

Perceived Advantages and Disadvantages of Different Farm Machinery by the Groundnut Farmers in Chittoor District of Andhra Pradesh



Agriculture

KEYWORDS : Groundnut; farm mechanization; advantages; disadvantages

C. HRUDAY RANJAN

Research Scholar, Dept. of Agricultural Extension, S.V. Agricultural College, Tirupati-517002

P. V. SATHYA GOPAL

Associate Professor, Dept. of Agricultural Extension, S.V. Agricultural College, Tirupati-517002

V. SAILAJA

Assistant Professor, Dept. of Agricultural Extension, S.V. Agricultural College, Tirupati-517002

S.V. PRASAD

Professor & Head, Dept. of Agricultural Extension, S.V. Agricultural College, Tirupati-517002

ABSTRACT

Andhra Pradesh state shares about 1/3rd of groundnut area of the country and occupies 3rd place in production contributing 18.81 percent of production in the country. In Andhra Pradesh, Chittoor district ranks second in the area and production under groundnut. Traditional methods of field operations require huge number of labour and more time, ultimately lead to increase in cost of cultivation, hence farm mechanization is an indispensable tool to avoid such imminent situation. For every cultural operation under groundnut, the scientists have developed different farm implements but their reach into the farming communities was found to be very sparse. Keeping this in consideration present study was aimed to reveal the farmer's perception towards various farm machinery that are available in groundnut cultivation and analyzing each implement in terms of its perceived advantages and disadvantages. Data was gathered from a sample of total 120 farmers through a well-structured interview schedule.

Groundnut is an important oil seed crop in India cultivated in an area of 6.7 million hectares with a production of 7.0 million tonnes annually. Adoption of traditional methods of field operations require huge number of labour and more time, ultimately led to increase in cost of cultivation. To overcome this problem and to perform the field operations at right time, farmers have to go for farm mechanization. The ultimate goal is to bring out seed to seed farm mechanization so as to enable groundnut cultivation more lucrative. Several efforts have been made to introduce different farm machinery for various cultural operations in groundnut. But the adoption of the technologies is becoming questionable due to several reasons viz., lack of financial support, lack of practicability, poor convincing capacity of the implement, non-availability of the implements, soil conditions, coupled with research and extension gaps.

To explore the scope of importance of farm mechanization in groundnut an attempt was made to analyze the perceived advantage and disadvantages of different implements which are recommended for the groundnut cultivation by the experts of ANGRAU. Hence in the present study the investigator probed the respondents about their perceived advantages, perceived disadvantages for each implement. This was measured by using frequency and percentages.

METHODOLOGY

The present study was conducted in Chittoor district of Andhra Pradesh and sample was pooled from twelve villages in four mandals selected purposively. From each mandal a total of 10 respondents were selected randomly who were cultivating groundnut for past three seasons. In this manner a total of 120 groundnut farmers were selected and interviewed through a well-structured interview schedule developed for the study in consultation with the experts of ANGRAU. To explore the scope of importance of farm mechanization in groundnut an attempt was made to analyze the perceived advantages and disadvantages of different implements. The data was collected from the groundnut farmers with the help of open ended questionnaire and as they were the best users of the farm machinery, further they were being asked to share their feedback with regard to each farm implement in terms of its perceived advantages and disadvantages.

RESULTS AND DISCUSSION

The data regarding "Implement wise advantages and disadvan-

tages, as perceived by the groundnut farmers towards different farm machinery" is furnished in below following table 1:

Hand Operated Groundnut Decorticator:

Regarding perceived advantage of hand operated groundnut decorticator, 30.8 per cent of farmers expressed 'time saving' followed by 'drudgery reduction' (26.6%), 'easy to operate' (25.8%) and 'need not be skilled to operate' (21.6%). Concerning perceived disadvantages, 35 per cent of farmers opined 'seed breakage problem' followed by lack of availability of machines (29.1%) and huge quantities cannot be taken up at a time (17.5%).

Power Operated Groundnut Decorticator:

Regarding perceived advantages of power operated groundnut decorticator, 50.83 per cent of farmers expressed 'works rapidly' followed by 'time saving' (57.5%) and 'maximum reduction of drudgery' (48.33%). Concerning perceived disadvantages, 42.5 per cent of farmers expressed 'seed breakage problem' followed by 'rupturing seed coat' (32.5%) and 'power problem' (26.6%).

Groundnut Kernel Grader

Regarding perceived advantages of groundnut kernel grader, 11.66 per cent of farmers quoted 'time saving' and quality seed depending upon size followed by 'works rapidly' (10.83%), 'maximum reduction of drudgery' (8.33%) and 'saving of wages to farmer' (6.66%). Concerning perceived disadvantages both 'lack of availability of machines' (11.66%), 'lack of awareness' (11.66%) followed by 'higher cost' (10.83%) and 'requires expertise' (10%).

Mould Board Plough

Regarding perceived advantages of mould board plough, 74.16 per cent of farmers opined high quality tillage followed by 'breakage of soil hard pan' (70.00%) and 'drudgery reduction' (60.00%). Concerning perceived disadvantages, 61.66 per cent of farmers opined seldom used by farmer followed by 'lack of availability' (30.00%).

Cultivator

Regarding perceived advantages of cultivator, 74.16 per cent of farmers expressed 'maximum reduction of drudgery' followed by 'removal of debris in field' (61.66%), 'highly useful for rec-

ommended spacing' (34.16%) and 'simultaneous levelling' (29.16%). Concerning perceived disadvantages, 59.16 per cent of farmers opined un practicable in closer spacing followed by not useful for spreading type of groundnut variety (40.00%).

Disc Plough

Regarding perceived advantages of disc plough, 61.60 per cent of farmers opined soil turning followed by 'drudgery reduction'(31.60%),removal of debris in field' (19.10%) and 'time saving' (10.00%). Concerning perceived disadvantages, 67.50 per cent of farmers expressed not effective for groundnut followed by soil mounting and improper land undulations (61.66%).

Rotovator

Regarding perceived advantages of rotovator, 73.30 per cent of farmers opined 'maximum saving of wages to farmer' followed by 'simultaneous levelling' (40.80%), 'maximum reduction of drudgery' (26.60%) and 'time saving' (26.60%). Farmer expressed 'requires skill for handling' (20%) followed by 'delicate blades' (16.66%) as perceived disadvantages.

Sub Soiler

Regarding perceived advantages of sub Soiler, 11.60 per cent of farmers expressed 'breakage of hard pan'. Concerning perceived disadvantages, 8.33 per cent of farmers opined 'lack of availability' and 'lack of awareness' followed by 'seldom used by farmer' (7.50%). Farmer suggested nothing with regard to perceived disadvantages of sub Soiler hence nothing was recorded. With regard to needed support 8.33 per cent of farmers expressed on basis of subsidy to the farmer groups.

Leveler

Regarding perceived advantages of leveler, 26.60 per cent of farmers opined 'saving of wages to farmer' followed by 'time saving' (23.30%), 'drudgery reduction'(17.50%) and 'easier to operate' (15.00%). Concerning perceived disadvantages, 60 per cent of farmers expressed levelling may not be done perfectly followed by seldom seeds are tend to damage while levelling (55.00%), 'un practicable in smaller fields' (48.30%) and 'skilled driving is required' (37.50%).

Table 1 perceived advantages, disadvantages of different farm machinery by the groundnut farmers

HAND OPERATED GROUNDNUT DECORTICATOR						POWER OPERATED GROUNDNUT DECORTICATOR							
S. No	Perceived Advantages	F	%	Perceived Disadvantages	F	%	S. No	Perceived Advantages	F	%	Perceived Disadvantages	F	%
1	Easy to operate	31	25.8	Seed breakage problem	42	35	1	Works rapidly	61	50.8	Ruptured seed coat	39	32.5
2	Need not be skilled to operate	26	21.6	Lack of availability	35	29.1	2	Maximum reduction of drudgery	58	48.3	Seed breakage problem	51	42.5
3	Drudgery reduction	32	26.6	Huge quantities cannot be taken up at a time	21	17.5	3	Time saving	69	57.5	Power problem	32	26.6
4	Time saving	37	30.8				4						

GROUNDNUT KERNEL GRADER						MOULD BOARD PLOUGH							
1	Works rapidly	13	10.8	Higher cost	13	10.83	1	Breakage of soil hard pan	84	70	Seldom used by farmer	74	61.66
2	Maximum reduction of drudgery	10	8.33	Lack of availability	14	11.66	2	Drudgery reduction	72	60	Lack of availability	36	30
3	Saving of wages to farmer	8	6.66	Lack of awareness	14	11.66	3	High quality tillage	89	74.1			
4	Time saving	14	11.6	Requires expertise	12	10							
5	Selection of Quality seed	14	11.6										

CULTIVATOR						DISC PLOUGH							
1	Simultaneous levelling	35	29.16	Un practicable in closer spacings	71	59.16	1	Soil turning	74	61.6	Not effective for groundnut	81	67.5
2	Highly useful for recommended spacings	41	34.16	Not useful for spreading varieties	48	40	2	Removal of debris in field	23	19.1	Soil mounting and improper land undulations	74	61.6
3	Maximum reduction of drudgery	89	74.16				3	Drudgery reduction	38	31.6			
4	Removal of debris in field	74	61.60				4	Time saving	12	10			

ROTOVATOR						SUBSOILER							
1	Simultaneous levelling	49	40.8	Delicate blades	20	16.60	1	Breakage of soil hard pan	10	11.6	Seldom used by farmer	9	7.50
2	Maximum reduction of drudgery	32	26.6	Skill required in handling	24	20	2				Lack of availability	10	8.33
3	Time saving	32	26.6				3				Lack of awareness	10	8.33
4	Fine tilth and soil mixing	14	11.6										
5	Saving of wages to farmer	88	73.3										

LEVELER						PLANK							
S. No	Perceived Advantages	F	%	Perceived Disadvantages	F	%	S. No	Perceived Advantages	F	%	Perceived Disadvantages	F	%
1	Drudgery reduction	21	17.5	Levelling may not be done perfectly	72	60	1	Time saving	64	53.3	Skill is needed to operate	12	10
2	Time saving	28	23.3	Seldom seeds are tend to damage	66	55	2	Saving of wages to farmer	31	25.8			
3	Saving of wages to farmer	32	26.6	Skilled driving is required	45	37.5	3	Easy to operate	23	19.1			
4	Easy to operate	18	15	Un practicable in small sized fields	58	48.3							
5	Easy to operate	11	9.1										

LASER LEVELLER						SEED TREATMENT DRUM							
1	Useful in dryland conditions	1	0.83	Higher cost	4	3.33	1	Time saving	14	11.6	Seed breakage problem	59	49.1
2	Many fold increase in yield over a long run	3	2.50	Not effective during rainy days	4	3.33	2	Saving of wages to farmer	25	20.8			
3				Lack of technical expertise	4	3.33	3	Less contact with chemical	54	45			
4				Lack of availability	4	3.33	4	Reduce seed born diseases	68	56.6			
5				Lack of awareness	4	3.33							

FOUR ROW BULLOCK DRAWN GROUNDNUT PLANTER						TRACTOR DRAWN GROUNDNUT PLANTER							
1	Useful for small fields	45	37.5	Cannot maintain uniform row to row spacing	42	35	1	Drudgery reduction	33	27.5	Un practicable in closer spacing	32	26.66
2	Easy to operate	17	14.1	No uniform depth of sowing field	33	27.5	2	Time saving	41	34.1	Lack of availability	29	24.16
3	Time saving	15	12.5	Lack of availability	65	54.1	3	Saving of wages	34	28.3			
4	Drudgery reduction	28	23.3	Lack of awareness	50	41.6	4	Uniform in spacing	25	45.8			

SEED CUM FERTI DRILL						SPRINKLER							
1	Fertilizer wastage can be avoided	76	63.3	Higher cost	39	32.5	1	Increases yield up to 25%	55	45.8	Sprinkler heads need to be shifted from one area to another to cover field	91	75.8
2	Time saving	74	61.6	Un practicable in small sized fields	68	56.6	2	Efficient usage of water	89	74.1	Requires technicality for installation	96	80
3	Saving of wages to farmer	64	53.3				3	Time saving	65	54.1	Loss of pollen and leaves	102	85
4	Reduction of drudgery	29	24.1										

DRIP METHOD						BULLOCK DRAWN INTERCULTIVATION IMPLEMENT							
1	Useful for long duration crops	26	21.6	Not effective for groundnut	103	85.8	1	Time saving	38	31.6	Seldom plants are tend to damage	82	68.3
2	Efficient usage of water	74	61.6	Requires technicality for installation	101	84.1	2	Reduction of drudgery	46	38.3	Lack of availability	59	49.1
3	Time saving	14	11.6				3	Saving of wages	34	28.3	Lack of awareness	41	34.16

TRACTOR DRAWN INTERCULTIVATION IMPLEMENT						STAR WEEDER							
1	Time saving	45	37.5	Lack of availability	51	42.5	1	Time saving	11	9.1	Requires certain moisture content to operate in field	71	59.1
2	Reduction of drudgery	51	42.5	Lack of awareness	35	59.1	2	Saving of wages to farmer	12	10	Not suited to spreading type of varieties	52	43.3
3	Saving of wages to farmer	33	27.5				3	Useful for small fields	54	45	Creates physical torment while operating	107	89.1
							4	Eradicates shallow weeds	71	59.1			

POWER TILLER						KNAPSACK SPRAYER							
1	Multipurpose implement	19	15.8	Lack of availability	18	15	1	Useful for small fields	45	37.5	Not suited for larger fields	98	81.6
2	Time saving	17	14.1	Lack of awareness	20	16.66	2	Easy to operate	69	57.5			
3	Reduction of drudgery	21	17.5	Higher cost			3	Time saving	38	31.6			
4	Saving of wages to farmer	13	10.8				4	Drudgery reduction	69	57.5			
							5	Saving of wages	58	48.3			

MOTORIZED KNAPSACK SPRAYER						POWER SPRAYER							
1	Saving of wages to farmer					23	19.1	1	Drudgery reduction	26	21.6		
2	Easy to operate					46	38.3	2	Saving of wages	48	40		
3	Time saving					33	27.5	3	Easy to operate	39	32.5		
4	Drudgery reduction					65	54.1	4	Time saving	86	71.6		

BOOM SPRAYER						PORTABLE SPRAYER							
1	Covers multiple rows at a time	5	4.16	Un practicable in small sized fields	5	4.16	1	Maximum drudgery reduction	4	3.33	Lack of availability	5	4.16
2	Highly suited for larger farms	5	4.16	Lack of availability	4	3.33	2	Time saving	6	5	Lack of awareness	9	7.5
3	Time saving	4	3.33	Lack of awareness	5	4.16	3	Highly advanced	9	7.5	High cost	8	6.66
4	Maximum drudgery reduction	5	4.16	Un practicable in closer spacing	5	4.16	4						
5				High cost	5	4.16							

ANGRAU BLADE GUNTAKA						ASHA GUNTAKA							
S. No	Perceived Advantages	F	%	Perceived Disadvantages	F	%	S. No	Perceived Advantages	F	%	Perceived Disadvantages	F	%
1	Useful for sandy soils	7	5.83	Un practicable in small sized fields	12	10	1	Requires expertise while operating	3	2.5	Difficult to operate in smaller fields	4	3.33
2	Maximum drudgery reduction	9	7.5	Lack of availability	12	10	2	Maximum drudgery reduction	4	3.33	Lack of availability	4	3.33
3	Time saving	11	9.16	Lack of awareness	11	9.16	3	Time saving	4	3.33	Lack of awareness	4	3.33
4	Highly suited for larger farms	3	2.5	High cost	9	7.5	4	Saving of wages to farmer	4	3.33			
5	Saving of wages to farmer	10	8.3	Requires certain moisture content to operate in field	11	9.16							

TNAU GROUNDNUT HARVESTER						GROUNDNUT DIGGER SHAKER CUM WINDROWER							
1	Highly suited for larger farms	13	10.8	Need to operate under recommended spacings	7	5.83	1	Highly advanced	3	2.50	Lack of awareness	3	2.50
2	Maximum drudgery reduction	9	7.5				2	Requires expertise while operating	3	2.50	Lack of availability	3	2.50
3	Time saving	15	12.5				3	Time saving	3	2.50			
4	Saving of wages to farmer	11	9.16				4	Saving of wages	3	2.50			

GROUNDNUT FRESH POD THRESHER						DRY POD THRESHER							
1	Threshing can be done immediately after harvesting	6	5	Seed breakage problems	5	4.16	1	Time saving	21	17.5	Lack of awareness	17	14.16
2	Time saving	5	4.16	Lack of awareness	8	6.66	2	Saving of wages to farmer	24	20	Lack of availability	13	10.83
3	Saving of wages to farmer	8	6.66	Lack of availability	7	5.83	3				High cost	21	17.5
4	Drudgery reduction	8	6.66	High cost	3	2.50	4				Not useful during rainy days	15	12.5

33. FRESH POD STRIPPER					
1	Time saving	9	7.50	Lack of awareness	8 6.66
2	Saving of wages to farmer	8	6.66	Lack of availability	7 5.83
3	Useful for small fields	4	3.33	Seed breakage problems	8 6.66
4				Small pods remain intact on plant	9 7.50

Mould Board Plough

Regarding perceived advantages of mould board plough, 74.16 per cent of farmers opined high quality tillage followed by 'breakage of soil hard pan' (70.00%) and 'drudgery reduction' (60.00%). Concerning perceived disadvantages, 61.66 per cent of farmers opined seldom used by farmer followed by 'lack of availability' (30.00%).

Cultivator

Regarding perceived advantages of cultivator, 74.16 per cent of farmers expressed 'maximum reduction of drudgery' followed by 'removal of debris in field' (61.66%), 'highly useful for recommended spacing' (34.16%) and 'simultaneous levelling' (29.16%). Concerning perceived disadvantages, 59.16 per cent of farmers opined un practicable in closer spacing followed by not useful for spreading type of groundnut variety (40.00%).

Disc Plough

Regarding perceived advantages of disc plough, 61.60 per cent of farmers opined soil turning followed by 'drudgery reduction'(31.60%),removal of debris in field' (19.10%) and 'time saving' (10.00%). Concerning perceived disadvantages, 67.50 per cent of farmers expressed not effective for groundnut followed by soil mounding and improper land undulations (61.66%).

Rotovator

Regarding perceived advantages of rotovator, 73.30 per cent of farmers opined 'maximum saving of wages to farmer' followed by 'simultaneous levelling' (40.80%), 'maximum reduction of drudgery' (26.60%) and 'time saving' (26.60%). Farmer expressed 'requires skill for handling' (20%) followed by 'delicate blades' (16.66%) as perceived disadvantages.

Sub Soiler

Regarding perceived advantages of sub Soiler, 11.60 per cent of farmers expressed 'breakage of hard pan'. Concerning perceived disadvantages, 8.33 per cent of farmers opined 'lack of availability' and 'lack of awareness' followed by 'seldom used by farmer' (7.50%). Farmer suggested nothing with regard to perceived disadvantages of sub Soiler hence nothing was recorded. With regard to needed support 8.33 per cent of farmers expressed on basis of subsidy to the farmer groups.

Leveler

Regarding perceived advantages of leveler, 26.60 per cent of farmers opined 'saving of wages to farmer' followed by 'time saving' (23.30%), 'drudgery reduction'(17.50%) and 'easier to operate' (15.00%). Concerning perceived disadvantages, 60 per cent of farmers expressed levelling may not be done perfectly followed by seldom seeds are tend to damage while levelling (55.00%), 'un practicable in smaller fields' (48.30%) and 'skilled driving is required' (37.50%).

Plank

Regarding perceived advantages of plank, 53.30 per cent of farmers opined 'time saving to farmer' followed by 'saving of wages to farmer' (25.80%) and 'easier to operate' (19.10%). Concerning Farmer suggested 'skill is needed to operate' (10%) with regard to perceived disadvantage.

Laser Leveller

Regarding perceived advantages of laser leveller, 2.50 per cent of farmers opined many fold increase in yield over a long run followed by useful in dry land conditions (0.83%). Concerning perceived disadvantages, similar 3.33 per cent of farmers ex-

pressed 'higher cost', 'not effective during rainy days', 'technical expertise is needed', 'lack of availability' and 'lack of awareness'.

Seed Treatment Drum

Regarding perceived advantages of seed treatment drum, 56.60 per cent of farmers opined 'reduction in seed born diseases' followed by 'avoids human contact with chemical' (45%), 'saving wages to farmer' (20.8%), 'time saving' (11.60%) and 'easier to operate' (9.10%). Concerning perceived disadvantages, 49.1 per cent of farmers expressed 'seed breakage problem'.

Four Row Bullock Drawn Groundnut Planter

Regarding perceived advantages of 4 row bullock drawn groundnut planter, 37.5 per cent of farmers opined useful for small holdings followed by 'drudgery reduction'(23.30%), 'easier to operate' (14.10%) and 'time saving' (12.50%). Concerning perceived disadvantages, 41.60 per cent of farmers expressed 'lack of availability' followed by 'lack of awareness' (41.60%), cannot maintain uniform row to row spacing (35.00%) and not uniform depth of sowing throughout the field (27.50%).

Tractor Bullock Drawn Groundnut Planter

Regarding perceived advantages of tractor drawn groundnut planter, 45.8 per cent of farmers expressed 'uniformity in spacing' followed by 'time saving' (34.16%), 'saving of wages to farmer' (28.30%) and 'drudgery reduction' (27.50%). Concerning perceived disadvantages, 26.66 per cent of farmers opined un practicable in closer spacing followed by 'lack of availability' (24.16%).

Seed cum Ferti Drill

Regarding perceived advantages of seed cum Ferti drill, 63.30 per cent of farmers opined fertilizer waste can be avoided followed by 'time saving' (61.60%), 'saving of wages to farmer' (53.30%) and 'drudgery reduction' (24.10%). Concerning perceived disadvantages, 56.60 per cent of farmers felt that it is un practicable in smaller fields followed by 'higher cost' (32.50%).

Sprinkler Method

Regarding perceived advantages of sprinkler method, 74.10 per cent of farmers expressed efficient usage of water followed by 'time saving' (54.10%) and increases yield up to 25% (45.80%). Concerning perceived disadvantages, 85 per cent of farmers opined loss of pollen and leaves from plants followed by requires technicality in installation (24.16%) and sprinkler heads need to be shifted from one area to another to cover total field (75.80%).

Drip Method

Regarding perceived advantages of drip method, 61.60 per cent of farmers opined efficient usage of water followed by useful for long duration crops (21.60%) and 'time saving' (11.60%). Concerning perceived disadvantages, 85.80 per cent of farmers opined not effective for groundnut followed by requires technicality in installation (84.10%).

Bullock Drawn Inter cultivation Implement

Regarding perceived advantages of bullock drawn inter cultivation implement, 38.30 per cent of farmers expressed 'reduction in drudgery' followed by 'time saving' (31.60%) and 'saving of wages to farmer' (27.50%). Concerning perceived disadvantages, 68.33 per cent of farmers opined seldom plants are tend to damage followed by 'lack of availability' (49.10%) and 'lack of awareness' (34.16%).

Tractor Drawn Inter cultivation Implement

Regarding perceived advantages of tractor inter cultivation implement, 42.50 per cent of farmers expressed reduction in drudgery followed by 'time saving' (31.60%) and 'saving of wages to the farmer' (27.50%). Concerning perceived disadvantages, 59.10 per cent of farmers opined 'lack of awareness' followed by 'lack of availability' (42.50%).

Star Weeder

Regarding perceived advantages of star weeder, 59.10 per cent of farmers expressed eradication of shallow weeds followed by

useful for small fields (45%), 'saving of wages to farmer' (10%) and 'time saving' (9.10%). Concerning perceived disadvantages, 89.10 per cent of farmers expressed it creates physical torment to farmer followed by requires certain moisture content to operate in field (59.10%) and not suited for spreading type of varieties (43.30%).

Power Tiller

Regarding perceived advantages of power tiller, 17.50 per cent of farmers expressed reduction in drudgery followed by multi-purpose implement (15.83%), 'time saving' (14.16%) and 'saving of wages to farmer' (10.80%). Concerning perceived disadvantages, 17.50 per cent of farmers opined higher cost followed by 'lack of awareness' (16.66%), 'lack of availability' (15.00%).

Knapsack Sprayer

Regarding perceived advantages of knapsack sprayer, 57.50 per cent of farmers expressed 'easier to operate' and 'drudgery reduction' followed by 'saving of wages to farmer' (48.30%), 'useful for small fields' (37.50%) and 'time saving' (31.60%). Concerning perceived disadvantages, 81.60 per cent of farmers opined not suitable for large fields.

Motorized Knapsack Sprayer

Regarding perceived advantages of motorized knapsack sprayer 54.10 per cent of farmers expressed 'drudgery reduction' followed by 'easier to operate' (38.30%), 'time saving' (27.50%) and 'saving of wages to farmer' (19.10%). Concerning perceived disadvantages nothing was recorded during study.

Power Sprayer

Regarding perceived advantages of power sprayer, 71.60 per cent of farmers expressed 'time saving' followed by 'saving of wages to farmer' (40.00%), 'easy to operate' (32.50%) and 'drudgery reduction' (21.60%). Concerning perceived disadvantages nothing was recorded during study.

Boom Sprayer

Regarding perceived advantages of boom sprayer, 4.16 per cent of farmers expressed it covers multiple rows at a time, highly suitable for larger farms and 'maximum drudgery reduction' followed by 'time saving' (3.33%). Concerning perceived disadvantages, 4.16 per cent of farmers responded that it is un practicable in smaller fields, 'lack of awareness', difficult in closer spacing and high cost followed by 'lack of availability' (3.33%).

Portable Sprayer

Regarding perceived advantages of portable sprayer, 7.50 per cent of farmers expressed highly advanced followed by 'time saving' (5.00%) and 'maximum drudgery reduction' (3.33%). Concerning perceived disadvantages, 7.50 per cent of farmers responded that 'lack of awareness' followed by 'high cost' (6.66%) and 'lack of availability' (4.16%).

ANGRAU Blade Guntaka

Regarding perceived advantages of ANGRAU blade guntaka, 9.16 per cent of farmers opined 'time saving' followed by 'saving wages to farmer' (8.30%), 'maximum drudgery reduction' (7.50%), useful for sandy soils and highly suited for larger farms (2.50%). Concerning perceived disadvantages, 10 per cent of farmers responded that 'lack of availability' and un practicable in smaller fields followed by 'lack of awareness', requires certain moisture content to operate in field (9.16, 9.16%) and 'high cost' (7.50%).

Asha Guntaka

Regarding perceived advantages of Asha guntaka, 3.33 per cent of farmers expressed 'maximum drudgery reduction', 'time saving' and 'saving of wages to farmer' followed by 'require expertise while operating' (2.50%). Concerning perceived disadvantages, 3.33 per cent of farmers responded that 'lack of availability', 'lack of awareness' and 'difficult to operate in smaller field'.

TNAU Groundnut Harvester

Regarding perceived advantages of TNAU groundnut harvester, 12.50 per cent of farmers expressed 'time saving' followed by 'highly suited for larger farms' (10.80%), 'saving of wages to farmer' (9.16%) and 'maximum drudgery reduction' (7.50%). Concerning perceived disadvantages, 5.83 per cent of farmers responded that it will be helpful under recommended spacing only (5.83%).

Groundnut Digger Shaker cum Windrower

Regarding perceived advantages of groundnut digger shaker cum windrower, 2.50 per cent of farmers opined highly advanced, 'require expertise while operating', 'time saving' and 'saving of wages to farmer'. Concerning perceived disadvantages, 2.50 per cent of farmers responded that 'lack of awareness' and 'lack of availability'.

Groundnut Fresh Pod Thresher

Regarding perceived advantages of Groundnut fresh pod thresher, 6.66 per cent of farmers felt 'saving of wages to farmer', 'drudgery reduction' followed by product can be threshed immediately after harvesting (5.00%) and 'time saving' (4.16%). Concerning perceived disadvantages, 6.66 per cent of farmers responded that 'lack of awareness' followed by 'lack of availability' (5.83%), 'seed breakage problem' (4.16%) and 'higher cost' (2.50%).

Dry Pod Thresher

Regarding perceived advantages of dry pod thresher, 20 per cent of farmers felt 'saving of wages to farmer' followed by 'time saving' (17.50%). Concerning perceived disadvantages, 17.50 per cent of farmers responded that 'higher cost' followed by 'lack of awareness' (14.16%), 'not useful during rainy days' (12.50%) and 'lack of availability' (10.83%).

Fresh Pod Stripper

Regarding perceived advantages of fresh pod stripper, 7.50 per cent of farmers felt 'time saving' followed by 'saving of wages to farmer' (6.66%) and 'useful for small fields' (3.33%). Concerning perceived disadvantages, 7.50 per cent of farmers responded that small pods remain intact to the plant followed by 'lack of awareness', 'seed breakage problem' (6.66%) and 'lack of availability' (5.83%).

CONCLUSION

Each implement has its own advantages and disadvantages as perceived by the groundnut farmers. The researchers, extension functionaries and policy makers has to reorient their action plans and strategies in line with the perceived advantages and disadvantages towards attaining the objective of farm mechanization in groundnut.

REFERENCE

FAO. 2010. World crop statistics. | www.indianstat.com |