33%), growth hormones, implements for intercultural operation and technology for taking pomegranate in first year of plantation (90.00%).

Majority of the respondents were having partial availability of pomegranate guard (100.00%) capital (90.83%), manures (86.66%) and marketing facility (81.66%) and nearly two third of the respondents (80.00%) having partially availability of tractor and transportation facility.

2.2.2 Quantity of resource

Table 6: Distribution of the respondents according to their extent of Quantity of resources

Sr. No.	Resources/items	Completely procured		Partially procured		Not procured	
		No	%	No	%	No	%
1	Land	00	00	00	00.00	120	100
2	Capital	88	65.00	23	19.16	09	07.50
3	Varieties of planting	120	100	00	00.00	00	00.00
4	Tractor	00	00.00	96	80.00	24	20.00
5	Bullock pairs	00	00.00	13	10.87	107	89.16
6	Labours	31	25.83	72	60.00	17	14.17
7	Well / Bore well	04	03.34	00	00.00	116	96.66
8	Electricity	120	100	00	00.00	00	00.00
9	Electric motor/wire	00	00.00	00	00.00	120	100
10	Pump sets	22	18.34	00	00.00	98	81.66
11	Drip set	108	90.00	12	10.00	00	00.00
12	Water harvester	00	00.00	35	29.17	85	70.83
13	Manures	48	40.00	72	60.00	00	00.00
14	Fertilizers	98	81.66	22	18.34	00	00.00
15	Bordeaux paste	102	85.00	18	15.00	00	00.00
16	Insecticides / Fungicides	113	94.16	07	05.87	00	00.00
17	Growth hormones	42	35.00	78	65.00	00	00.00
18	Micro-nutrients	57	47.50	63	52.50	00	00.00
19	Sprayer / duster	23	19.17	00	00.00	97	80.83
20	Implements for inter culture operation	112	93.33	08	06.67	00	00.00
21	Implements for pomegranate fruits harvesting	00	00.00	00	00.00	120	100
22	Marketing facilities	22	18.34	98	81.66	00	00.00
23	Transporting facilities	24	20.00	96	80.00	00	00.00
24	Availability pomegranate processing industry	00	00.00	00	00.00	120	100
25	Pomegranate guard	00	00.00	21	17.43	99	82.57
26	Technology for taking pomegranate in first year of plantation	67	55.83	53	44.17	00	00.00

It is observed from table 6 that majority of the respondents had completely procured varieties of planting, and electricity (100.00%) ,Insecticide fungicide (94.16%), Implements for intercultural operation (93.33%), drip set 90.00 per cent and nearly half of the respondents capital (65.00%) and technology for taking pomegranate in first year of plantation (55.83%).

Majority of the respondents had partial marketing facilities, (81.66%) Tractor and transportation facilities (80.00%), labour and manure (60.00%), growth hormones (65.00%) and half of the respondents partially procured micronutrients (52.50%).

Majority of the respondents had not procured resources like land and electric motor wire (100.00%) because they have already available this resource and there is no availability pomegranate processing industries that's why (100.00%) not procured and most of the respondents well (96.66%) and bullock pair (89.16%) not procured because of they have already available with them.

About two third of the respondents not procured water harvester (70.83%).

2.2.3 Time of resources

Table 7: Distribution of the respondents according to their extent of Time of resources

Sr. No.	Resources/items	Procured well in advance		Procured in time		Not procured	
		No	%	No	%	No	%
1	Land	00	00.00	00	00.00	120	100
2	Capital	113	94.16	07	05.84	00	00.00
3	Varieties of planting	116	96.66	04	03.34	00	00.00
4	Tractor	00	00.00	96	80.00	24	20.00
5	Bullock pairs	96	80.00	13	10.84	00	00.00
6	Labours	23	19.17	97	80.83	00	00.00
7	Well / Bore well	00	00.00	00	00.00	120	100
8	Electricity	116	96.66	04	03.34	00	00.00
9	Electric motor/wire	120	100	00	00.00	00	00.00
10	Pump sets	22	18.34	00	00.00	98	81.66
11	Drip set	108	90.00	00	00.00	12	10.00
12	Water harvester	00	00.00	00	00.00	120	100.00
13	Manures	26	21.67	94	78.33	00	00.00
14	Fertilizers	05	04.17	115	95.63	00	00.00
15	Bordeaux paste	06	05.00	114	95.00	00	00.00
16	Insecticides / Fungicides	08	06.67	112	93.33	00	00.00
17	Growth hormones	27	22.50	93	77.50	00	00.00
18	Micro-nutrients	31	25.84	89	74.16	00	00.00
19	Sprayer / duster	118	98.33	02	01.67	00	00.00
20	Implements for inter culture operation	117	97.50	03	02.50	00	00.00
21	Implements for pomegranate fruits harvesting	00	00.00	00	00.00	120	100
22	Marketing facilities	22	18.34	98	81.66	00	00.00
23	Transporting facilities	97	80.83	23	19.17	00	00.00
24	Availability pomegranate processing industry	00	00.00	00	00.00	120	100
25	Pomegranate guard	00	00.00	18	15.00	112	93.33
26	Technology for taking pomegranate in first year of plantation	120	100	00	00.00	00	00.00

It is observed from table 7. that majority of the respondents well in advance, procured the resources were electric motor wire, Technology for taking pomegranate in first year of plantation (100.00%), Speyer / duster (98.33%), implements for intercultural operation (97.50%), varieties of planting and electricity (96.66%), capital (94.16%), drip set (90.00%) and transporting facilities (80.83%).

Majority of the respondents had timely procured The resources viz. fertilizer (95.63%), insecticide / fungicide (93.33%) marketing facility (81.66), labour (80.83%) and tractor (80.00%) only three forth of the respondents for manure (78.33%), growth hormones (77.50%) and micronutrients (74.16%) procured in time very less number of respondents transporting facilities, (19.17%), pomegranate guard (15.00%), capital (5.84%) and variety of planting and electricity (3.34%) respondents procured in times.

Majority of the respondents had not procured the resources in time were land, well, bore well, water harvester, implements for pomegranate fruit harvesting and pomegranate processing industries (100.00%). Most of the respondents not procured pomegranate guard (93.33%), pump set (81.66%) and bullock pair (80.00%).

2.2.4 Place of resources

It is observed from table 7 Majority of the respondents were having availability of the resources on actual field were bullock pairs, labours, well / tube-well and electricity (100.00%), pump set and transporting facility (81.66%), manures (78.33%) less numbers of respondents having water harvester (29.16%), tractor (20.00%), drip set (10.00%) available on actual field. Only (11.16%) of the respondents procured varieties of the planting from government.

Majority of the respondents were procuring the resources from the market on the basis of their availability in market, were electric motor / wire, fertilizer, Bordeaux paste, insecticide / fungicide, growth hormones, micro nutrients, sprayer / duster, implements for intercultural operation, marketing facility, pomegranate guard and technology for taking pomegranate in first year of plantation (100.00%) and varieties of planting (88.33%), tractor (80.00%),drip set (90.00%) also on the basis of availability they procured from market.

Table 8: Distribution of the respondents according to their extent of Place of resources

Sl. No.	Resources/items	Available on own actual Field		Available in / NGOs		Available in Market		Not available Govt	
		No	%	No	%	No	%	No	%
1	Varieties of planting	00	00.00	14	11.67	106	88.33	00	00.00
2	Tractor	24	20.00	00	00.00	96	80.00	00	00.00
3	Bullock pairs	120	100	00	00.00	00	00.00	00	00.00
4	Labours	120	100	00	00.00	00	00.00	00	00.00
5	Well / Bore well	120	100	00	00.00	00	00.00	00	00.00
6	Electricity	120	100	00	00.00	00	00.00	00	00.00
7	Electric motor/wire	00	00.00	00	00.00	120	100	00	00.00
8	Pump sets	98	81.66	00	00.00	22	18.34	00	00.00
9	Drip set	12	10.00	00	00.00	108	90.00	00	00.00
10	Water harvester	35	29.16	00	00.00	00	00.00	85	70.84
11	Manures	94	78.33	00	00.00	26	21.67	00	00.00
12	Fertilizers	00	00.00	00	00.00	120	100	00	00.00
13	Bordeaux paste	00	00.00	00	00.00	120	100	00	00.00
14	Insecticide/ Fungicides	00	00.00	00	00.00	120	100	00	00.00
15	Growth hormones	00	00.00	00	00.00	120	100	00	00.00
16	Micro-nutrients	00	00.00	00	00.00	120	100	00	00.00
17	Sprayer / duster	00	00.00	00	00.00	120	100	00	00.00
18	Implements for inter culture operation	00	00.00	00	00.00	120	100	00	00.00
19	Implements for pomegranate fruits harvesting	00	00.00	00	00.00	00	00.00	120	100
20	Marketing facilities	00	00.00	00	00.00	120	100	00	00.00
21	Transporting facilities	98	81.66	00	00.00	22	18.34	00	00.00
22	Availability pomegranate processing industry	00	00.00	00	00.00	00	00.00	120	100
23	Pomegranate guard	00	00.00	00	00.00	120	100	00	00.00
24	Technology for taking pomegranate in first year of plantation	00	00.00	00	00.00	120	100	00	00.00

Majority of the respondents not availability of implements for pomegranate fruit harvesting and no processing industries (100.00%) and (70.84%) respondents having no availability of water harvester.

Besides conducting study of procurement for various resources, level of procurement as a whole for the resources were worked out and presented in table 8.

Table 9: Distribution of the respondents according to their procurement resources

Sl. No.	Category	Respondents (n=120)	
		Frequency	Per cent
1.	Low (Up to 33.33)	22	18.34
2.	Medium (33.33 to 66.66)	70	58.33
3.	Large (Above 66.67)	28	23.33
	Total	120	100.00

It is obvious from table 9 that more than half (58.33%) majority of pomegranate growers procured resources moderately however, the remaining about nearly equal per cent of them found to be in a high (23.33%) and low (18.34%) category of procurement of resources.

2.3 Utilization of resources

Third dimension of resource management behaviour of pomegranate growers included in the present investigation was utilization of resource.

Table 10: Distribution of the respondents according to their extent of Utilization of resources

Sl. No.	Resources/items	Completely utilized		Partially utilized		Not utilized	
		No	%	No	%	No	%
1	Land	00	00.00	120	100.00	00	00.00
2	Capital	82	68.33	38	31.67	00	00.00
3	Varieties of planting	120	100	00	00.00	00	00.00
4	Tractor	26	21.67	94	78.33	00	00.00
5	Bullock pairs	98	81.66	13	10.84	09	07.50
6	Labours	108	90.00	07	05.84	05	05.83
7	Well / Bore well	120	100.00	00	00.00	00	00.00
8	Electricity	120	100.00	00	00.00	00	00.00
9	Electric motor/wire	120	100.00	00	00.00	00	00.00
10	Pump sets	120	100.00	00	00.00	00	00.00
11	Drip set	120	100.00	00	00.00	00	00.00
12	Water harvester	22	18.33	13	10.84	85	70.83
13	Manures	79	65.83	41	34.17	00	00.00
14	Fertilizers	93	77.50	27	22.50	00	00.00
15	Bordeaux paste	78	65.00	42	35.00	00	00.00
16	Insecticides / Fungicides	91	75.83	29	24.17	00	00.00

17	Growth hormones	63	52.50	57	47.50	00	00.00
18	Micro-nutrients	98	81.66	22	18.37	00	00.00
19	Sprayer / duster	120	100.00	00	00.00	00	00.00
20	Implements for inter culture operation	114	95.00	06	05.00	00	00.00
21	Implements for pomegranate fruits harvesting	00	00.00	00	00.00	120	100.00
22	Marketing facilities	98	81.66	22	18.34	00	00.00
23	Transporting facilities	96	80.00	24	20.00	00	00.00
24	Availability pomegranate processing industry	00	00.00	00	00.00	120	100.00
25	Pomegranate guard	00	00.00	23	19.17	97	80.83
26	Technology for taking pomegranate in first year of plantation	120	100.00	00	00.00	00	00.00

It is observed from table 10 majority of the respondents had completely utilized the resources were varieties of planting, well, electricity, electric motor / wire, pump sets, drip sets, sprayer / duster and Technology for taking pomegranate in first year of plantation (100.00%), implements for intercultural operation (95.00%), labour (90.00%), micro nutrient, bullock pair and marketing facilities (81.66%), transportation facility (80.00%).

About two third of the respondents completely used fertilizer (77.50%) insecticide / fungicide (75.83%) and capital (68.33%). More than half of the respondents completely utilized the resources manure (65.83%) Bordeaux pest (65.00%) and growth hormones (52.50%).

Majority of the respondents had partially utilized land (100.00%), tractor (78.33%) and less no of growth hormones (47.50%) Majority of the respondents were not utilized the Implements for pomegranate fruits harvesting and pomegranate processing industry (100.00) because no availability of these resources.

Besides conducting study of utilization for various resources, level of utilization as a whole for the resources were worked out and presented in table 11

Table 11: Distribution of the respondents according to their utilization resources

Sl. No.	Category	Respondents (n=120)	
		Frequency	Per cent
1.	Low (Up to 33.33)	10	08.33
2.	Medium (33.33 to 66.66)	15	15.50
3.	Large (Above 66.67)	95	79.16
	Total	120	100.00

It is observed from the table 11, it was revealed over three fourth of the majority (79.16%) have utilized resources for pomegranate cultivation to high extent where as few of the them at medium (15.50%) and low (8.33%) their resources.

2.4 Resource management behaviour level of respondents

Resource management behaviour of pomegranate growers was studied on three dimensions namely planning, procurement and utilization, summation of all these dimensions had indicated the overall Resource management behaviour.

Table 12: Distribution of the respondents according to their. Resource management behaviour

Sl. No.	Category	Respondents (n=120)	
		Frequency	Per cent
1.	Low (Up to 33.33)	12	10.00
2.	Medium (33.33 to 66.66)	72	60.00
3.	Large (Above 66.67)	36	30.00
	Total	120	100.00

It is observed from table 12, it is revealed that over half of majority (60.00%) of pomegranate growers have shown about managing the resources to moderate extent, where as, one fourth of them found to be in high (30.00%) and low (10.00%) category of resource management behaviour.

2.5 Summary and Conclusion

2.5.1 Resource management behaviour of pomegranate growers

2.5.1.1 Planning of resources

a. Pre requisites: Majority of respondents decided well in advance the selection of varieties for planting (100.00%).
b. Inputs: Majority of the respondents decided planned in advance the Electric pump and well (100.00%) Irrigation system (90.00%) fertilizer (85.00%) and Tractor (69.16%).
c. Capital: Majority of respondents decided well in advanced amount for purchasing planting material (81.66%), followed by (93.33%) of the respondent decided planned in time the purchasing of manure.
d. Distribution of the respondents according to their level planning resources indicates that half of the respondent (50.00%) of pomegranate growers planned moderately the resources.

2.5.1.2 Procurement of resources

a. Availability of resource: Equal majority of the respondents having completely available resources, followed by partial availability of resources and majority of the respondents not available of pomegranate processing industries and implements for pomegranate fruit harvesting.
b. Quantity of resource: Majority of the respondents completely procured varieties of planting, and electricity (100.00%), followed by partial procurement in marketing facilities, (81.66%) Tractor and transportation facilities (80.00%) and majority of the respondents not procured resources like land and electric motor wire (100.00%).
c. Time of resource: Majority of the respondents not procured resources like land, well, bore well, water harvester, implements for pomegranate fruit harvesting and pomegranate processing industries (100.00%).
d. Place of resources: Less of the respondents having availability of the resources on actual field were bullock pairs, labours, well / tube-well and electricity (100.00%), followed by Majority of the respondents procured resources from market on the basis of their availability in market.
e. Distribution of the respondents according to their procurement resources
f. Indicate that more than half (58.33%) of pomegranate growers procured resources moderately.

2.5.1.3 Utilization of resources

Distribution pertaining to utilization of resources indicate that majority of the respondents (79.16%) have utilized resources for pomegranate cultivation to high extent.

2.5.1.4 Resource management behaviour level of respondents

It is observed that over half of majority (60.00%) of pomegranate growers have shown about managing the resources to moderate extent.

3. Implications

Majority of the of the respondents procure resources moderately, there is a wide scope to achieve higher level of procurement of resources it is necessary to involved farmers in a method demonstration of recent resources and technology for realization This is matter of concern to draw attention of various extension and developmental agencies for taking various programmes at gross root level

Majority of the respondent manage the resources up to moderate extents resource management is prerequisite for planning procurement and use of any farm management inadequate resource certainly affect management They are required to the fully equipped with all resources therefore extension agency may organized demonstration and seminars so as to convince the farmer about important aspects of cultivation of pomegranate

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