Hkkjrh; df"k vuqla/kku if=dk] **35**(3): 185-188 DOI: 10.18805/BKAP233

M;jh i'kvk dk ckbikl ykx f[kyku dk çHkko& ,d foopuk

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i'k 'kjhj&fØ;k foHkkx] jk"Vh; M;jh vuqla/kku lLFkku djuky&132 001] gfj;k.kkA

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xHkkoLFkk d vfre ,o nX/kdky d vkjfHkd 3 lIrkg lØe.kdky d vrxr vkr g- bu fnuk Åtk mip; vkj gkeku ifjoruk d dkj.k i'k dk db pukfr;k dk lkeuk djuk iMrk gA t l gh çlo dk le; fudV vkrk g i'k dh 'k"d inkFk xkárk de gku yxrh g tk çlo l 3 lIrkg io 30% rd de gk tkrh gA çlokijkr vf/kdrj Åtk dk mi;kx [kh l ,o nX/k fuek.k t lh xfrfof/k;k e gkrk g ft ld dkj.k i'k _.kkRed Åtk lryu dh fLFkfr e igp tkrk gA çlo d rjr ckn nfgd voLFkk lpdkd e gku okyh deh e[;r% _.kkRed Åtk lryu d dkj.k gh gkrh gA nfgd Åtk dh ifr gr i'k viu 'kjhj e tek pch dk {kj.k dju yxrk g ft l ll jä e xj&,LVjh—r olh; vEyk dh ek=k c< tkrh gA vr% nX/k&mRiknu gr i'kvk dk viu 'kjhj e tek dh xb olh; Åtk dk mi;kx djuk iMrk g ft l ll bUg mip; lEcU/kh fodkj ,o nX/k&mRiknu e deh t lh leL;kvk dk lkeuk djuk iMrk gA ,l i'kvk d vkgkj e Åtk ?kuRo c<ku l Åtk dh deh dk ijk fd;k tk ldrk gA vR;f/kd ek=k e nkuk f[kyku l #eu dh vEyrk c<rh g tk ^,flMkfll* dk çe[k dkj.k g rFkk bl l j'kk dh ikpdrk Hkh de gku yxrh gA çkfi;kuV dk mRiknu vf/kd rFkk ,flVV dk de fuek.k gku l nX/k&olk de gk tkrk gA ;fn bu i'kvk dk Þ#eu ckbikIß olk fn;k tk, rk bl l _.kkRed Åtk lryu d n"çHkko de gk tkr g tcfd #eu d lYyykl ikpd thok.k Hkh ljf{kr cu jgr gA i'kvk dk 1% l vf/kd ek=k e lk/kkj.k olk f[kyku l #eu d lYyykl ikpd thok.kvk dk gkfu igprh g vr% bUg olh; vEyk d dfY'k;e yo.k vFkok fçy olk fn;k tkrk g tk #eu e vi?kfVr ugh gk ldrk rFkk ;g ^,flMkfll* t l mip; fodkj jkdu e Hkh lgk;d gkrk gA

Bhartiya Krishi Anushandhan Patrika, **35**(3): 185-188

Effect of feeding bypass fat to dairy animals- A Review

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Received: September 2020 Accepted: October 2020

ABSTRACT

The last 3 weeks each of pregnancy and early lactation are very critical for the dairy animals because of the challenges posed by metabolic and hormonal changes in the body. The dry matter intake of these animals starts declining during advanced pregnancy and gets reduced up to 30% just 3 weeks before parturition. Most of the energy is utilized for the production of colostrum and milk after parturition due to which the animal faces negative energy balance. The animal also loses its body condition score due to the utilization of its body fat to meet energy requirements that lead to an increase in non-esterified fatty acids in the blood. The animals are prone to metabolic disorders and decreased production of milk when its body fats are depleted. The energy requirements of such animals could be met by increasing the energy density of their diet. There is an increase in rumen acidosis if more quantity of concentrate is offered to such animals. Acidosis leads to the poor digestion of fibers in the rumen. There is increased production of propionate in comparison to acetate which is responsible for less percentage of fat in the milk of these animals. The ill effects of negative energy balance may be eliminated if these animals are offered bypass fat in their diet. The cellulose digesting bacteria stay unharmed due to bypass fat where as ordinaryfat may harm these bacteria if more than 1% of its dry matter intake is fed. Therefore, it is advisable to offer bypass or prilled fat to the animals during transition period.

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—f"k ,o [kk| lxBu d vkdMk d vuqkj Hkkjr e M;jh m|kx dk ;kxnku —f"k mRiknu dk 26% g tk fo'o e lokf/kd g- fo'o dk 20% nX/k&mRiknu gekj n'k e gh gkrk gA n'k e gj lky 17-6 djkM ehfVd Vu n/k dk mRiknu gkrk g tk lHkh ;jkih; n'kk d nX/k&mRiknu l Hkh vf/kd gA gekj n'k e nX/k&mRiknu dh okf"kd of) nj 4-5% g tk nfu;k e lcl vf/kd gA Hkkjr d —f"k l lEcf/kr ldy ?kjy mRikn dk yxHkx 30% Hkkx i'k/ku l çklr gkrk gA n/k lcl cMk —f"k mRikn g ftl çfr o"k 7 yk[k djkM #i;k dh çkflr gkrh gA n'k d yxHkx 10 djkM ifjokjk dk M;jh l ijd vk; çklr gkrh gA n'k dh xkeh.k vFk 0;oLFkk e i'k/ku mRiknu dk cgr egÙo g- M;jh i'kvk dh l[;k gj o"k c< jgh g tcfd ge çR;d i'k dh tuu ,o nX/k&mRiknu {kerk dk c<kuk gkxk rkfd Hkfo"; e c<rh gb vkcknh dh t:jrk dk ijk fd;k tk ldA n/kk: i'kvk dk ckbikl olk f[kyku l nX/k&mRiknu e of) djuk lHko gA

ckbikl olk f[kyku dk çHkko% xHkkoLFkk ,o nX/kkoLFkk ,lh nfgd voLFkk, g tk i'kvk d mip; dk ifjofrr djd mUg ruko dh vkj /kdyrh gA ¼Iriadam, 2007; Tanritanir *et al.,* 2009½A xk; dk vU; db dkjdk tl bld cNM dk vyx j[ku l Hkh ruko gk ldrk g (Salasel *et al.,* 2010); Åtk] ik"k.k ,o [kfutk dh c<rh gb ekx ¼LeBlanc, 2010½ rFkk vkgkj ifjoru ,o u; leg cuku l Hkh bUg ruko gk ldrk g (Schirmann *et al.,* 2011) çlokoLFkk d vklikl dk le; vR;f/kd egÙoi.k gkrk g D;kfd bl le; xk; dk db mip; lEcU/kh nfgd ifjoruk l xtjuk iMrk g (Tanaka *et al.,* 2011)A xHkkoLFkk d vfre 3 ,o nX/kdky d vkjfHkd 3 llrkg lØe.kdky d vrxr vkr gA bu fnuk Åtk mip; vkj gkeku ifjoruk d dkj.k i'k dk db pukfr;k dk lkeuk djuk iMrk g- tl gh çlo dk le; fudV vkrk g i'k dh 'k"d inkFk xkárk de gku yxrh g tk çlo l 3 llrkg io 30% rd de gk tkrh g- i'kvk dh 'k"d inkFk xkárk e gku okyh 90% fxjkoV rk çlo l ,d llrkg io gh gkrh g ¼Ingvartsen and Andersen 2000½A çlokijkr vf/kdrj Åtk dk mi;kx [kh l ,o nX/k fuek.k tlh xfrfof/k;k e gkrk g ftld dkj.k i'k _.kkRed Åtk lryu dh fLFkfr e igp tkrk g ¼Grummer, 1995½A çlo d rjr ckn nfgd voLFkk lpdkd e gku okyh deh e[;r% _.kkRed Åtk lryu d dkj.k gh gkrh g (Wathes *et al.,* 2009½A nfgd Åtk dh ifr gr i'k viu 'kjhj e tek pch dk vi?kVu dju yxrk g ftl jä e xj&,LVjh—r olh; vEyk dh ek=k c< tkrh g ¼Garnsworthy *et al.,* 2008½A bu ifjfLFkfr;k e nX/k&mRiknu gr i'kvk dk viu 'kjhj e tek dh xb olh; Åtk dk mi;kx djuk iMrk g ftl bUg mip; lEcU/kh fodkj ,o nX/k&mRiknu e deh tlh leL;kvk dk lkeuk djuk iMrk gA ,l n/kk: i'kvk d vkgkj e Åtk ?kuRo c<ku l Åtk dh deh dk ijkfd;k tk ldrk g- vR;f/kd ek=k e nkuk f[kyku l #eu dh vEyrk c<rh g tk^,flMkfll* dk çe[k dkj.k g rFkk j'kk dh ikpdrk de gku yxrh gA ,l e çkfi;kuV dk mRiknu vf/kd rFkk ,flVV dk de fuek.k gku l nX/k&olk de gk tkrk g ¼Bargo *et al.,* 2002½A ;fn n/kk: i'kvk dk Þ#eu ckbikl ß olk fn;k tk, rk bll _.kkRed Åtk lryu d n"çHkko de gk tkr g ¼Ganjkhanlou *et al.,* 2009½A Þ#eu ckbikl ß nu l #eu d lYyykl ikpd thok.k Hkh ljf{kr jgr g ¼Thakur and Shelke, 2010½A i'kvk dk 1% l vf/kd ek=k e lk/kkj.k olk f[kyku l #eu d lYyykl ikpd thok.kvk dk gkfu igprh g vr% bUg olh; vEyk d dfY'k;e yo.k fn, tkr g tk #eu e vi?kfVr ugh gk ldr rFkk ;^,flMkfll* fodkj jkdu e lgk;d gkr g ¼Naik *et al.,* 2009½A xk;k dk 150&300 xke çfrfnu ;k 'k"d inkFk xkárk d 2&3% d cjkcj olh; vEyk d dfY'k;e yo.k f[kyku dk ldkjkRed çHkko nX/kkoLFkk d vkjfHkd nkj e n[kk x;k g gkykfd 'k"d inkFk xkárk d 10&15% ;k 800 xke l 1 fdykxke olh; vEyk d dfY'k;e yo.k ¼ckbikl olk½ f[kyku dk Hkh vkgkj mi;kfxrk ij dkb n"çHkko ugh n[kk x;k g ¼Alexander *et al.,* 2002½A vR;f/kd ek=k e ckbikl olk nu l i'kvk d LokLF; ,o mRiknu ij çfrdy çHkko iMrk g D;kfd bll jä ,o n/k e olk dk Lrj c< tkrk gA lrlr olh; vEyk d feJ.k dk vR;f/kd ok;&nkc ij 'kU; l de rkieku oky ,d d{k e Lç }kjk fc[kjk tkrk g ftl NkVh&NkVh xkfydkvk d :i e fçy olk dk fuek.k gkrk g- ;g olk Hkh^ckbikl* olk gh g tk #eu d lkekU; rki ij ?kyu'khy ugh gkrkA vulU/kku ijh{k.kk e ik;k x;k g fd 200 xke ckbikl olk gj jkt f[kyku l 1-13&3-2 fdykxke çfrfnu n/k dk vf/kd mRiknu feyrk g tk olk vk/kkfjr nX/k&mRiknu dh x.kuk d vulkj 22-3% vf/kd ik;k x;k gA bld f[kyku l d.k&f¶jl ldj xk;k e vkjfHkd nX/kdky d vrxr çtuu e l/kkj ,o cgrj nfgd voLFkk lpdkd feyk g (Sirohi *et al.,*

2010; Wadhwa *et al.,* 2012; Gowda *et al.,* 2013½A n/kk : i'kvk dk ckbikl olk f[kyku l n/k e olk dh ek=k Hkh c< tkrh g ¼Thakur and Shelke, 2010; Parnerkar *et al.,* 2011½ tcfd olk&jfgr Bkl inkFkk dh ek=k e dkb ifjoru ugh gkrkA ijh{k.k }kjk ekye gvk g fd çloio l xHkkoLFkk d vfre nkj rd ckbikl olk lijd nu l tUe d le; cNM dk Hkkj Hkh c< x;k ¼24-94 dh ryuk e 27-95 fdykxke½A bld dkj.k xk;k e tj ckgj u fudkyu d ekeyk e Hkh deh n[kh xb ¼Tyagi *et al.,* 2009½A vkjfHkd nX/kdky e fçy olk f[kyku l xk;k vkj Hkkjk dh tuu {kerk e l/kkj gku d lkFk&lkFk n/k mRiknu vf/kd gkrk g ¼Rajesh, 2013; Singh *et al.,* 2013½A fçy QV f[kyku l 'k"d inkFk xkárk ij dkb çHkko ugh iMk rFkk nX/k mRiknu lkFkd –f"V l ¼ih- < 0-01½ c< x;k ¼Gobinda Yadav, 2014½A bl 'kk/k d vulkj dj.k&f¶jl xk;k dk çlo l igy 75 xke çfrfnu çfr i'k dh nj l fçy QV nu l tUe d le; cNMk dk otu lkFkd –f"V l vf/kd ¼ih-< 0-01½ ik;k x;k ,o tju fxjku dh fLFkfr vkj xHkk'k;&lØe.k dh lHkkouk e Hkh deh ikb xbA

fu"d"k

lØe.kdkyhu vof/k d vrxr n/kk : i'kvk dk ckbikl olk f[kyku l mip; lEcU/kh fodkj gku dh lEHkkouk de gkrh g rFkk i'k çlokijkr vf/kd n/k nr gA ckbikl olk f[kyku l çtuu lEcU/kh fodkj de gkr g rFkk uotkr cNMk d Hkkj e Hkh of) gkrh gA

lnHk

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