

## Åuk fgekpy çnšk ea i 'kkyu eavfnokl h x̄tj fdI kuad dh I gHxrk plnu dök jk; \*] [ktku fl g ,oa vkyrh]

Ms jh foLrkj çHkkx] jk"Vh; Ms jh vuq U/kku I tFkk] djuky& 132 001] gfj ; k.kk] Hkkjr  
i klr%viy 2019 Lohdr%ebz2019

### I kjkak

Hkkjr] nfu; k eavfnokl h vcknh okyk nlijk l cl scMk nsk gA fgekpy çnšk ds^x̄tj^ vfnokl h fdI ku vHkh Hkk ikyu vks nuk ,oanuk mRi knkd dh fcØh dsvi us i qrsih 0; ol k; eayxgA ^x̄tj^ tutkfr dk ceik 0; ol k; i 'kkyu ,oaMs jh gsrFkk ; g [kk] vkkFkjd] i ; kbj.k] I tFkkxr] LokLF; ] 'k{kjd] I kekftd] vol jpuRed ,oai ksk.k l j{kk dsI kFk l kFk vfnokl h x̄tj kadh vktfodk Hkh l quf'pr djrk gA xjhc l sxjhc vfnokl h ^x̄tj^ fdI ku dsikl Hkh Mjh i 'kqgrsgitksmlgaxjhch l sckgj fudyuseenn djrsgA xk; ] Hkk vks cdjh tS sMs jh i 'kkyu vfnokl h ^x̄tj^ fdI kuad dh i 'kkyk ds egRoiwz i 'kqgftudk vfnokl ; kads vFk; oLFkk eacgr ; kxnu gA orEku v/; uj i 'kkyu 0; ol k; eavfnokl h ^x̄tj^ fdI kuad dh Hkkxhnkjh dsfo'ySk.k ij tkj fn; k x; k gA ; g v/; u fgekpy çnšk dsÅuk ftyssevk; kstr fd; k x; k FkkA MkVk ,df=r djusdsfy, ] Åuk ftysdsnsly,dkslvEc ,oa xxjV/ dk crjrh <k l sp; fur fd; k x; k rFkk cR; d ly,d l s nks& nksxkoadk p; u fd; k x; kA bl çdkj Åuk ftysl sdly pkj xkoka dk crjrh <k l sp; u fd; k x; kA l jfpr l k{kRdkj vuq ph dk mi ; kx djds; k-fPNd : i l sp; fur dly vLI h 180% ^x̄tj^ fdI kuad s, d= fd; k x; k FkkA nuk nuj f[kyku] LokLF; ns[kkky vks çcaku] çtuu vks Hkk ikyu l s l cikr i gyypkaeaHkkxhnkjh vf/kd ns[kh xbA

'kOn dph %vfnokl h fdI ku] fu; Zk ysk] Hkkxhnkjh i 'kkyu] nuk mRi knuA

Bhartiya Krishi Anushandhan Patrika, 34(2): 112-117, 2019

## Participation of Tribal “Gujjar” farmers in animal husbandry and dairyng in Una, Himachal Pradesh

Chandan Kumar Rai\*, Khajan Singh and Arti<sup>1</sup>

Dairy Extension Division, ICAR-National Dairy Research Institute, Karnal, Haryana-132 001, India

Received: April 2019

Accepted: May 2019

### ABSTRACT

India has the second largest population of the tribal population in the world. “Gujjars” tribes of H.P. still stick to their ancestral profession of buffalo rearing and selling of milk and milk products. Animal husbandry and dairyng (AHD) signifies as the major occupation of “Gujjars” tribe and contribute to food, economic, environmental, institutional, health, educational, social, infrastructural, nutritional security and thus in total to the livelihood security of tribes. Even the poorest of the poor tribes often have livestock that can help them along a pathway out of poverty. Dairy animals like cattle, buffaloes and goat are important species of livestock production systems of the tribes which contribute significantly to the rural economy. This study emphasized the analysis of participation of tribal “Gujjar” farmers in animal husbandry occupation. The study was conducted in Una district of Himachal Pradesh. Data were collected from 80 randomly selected “Gujjar” farmers from two villages of Amb block and two villages of Gagret block using structured interview schedule. The participation was observed more in the aspects related to milking, feeding, health care and management, breeding and buffalo rearing.

**Key words:** AHD, Decision-making, Participation, Tribal Farmer.

\*Correspondence Email: chandaniashbu@gmail.com

<sup>2</sup>DES&M Division, ICAR-National Dairy Research Institute, Karnal, Haryana-132001, India.

Ms jh vFkz kkl=] l k[; dh ,oa çcaku çHkkx] jk"Vh; Ms jh vuq U/kku

I tFkk] djuky] gfj ; k.kk & 132001] Hkkjr

### çLrkouk

fo'o eä vlfnokl h tul j[; k ds ekeys ea Hkkj r nü jk l cl s cMk nsk gä vlfnokl h vHkh Hkh vk/kjud nfu; k dh thou'ksy l svNirsgä , Eksky, th dsfud ds 'kndksk dsvuñ kj] vlfnokl h , d l kekftd l ey gä tks vkerş ij , d fuf'pr {ks-} cksy] l kL-frd l e: i rk vks , dh-r l kekftd l xBu ds l kfk jgrsgä fgekpy çnsk , d mÜkj Hkkj rh; jkT; gä tgkatul {; k dh fHkkurk ds l kfk jkT; dsfotklu fglI kæafgimvks eñlye ^xñtjks dh , d cMk vkcñh fuokl djrh gä ^xñtj^ 'kñn dh mri flk ^xkpj^ l sgþ gä ftl dk eryc gä^xk; pjkus okyl^100] 1896½ tks; g n'kñrk gsfld xñtj vlfnokl h ey : i os xk; j [kus okys FkA xñtj vlfnokl ; ka dk çedk 0; ol k; i 'kñkyu , oa nñ/k mRiknu gä ftl dk [kk ] vlfFk] LokLF; ] 'kñf.kd , oai ksk.k l j{kks eegroi wkl ; kñnu gä vks bl çdkj Mjñ vlfnokl ; kads vktfodk dk l kku gä Åuk ftvk nf{k.kh fgekpy çnsk dk , d igkMk {ks- gä tgk vf/kdkäkr%eflye xñtj vlfnokl h jgrsgä mudsvktfodk dk ef; l kku xk; ] Hks rFkk cdjh ikyu gä osT; knkrj vui <+gårFkk nñk vks nñk mRiknu djdse; l ekt eegroi wkl ; kñnu nñsgäjk; o vu; ] 2019/A

### I kexh , oa i jh{k.k fof/k

oržku 'kñk mÜkj Hkkj r ds Åuk ftvk eaf; k x; k tksfgekpy çnsk jkT; dk , d igkMk {ks- gä ; gä vlfnokl h xñtjks dh l {; k vf/kd gä dk p; u fd; k x; kA i ñ% çR; d l y,d l snk&nksxkpsdk p; u fd; k x; kA bl rjg dly pkj xkplg vEc l y,d l s /k jxñtjks , oaol fju rFkk xxjV l y,d l svEck/k , oal åkub] dk p; u fd; k x; kA çR; d xkø l sU; ure , d nñkk: i 'kñj [kus okys xñtj vlfnokl h mÜkrjnkrkvks dk crjrh <& l s puko fd; k x; kA vr eä , spNd ueñk rduhd dk mi; kx djdçük; d xkø l s 20 rFkk dly 80 mÜkrjnkrkvks dk p; u fd; k x; kA l jfpr l k{kRdkj vuñ ph dks/; ku eaj [ks gä vu/; u ds mñs; kads r\$ kj fd; k x; kA

### ifj.kk , oa foopuk

vlfnokl h xñtj fdl kuka dh l kekftd , oa vlfFk fo'kkrk mÜkj nkrf dfl h Hkh l kekftd vuñ dku vflk; fä

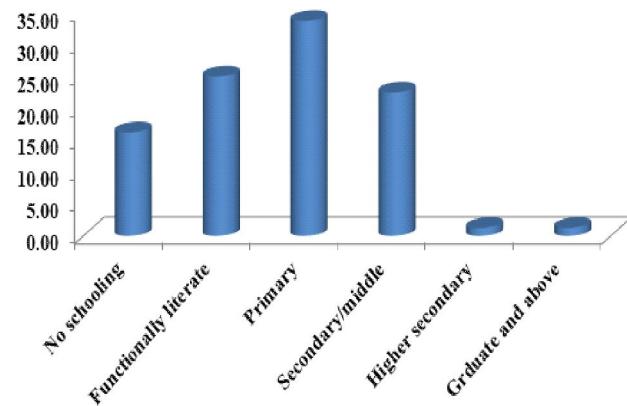
rkydk 1%; 'kñkyu eamudh Hkkxhnkjh dsvuñ kj vlfnokl h xñtj fdl kuka dfl fooj .ka

i 'kñkyu	Is I EcflUkr	fö; k&dyki	vkoñr	çfr 'kr
<b>1-[kku&amp;iku , oa pkjk çcaku</b>				
xHkkzrh Hks dksf[kyukuk		60	75-00	
dVMs dks f[kyukuk		50	62-50	
>k/s dksf[kyukuk		50	62-50	
nkuk dk feJ.k f[kyukuk		70	87-50	
eoñk dk iku fi ykuk		48	60-00	
l lks pkjs dk l o/ku		80	100-00	
pkjk , oankus dk j [k j [kko		80	100-00	
<b>2&amp;foÜkh; Hkkxhnkjh</b>				
i 'kñvflkys[kka dk j [k&j [kko		5	6-25	
Ms jh l gdkjh ea Hkkxhnkjh		48	60-00	
...k ysk		30	37-50	
tkuojka ds fy, chek		5	6-25	
<b>3&amp;nñkk: i 'kñka dk çcaku</b>				
-f=e xHkkzku		75	93-75	
uj cNMk dk cf) ; kdj.k		35	43-75	
xHkkzku ds nñku nñkky		30	37-50	
çtuu ds l e; ea nñkky		60	75-00	
cNMk ds Nñkuk çcaku		56	70-00	
<b>4&amp;LokLF; nñkky vks</b>				
i 'kñku çcaku				
?kÿq Lrj i j vke chekj; ks dk funku		20	25-00	
chekj i 'kñka dh nñkky		78	97-50	
l Øfer dMs dk fui Vlkj		10	12-50	
>kMñnu] Qkbz vks Hks @xk; ka dks ugyuk		5	6-25	
Vhdk		80	100	
<b>5&amp;nñ/k mRikn çcaku</b>				
eof'k; ka l s nñk fudyuk		80	100	
l gdkjh l fkkvks }jkj nñk dh fcØh		23	28-75	
Lo; a nñk mRikn cukdj cpuk		4	5-00	
nñk dks ?kj ?kj tkdj cpuk		20	25-00	

dh ey bdkbz gä bl fy,] mÜkj nkrvks dh i "Bkkie dk o.ku djuk l cl segroi wZgä D; kfd l kekftd&ö; fäxr vks l kekftd&vlfFk y{k.k i 'kñkyu eegroi wklHkkedk fulkkrs gä l jfpr l k{kRdkj vuñ ph dk ç; kx djds , df=r Mkvk dk fo'ysk.k fd; k x; kA fp= 1 eä; g nñk x; k fd vf/kdkäk mÜkj nkrf 165-00 çfr 'kr½ e/; e vks; q oxz l s I EcflUkr FkA ml dsckn 27-50 çfr 'kr o) oxz½ o'kz l s T; knk½ l s 17-50 Qhl nh ; qk oxz l s I EcflUkr FkA bl dk eryc gädh ; qk vks cijsyks i 'kñkyu dsdk; k eade 'kkfey FkA oekzo vu; 1/2016½ dsbl h çdkj ds 'kñk eahh i k; k x; k dh vf/kdkäk 165-00 çfr 'kr½ mÜkj nkrf e/; e vks; qoxz l s I EcflUkr FkA fp= 2 l s; g nñk x; k fd xñtj vlfnokl h l emk; eafgykvks dh Hkkxhnkjh 1/8-75 çfr 'kr½ i #kñ 81-25 çfr 'kr½ ds epkcs dkQh de

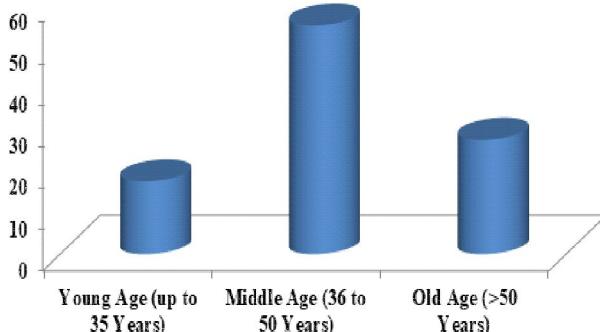
## Hkjrh; dfrk vuq tkku if=dk

Fka bI dk çefk dkj.k vknokl h bykdkaf'k{kk 0; oLFkk dk ux.; gsk gks l drk gftl dsdkj.k vf/kdkak ?kjks esif"k gh ?kj dsef[k; k FKA U; k 1/2009/2 Mj k o vU; ] 1/2010/2 usHkh vi us'kksk ea, l k gh ik; kA fp= 3 ; g n'kirk gS dh mukjnkrkvks ea l s doy 1-25 çfr'kr vknokl h fdI ku gh ckj goh ; k Lukuld rd dh i <kbZfd; sgA 22-50 çfr'kr fdI ku fah i kl FksrFkk 33-37 çfr'kr çkfkfed rd dh f'k{k xg.k fd; sFks , oa25-00 çfr'kr vknokl h fdI ku çdk; kred : i l s l k{kj FKA bI 'kksk l s; g Hkh i rk pyk dh 16-25 çfr'kr xitj vknokl h fuj{kj Fks tks i <us fy [kus ea vI eFk FKA fuj{kjka ds de çfr'kr dk i 'kikyu dsfodkl ij l dkjuked çHko i Mf gSrFkk Mjh ds{ks eacgr l suohuhdj.k gq gA ifjokj dk vdkdj dk ifj.kke fn[krk gSdh %p= 4% vf/kdkak xitj mukjnkrk 1/50-00 çfr'kr%e/; e vdkdj dsifjokj l sFk tcfid 35-00 çfr'kr vks 15-00 çfr'kr mukjnkrk Øe'k%Nks4 vdkdj vks cMs vdkdj dsifjokj l sFk tck ifj.kke l s rk pyrk gSdh %p= 5%vf/kdkak çfrfkn; ks 1/5-00 Qhl nhz dsifjokj esif"k & L=h vuqkr e/; e oxZdk Fkk tcfid

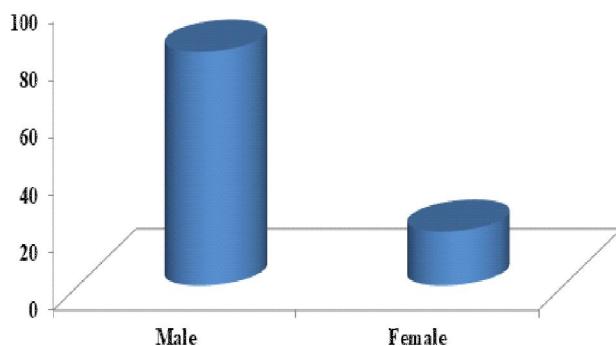


fp= 3%'k{kf.kd fLFkr ds vuq kj mukjnkrkvks dk fooj .ka

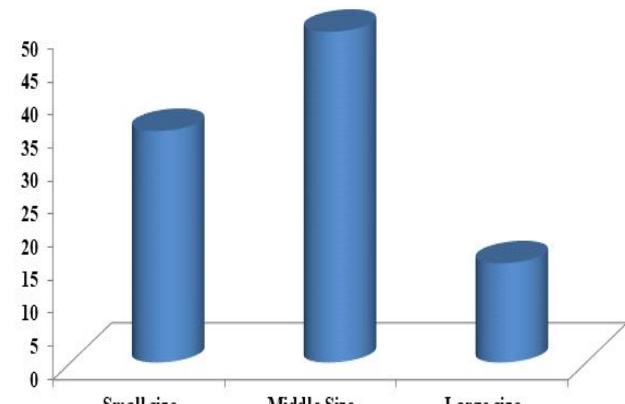
13-75 , oa11-25 çfr'kr vknokl h fdI ku Øe'k%U; ure rFkk vf/kdre i #&L=h vuqkr oxZ l sI Ec/kr FKA fdI h Hkh ifjokj ea i #&L=h dk vuqkr ifjokj ds vkkfkd fdkl dksçHkfor djrk gA fp= 6 ds vuq kj vf/kdkak xitj vknokl h 1/46-25 çfr'kr%ds i kl e/; e vdkdj 1/4&7/2 dsnqk: i 'kqFk tcdh 31-25 çfr'kr vks 22-50 çfr'kr mukjnkrkvks i kl Øe'k%Nks4 rFkk cMf7 > M FKA oekzo vU; 1/2016/2 usHkh vi us'kksk ea, l k gh ifj.kke ik; kA fp= 7 l s; sI e>k tk l drk gSdh mukjnkrkvks dschp] vf/kdkak mukjnkrk; 1/53-75 çfr'kr%çfrfnu 12-52&21-25 yhVj dschp n/k dk muki knu fd; § tcdh 15-00 çfr'kr 12-52 yhVj l sde vks 31-25 çfr'kr mukjnkrk; § 21-25 yhVj l s vf/kd n/k dk muki knu fd; § tks ; g n'kirk gSdh xitj vknokl h fdI ku i 'kikyu vks n/k muki knu esdkQh fuiqk gA oréku tck l s; g i rk pyrk gSdh %p= 8%55-00 çfr'kr fdI ku çfrfnu 10-09 l s18-



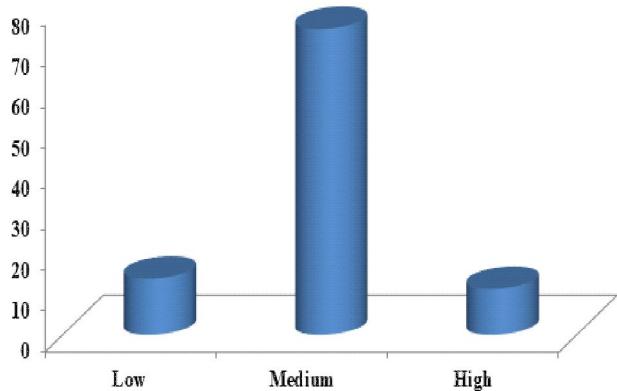
fp= 1%vk; q l e g ds vuq kj mukjnkrkvks dk fooj .ka



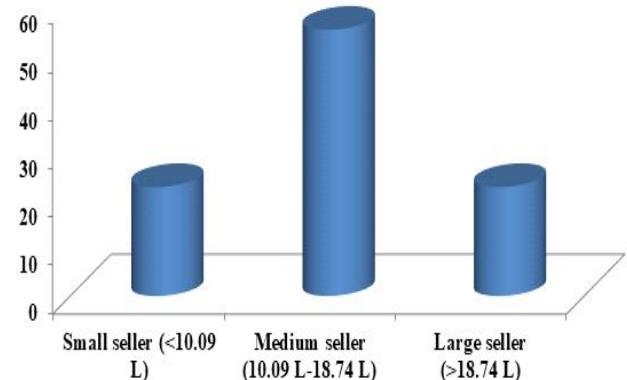
fp= 2%fyak l e g ds vuq kj mukjnkrkvks dk fooj .ka



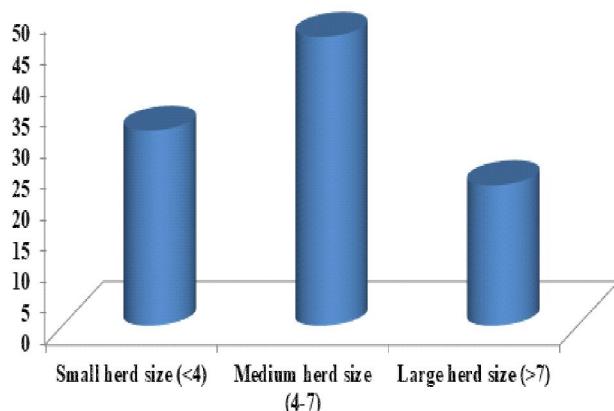
fp= 4%ifjokj ds vdkdj ds vuq kj mukjnkrkvks dk fooj .ka



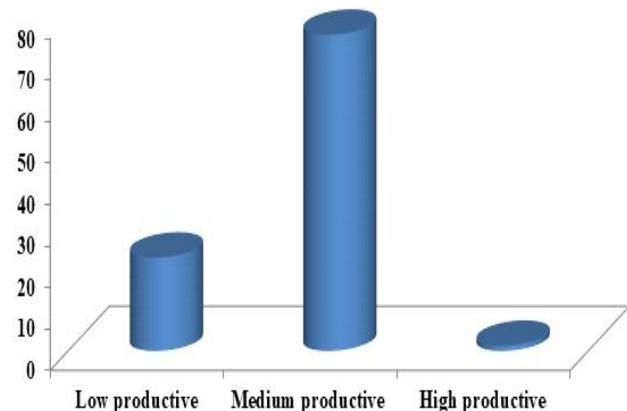
fp= 5& fy&ku&kr dsvu& kj m&lkjnk&kv&dk fooj .kA



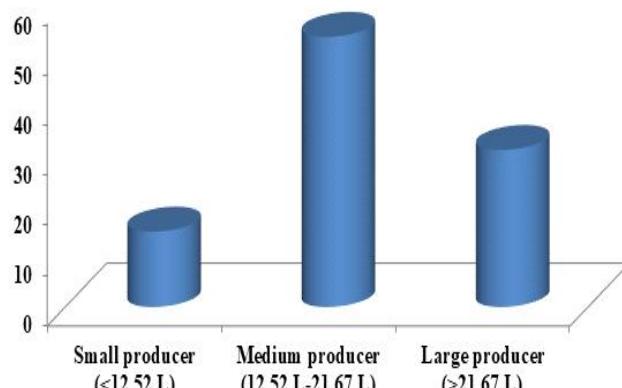
fp= 8& n&/k fo&: dsvu& kj m&ukrjnk&kv&dk fooj .kA



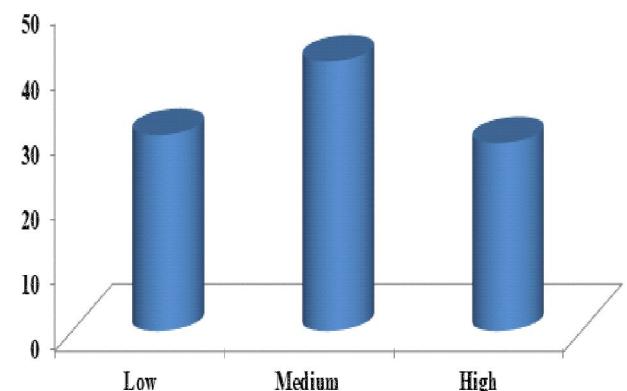
fp= 6% i 'kq>qM dsvkdkj dsvu& kj m&lkjnk&kv&dk fooj .kA



fp= 9% m&üi knd i 'kqvu&kr dsvu& kj m&lkjnk&kv&dk fooj .kA



fp= 7% n&/k m&üi knu dsvu& kj m&lkjnk&kv&dk fooj .kA



fp= 10% l kekfd Hkkxhnkjh dsvu& kj m&lkjnk&kv&dk fooj .kA

74 y&Vj n&/k çfrfnu cprsf&tcf& 22-50 Qhl nh m&lkjnk& 10-09 y&Vj l s de n&/k cp i krs f&s , oa 22-50 çfr'kr fd&l ku çfrfnu 18-74 y&Vj l sT; knk n&/k cp nsjsf& fp= 9 l s; g i rk pyrk g&dh vf/kdk&k fd&l ku 176-25 çfr'kr% e/; e oxl&dsi 'kqm&ki knd vu&kr okysf& tcfd 22-50 , oa 1-25 çfr'kr fd&l ku Øe'k%fu&u v&g m&p i 'kq m&üki knd

v&u&kr okysf& l kekfd Hkkxhnkjh dk i fj .kke fp= 10% ; g crkrk g&dh m&ukrjnk&kv&ea l s 41-25 çfr'kr e/; e l kekfd Hkkxhnkjh nsjsf& tcfd 30-00 çfr'kr de l kekfd Hkkxhnkjh dj jgsf&sr& 28-75 çfr'kr m&p l kekfd Hkkxhnkjh nsjsf& noh 1/2013% usH&h vi us 'kk& l keku i fj .kke i k; kA

**fofHkklu xfrfof/k; ka ea vknokl h xitj fdI kuka**  
**dh Hkkxhnkjh% [kku&i ku , oapkjk çcaku] foÜkh; çcaku]**  
**nqkk: i 'kykadk çcaku] LokLF; ns[kkky vlg i 'kku çcaku**  
**, oan/k mRi kn çcaku rFkk cI LdJ.k vlg nuk dsfoØ;**  
**I fgr Ms jh Qkfeñ dh vuq xfrfof/k; ka ea vknokl h**  
**fdI kuks }jkj vnk dh x; h Hkfedk dk fo'yš.k fd; k x; k**  
**vlg rkfydk 1 ea n'kkz k x; kA vknokl h fdI kuks dh**  
**Hkkxhnkjh dk i 'kyksds [kku&i ku , oapkjk çcaku ds{ks-**  
**esfd; k x; k rFkk rkfydk 1 eaçLrj fd; k x; k tks; g**  
**çnf'kr djrk gSdh vf/kdkák fdI ku I [kspljsdk I o/kü**  
**1/100 çfr'kr½ pkjk , oankusdk j [k j [kko 1/100 çfr'kr½**  
**nkuk dk feJ.k f[kykuk 1/87-50 çfr'kr½ xHkkbrh Hk dk**  
**f[kykuk 1/75-00 çfr'kr½ >k/s, oadVMsdsf [kykuk 1/62-50**  
**Qhl nh/rFkk eoskh dks ikuh fi ykuk 1/60-00 çfr'kr½ dk; k**  
**ea'kkfey FkA bl h rjg dsifj.kke pk; y o vu; 1/2009½**  
**rFkk ykgkjh o vu; 1/2012½ }jkj ckjr fd; k x; kA bl rjg**  
**foÜkh; Hkkxhnkjh dsfo'ysk.k I sirk pyrk gSdh \_\_.k yes**  
**1/87-50 çfr'kr½ i 'kqvflky [kakdk j [k&j [kko 1/6-25 Qhl nh/rFkk**  
**tkuojkdsfy, chek 1/25 çfr'kr½ djokuseavknokl h**  
**fdI ku dke Hkkxhnkj Fk, oa Ms jh I gdkjh 1/60-00 çfr'kr½**  
**ea vf/kd Hkkxhnkj Fks A rkfydk 1 eaçLrj MKVh I sirk**  
**pyrk gSdh vknokl h fdI ku nqkk: i 'kykadk çcaku ij**  
**Hkh fo'k /; ku ns[rFkk 93-75 çfr'kr fdI ku -f=e**  
**xHkkZku dksvi uk; A bl dsvykok rkfydk 1 I sHkh irk**  
**pyrk gSdh vf/kdkák mUkjnkrk ctuu dsle; eans[kkky**  
**1/75-00 çfr'kr½ cNMds Nmuk çcaku 1/70-00 çfr'kr½**  
**uj cNMkakcf); kdj.k 1/43-75 çfr'kr½ rFkk xHkkBLFkk**  
**dsnqku ns[kkky 1/87-50 Qhl nh/e a'kkfey FkA mi; k**  
**i f. kke fudy fl g 1/2011½ dsifj. kke dsvuq i gA; g**  
**Hkh ns[kk x; k dh vknokl h fdI kuksadoy 6-25 Qhl nh**  
**>kMwnsj I Qkbz vlg Hk @xk; kA dks ugyukuk ej 12-50**  
**Qhl nh I Øfer dMsdk fui VkjsearFkk 25-00 Qhl nh ?kjsyq**  
**Lrj ij vke chekfj; ks dk funku djus ea'kkfey FkA**  
**mi; k i f. kke Ogkjk o vu; 1/2016½ dsifj. kke dsvuq i**  
**gA vf/kdkák fdI ku Vhdkdj.k 1/100 çfr'kr½ rFkk chekij**  
**i 'kykadk ns[kkky 1/87-50 çfr'kr½ djuseavR; f/kd : i**  
**I s 'kkfey FkA rkfydk 1 }jkj n/k mRi kn çcaku ds**  
**fo'yš.k I s; g irk pyrk gSdh 100 çfr'kr fdI ku Lo; a**  
**eof'k; kA l snuk fudkyus ea'kkfey Fks , oa 25-00 çfr'kr**  
**fdI ku nuk ?kj&?kj tkdj cprss Fks vlg 28-75 çfr'kr**  
**fdI ku nuk dh fcØh I gdkjh I tFkkvks }jkj djrs FkA**  
**rkfydk 1 I s; g Hkh irk pyrk gSdh 5-00 çfr'kr fdI ku**

, s sHkh Fks tksnuk I smui kn t\$ sfeBkbz k cukdj cpusea  
 'kkfey FkA

### fu"d"kl

fgekpy çnşk dsxÜtj vlfnoi h fdI kuksdse/; fd; sx, bl v/; ; u I s; g fu"d"kl fudyk tk I drk gS  
 dh i 'kkyu , oan/k mRi knu dk xitj fdI kuksdsthough  
 dk vftklu vax gS rFkk os thfodkiktu ds fy, bl h  
 0; ol k; ij fuHkj gSA os I fØ; : i I sMs jh Qkfeñ ds  
 fofollu i gyvkaeats si 'kku çcaku] [kku&i ku , oapkjk  
 çcaku] nqkk: i 'kykadk çcaku] LokLF; ns[kkky vlg  
 i 'kku çcaku , oan/k mRi kn çcaku vlfnoi ea'kkfey gA  
 os fuEufyf[kr i 'kkyu xfrfof/k; ka ea vf/kd Hkkxhnkjh  
 i sk djrs gS t\$ & xHkkbrh Hk dk f[kykuk] dVMs dk  
 f[kykuk] nkuk dk feJ.k f[kykuk] I [kspljsdk I o/kü]  
 pkjk , oankusdk j [k j [kko] Ms jh I gdkjh eaHkkxhnkjh  
 -f=e xHkkZku] uj cNMkakcf); kdj.k xHkkBLFkk ds  
 nqku ns[kkky] ctuu dsle; eans[kkky] ?kjsyqLrj ij  
 vke chekfj; ksdk funkuj chekij i 'kykadk ns[kkky] Vhdk  
 eof'k; kA l snuk fudyuKA I gdkjh I tFkkvks }jkj nuk dh  
 fcØh rFkk Lo; an/k mRi kn cukdj cpukA cf'k{k.k dk; kØek  
 çn'kjh vlg vknokl h i 'kkydks ds fy, i 'kkyu ds  
 fofHkklu i gyvka I s I Eci/kr I seukj dh 0; oLFkk fofHkklu  
 cI kj , tñ; kavlg ulfr fuekzvks }jkj fd; k tkuk pkfg, A  
 vko'; d fuoskakd vki firj chek vlg fofHkklu Mjh mRi knka  
 dsfy; k cktkj mi yCk djkdj Mjh Qkfeñ dh pkfr; k  
 dks vol jkaeifjofr fd; k tk I drk gA

### I anHZ

- Chayal, K., Daaka, B.L. and Suwalka, R.L. (2009). Analysis of role performed by farm women in dairy farming. *Indian Journal of Dairy Science*, **62**(6): 491-494.
- Devi, L. (2013). Adoption of dairy farming technologies by livestock farmers. *Indian Research Journal of Extension Education*, **13**(2): 57-61.
- Lahoti, S.R., Chole, S.R., and Rathi, N.S. (2012). Role of women in dairy farming. *Indian Journal of Dairy Science*. Retrieved from <http://epubs.icar.org.in/ejournal/index.php/IJDS/article/view/25441>
- Nikulsinh, M. (2011). Role performance of tribal farm women in agricultural and animal husbandry in Gujarat. *Karnataka Journal of Agricultural Sciences*, **24**(5): 672-674

- Nyong, A., Dabi, D., Adepetu, A., Berthe, A. and Ibemebulem, V. (2008). Vulnerability in Sahelian Zone of North Nigeria: A household-level assessment. In: Climate change and vulnerability. (Eds) Leary N, Conde C, Kulkarni J, Nyong A. Published in *Journal of Earth Scan*, London, UK. Pp, 218-238.
- Rai, C., Singh, K., Lal, S., Arti, and Azad, A. (2019). Adoption and Perceived Effectiveness of Indigenous Technical Knowledge among Tribal Farmers for Bovine Management: An Exploratory Study. *International Journal of Livestock Research*, **9**(2), 243-253. doi: 10.5455/ijlr.20180921074902
- Vahora, S.G, Thorat, G.N. and Ramjiyani, D.B. (2016). Participation of Tribal Dairy Women Special Reference to Feeding and Breeding Practices in Animal Husbandry and Dairy. *Gujrat Journal of Extension Education*, **27**(1): 98-101.
- Verma, A. P., Ansari, M.A., Ranjan, R., Raghuvanshi, R., Patel, D. and Bhatt, A. (2016). Multi-dimensional co-relational analysis of attitude of farmers towards utilization of e-Choupal in their farm communication. *International Journal of Agriculture Sciences*, **8**(49): 2072-2075.