

# TATAISO EA LIHOAI TSA LERUO LA LIKOLOBE



Tokomane ena e hlalisoetse ka tšebetso ea lichelete ea EU, ACP le IFAD.



*Maikutlo a hlalisoeng tokomaneng ena ha a bolele maikutlo a EU, ACP kapa*

# LETHATHAMO LA TSE KA HARE

<b>LETHATHAMO LA TSE KA HARE .....</b>	<b>1</b>
<b>KAROLO EA PELE: TLHALOSO EA LERUO LA LIKOLOBE.....</b>	<b>5</b>
1.1 SELELEKELA.....	5
1.2 SE LEBELLETSOENG KA BUKANENG ENA.....	5
1.3 PALE EA LERUO LA LIKOLOBE LESOTHO.....	5
1.4 MELEMO LE MAKHABANE A LERUO LA LIKOLOBE .....	6
1.5 LINTLHA TSA BOHLOKOA TLHAHISONG EA LIKOBÉ.....	7
1.6 MEKHOA EA HO RUOA LIKOLOBE .....	8
1.7 MEKHAHLELO EA TLHAHISO EA LIKOLOBE .....	9
1.8 MEFUTA EA LIKOLOBE.....	9
<b>KAROLO EA BOBELI: TŠIRELETSO LE TLHOKOMELO EA LERUO LA LIKOLOBE .....</b>	<b>12</b>
2.1 BOLULO BA LIKOLOBE.....	12
2.2 PHEPO .....	16
2.3 BOHLOEKI.....	20
2.4 BOIKETLO BA LIKOLOBE.....	20
<b>KAROLO EA BORARO: KATISO EA LERUO LA LIKOLOBE .....</b>	<b>22</b>
3.1 TSOALISO .....	22
3.2 TLHOKOMELO EA KOLOBE EA TSOALISO.....	22
3.3 MATŠOAO A KOLOBE E PALESITSENG.....	23
3.4 MEKHOA EA HO NEHELA .....	23
3.5 KEMARO.....	24
3.6 HO TSOALA .....	25
3.7 TLHOKOMELO EA MALINYANE .....	27
3.8 TLHOKOMELO EA 'MAMALINYANE (MOTSOETSOE) .....	29
<b>KAROLO EA BONE: NOTŠO EA LIKOLOBE.....</b>	<b>30</b>
4.1 NONTŠO EA LIKOLOBE (PIG FATTENING) .....	30
4.2 KHETHO EA KOLOBE EA NONTŠO LE KHOLO/NAKO EA EONA (AGE OF FATTENING).....	30
4.3 MOKHOA OA PHEPO: .....	30
4.4 BOLULO:.....	30
<b>KAROLO EA BOHLANO: MAFU A LIKOLOBE LE PHEKO EA OONA.....</b>	<b>31</b>
5.1 MATŠOAO A HO KULA KA KAKARETšo: .....	31
5.2 MAFU A SA TŠOAETSANENG:.....	31
5.3 KHAELLO EA PHEPO KAPA LIJO TSE FOSAHETSENG:.....	32
5.4 MAFU A TŠOAETSANOANG .....	32
<b>KAROLO EA BOTŠELA: TSAMAISO EA LERUO LA LIKOLOBE .....</b>	<b>36</b>
5.5 POLOKO EA LIBUKA / LIREKOTO.....	36



# TATAISO EA LIHOAI KA LERUO LA LIKOLOBE

Mokhatlo oa Lesotho oa Lihoai (*LENAFU*)

Lefapha la Liphoofole (*Department of Livestock*)

Lekala la Temo



## **Tlhaloso**

Tokomane ena ha e bontše maikutlo a Mokhatlo oa Machaba oa Ntlatfatso ea Temo IFAD le kopano ea Europe (EU) ka tsela efe kapa efe, maikutlo a hlahang bukeng ena ke a litsebi tse ikopantseng ho ngola libuka tsena tsa tataiso ka tšebeliso le Mokhatlo oa Lesotho oa Lihoi (LENAFU).

## **Liteboho**

Bangoli ba tokomane ena ba leboha basebetsi-'moho le bona ba Lekala la Temo le ba LENAFU ka tšebetso e sa thekeseleng nakong eo ho ngolang tokomane ena.

Bangoli: **Dr. Lipolelo Sekali**

### **Likopo Maputsoe**

Ba kentseng letsoho: **Mataelo Ramochela, Peo Ntho, Masekothali Nkoebe, Motlalepula George**

Bohlophisi le boqapi ba litšoantšo: **Motlatsi John Tsatsi**



## TLHALOSO EA MANTSOE

**Poho (Boar)** – Kolobe e tona e kaholimo ho likhoeli tse robeli

**‘Meri (Sow)** – Kolobe e tšehali e seng e ile ea tsoala.

**Sethojana (gilts)** – Kolobe e tšehali e so neheloe

**Ho futsisetsa** – Ho arola malinyane ho ’ma.

**Ho palesa** – Ha kolobe e tšehali e thuntse e batla ho neheloa.



# KAROLO EA PELE: TLHALOSO EA LERUO LA LIKOLOBE

## 1.1 SELELEKELA

Bukana ena e reretsoe ho tataisa sehoai ka tlhahiso e nepahetseng ea likolobe. Sepheo ke ho ho ntlafatsa tlhahiso, boiketlo ba likolobe le tlhokomelo ea tsona.

## 1.2 SE LEBELLETSOENG KA BUKANENG ENA

- ✓ Mefuta ea likobe le khetho ea tsona.
- ✓ Phepo ea likolobe.
- ✓ Tlhokomelo e nepahetseng.
- ✓ Mafu a likolobe le mokhoa oa ho a thibela.

## 1.3 PALE EA LERUO LA LIKOLOBE LESOTHO

Tlhahiso ea leruo la likolobe tse ntlafalitsoeng naheng ea Lesotho e ne e qale lilemong tsa bo sekete makholo a robong mashome a supileng a motso o mong (1971), ha mmuso oa Lesotho o bontša thahasello lerueng la likolobe o shebile haholo-holo litaba tsa phepo e nepahetseng le kholiso ea moruo. Lekala la temo le ile la matlafatsa le ho atolosa bosupisi litabeng tsa leruo lena. -

### **Setsi sa tsoaliso ea likolobe**

1979/80 setsi sa tsoaliso ea likolobe sa ahoa ka lithuso tsa Manyesemane (Official Development Assistant; ODA).

Setsi se ne se le boholo ba ho ruoa lithole/thojana tse 110(sows) tse hlahisang 2500 ea malinyane ka selemo.

Ke setsing sena moo lihoai li neng li fumana malinyane ho ea tsoalisa le ho nontša.

**Setsi sa tlhabo ea likolobe:** Selakhapane sa likolobe e ne e le sa Lekhotla la motse moholo Maseru (MCC), se sebelisoa ka kopanelo le lelakala la liphoofofo. Setsi sena se ile sa koaloa ka 14 Pherekhong 2000. Kamora ho koaloa, bo ralilakha le lihoai ba ile ba etsa tlhopho ea ho tšelisa likobe ho ea hlajoa Bloemfontein hola Afrika boroa li khutla e se ele nama. Tlhophiso e na e emisitsoe ke ho qhoma ha lefu la likholoane/tlhako le molomo. Ha ho setsi se etsang mosebetsi o na ka hara naha.

**Leruo la likolobe ke eng:** Le a ma tsoaliso ea malinyane, tlhahiso ea nama le malinyane a tsoalloang ho ntlafatsa mohlape.

**Re ho kae:** Hona le barui ba hlahisang ka mokhoa o holimo, ba itlhabelang malapeng, ha ho tlhthobo e etsoang le thekiso e etsoa ka bomong

Tlhahiso ea nama ea kolobe ka hara naha e hakanyetsoa ho ea linokong tse mashome a mararo a metso e meraro a tlhoko, se na se etsoa ke hobane hahona litsi tsa tlhabo ho fana ka lipalo tse nepahetseng.



**Mekhatlo ea barui:** Ka selemo sa 2011 barui ba likolobe ho tsoa literekeng tse leshome ba ile ba theha mokhatlo oa naha o neng o bitsoa Pork Producers Association of Lesotho (PPAL). Mokhatlo o na o teng ka lebitso feela ha ha joale.

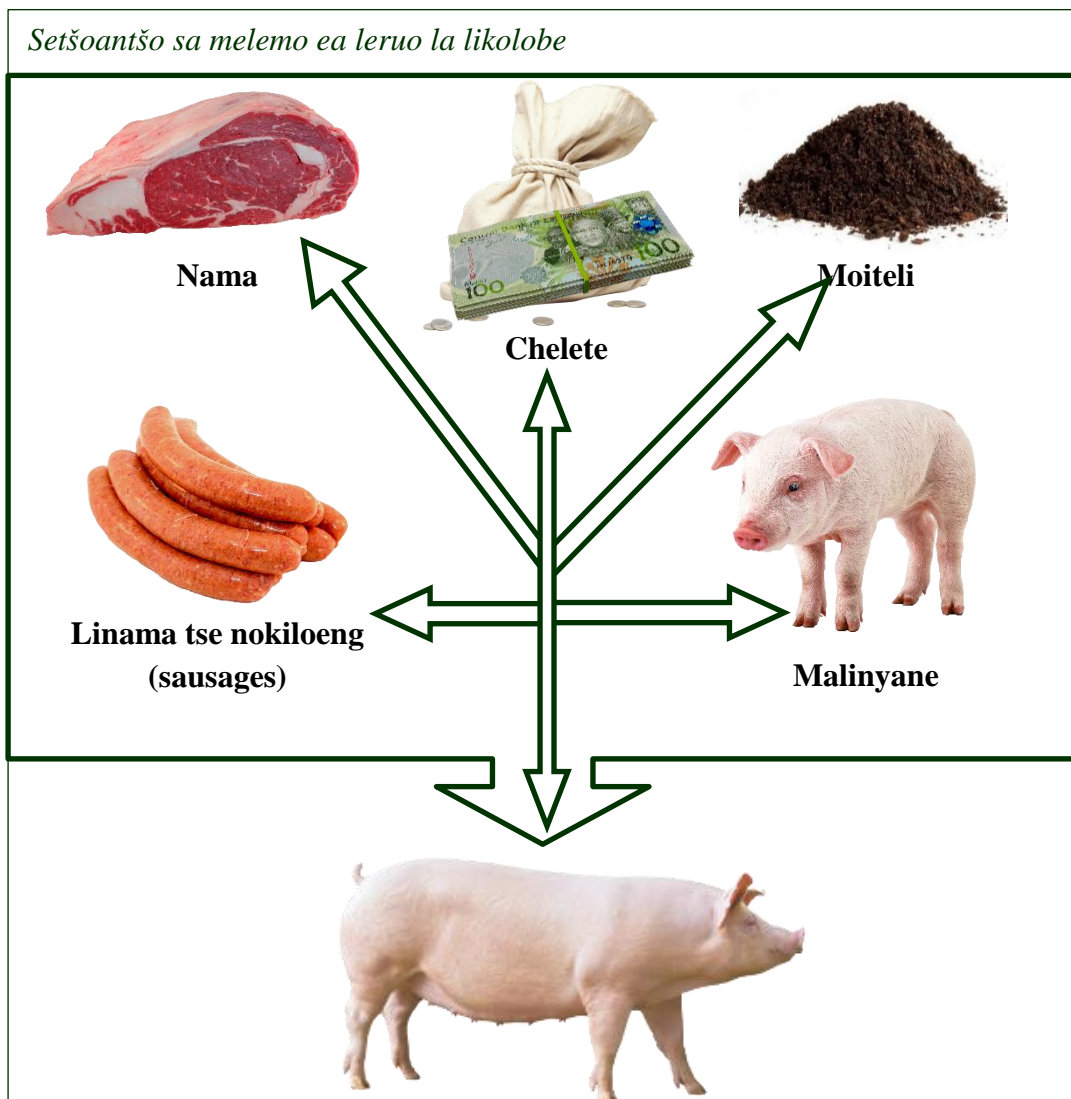
**Mathata tlhahisong ea likolobe:** Tlhokahalo ea selakhapane, theko e holimo ea lijo, bo sieo ba meriana ea liphoofolo, tsebo e sa lekanang, lisebelisoa le melao e sa hlakang e sireletsang likolobe le thuo ea tsona.

**Menyetla:** Likolobe ke liphoofolo tse a tang ka pele, malinyane a ba mangata bakeng sa thekiso, nama ea kolobe ena le mmaraka, maemo a leholimo a lumella kholo e ntle e se nang mafu a mangata a likolobe, tlhahiso ea mesebetsi (ho hloka-hala maloala a lijo tsa liphoofolo, khaho ea lihoko, lilakhapane).

## 1.4 MELEMO LE MAKHABANE A LERUO LA LIKOLOBE

### A. Melemo

Mona ho bontšitsoe e meng e ka sehloohong ea melemo ea leruo la likolobe. Leha holee joalo, ho ntse ho ena le melemong e meng e mengata ka thoko ho ena e boletsoeng.



## B. Makhabane

Leruo la likolobe le khothaletsoa haholo bakeng sa boipheliso le ho loants'a tlala. Hona ke hobane ho hlokomelehile makhabane a latelang :

- ✓ Li hola ka pele, e ka rekisoa ha e le khoeli tse 'ne (4) ho isa ho tse tšeletseng (6).
- ✓ Li ata ka pele, e tsoala malinyane a palo hare ea (8-18) ha beli kapa ho feta ka selemo
- ✓ Lihoko li ka hahoa sebakeng se ke keng sa sebelisoa ba keng sa temo.
- ✓ Li ka fepeha ha bobebe (metsoako e 'maloa ea lijo).
- ✓ Mantle a teng a ka sebelisoa e le moiteli ho matlafatsa mobu.

### 1.5 LINTLHA TSA BOHLOKOA TLHAHISONG EA LIKOBÉ

Tafole e latelang e lokolisa le ho hlalosa lintlha tsa bohlokoa tseo u lokelang ho itlhophela tsona ha u kena leruong la likolobe.

Lintlha	Tlhaloso
<b>1. Tsebo le thupelo ea leruo la likolobe</b>	Litsebo tsa ho ruoa likolobe ka nepo e le ho qoba ho kena litšenyehelong tse sa hlokeheng. Seoai se tšoanela ho ea koetlisong ea ho hlahisa likolobe
<b>2. Maraka</b>	'Maraka ke lesupa-tsela la tlhahiso, sehai se lokela ho batla/tseba hore na se hlahisa eng, e kae, se hlahisetsa mang..
<b>3. Sebaka</b>	Sebaka se tlang ho lamella meralo ea tlhahiso ea likolobe se bile se sa silafatse tikoloho
<b>4. Chelete e qalang</b>	Chelete e hlokahalang hore tlhahiso e be teng. Se na se tla ipapisa le boholo ba eona bakeng sa ho aha matlo, ho reka thepa, lijo, meriana ea likolobe le ho lefa basebetsi
<b>5. Mali/lesika le nepahetseng</b>	Tlhahiso e itšetlehile ka mohlape o ntlafetseng bakeng sa ho etsa nama e ntle le malinyane a ntlafetseng ka nako e fanoeng.
<b>6. Metsi</b>	Metsi a bohlokoa bakeng sa ho noa ke likolobe, ho hloekisa lihoko, ho theola mocheso, joalo-joalo. Metsi a hloekileng a lokela ho fumaneha ka linako tsohle
<b>7. Sepheo oa tlhahiso</b>	<ul style="list-style-type: none"><li>- Ho hlahisetsa ho ja</li><li>- Ho rekisa tse salang ha o jele</li><li>- Thekiso/khoebo.</li></ul>
<b>8. Lijo</b>	Lijo li etsa 80% ea litšenyehelo tsa tlhahiso. Li tšoanela ho fumana lijo tse bolokehileng ka linako tsohle.
<b>9. Lihoko</b>	Matlo a tlhahiso a tšoaneloa ho lumella kholo ea kolobe ka 'ngoe, ka ha litlhoko li a fapana.



## 1.6 MEKHOA EA HO RUOA LIKOLOBE

Mekhoa e meraro e meholo ea ho ruoa/holisa: Thuo e pharalletseng, li e tse litsoe lihoko li ea tsoa ho iphatela lijo le moo li koalletsoeng ka har'a mohaho 'me ha lia lumelloa ho tsoa. Mekhoa ena e etsoa ka tsela e fapaneng ke lihoai tse nyenyane ho itšetlehile ka boemo ba matla a tlhahiso ea lijalo, bokhoni le sepheo sa ho rua likolobe.

### A. Thuo e pharaletseng (Extensive system):

Mona likolobe li bolokolohing ba ho tsamaea kantle li ikhoantlella lijo le ho itšireletsa ka botsona.

- ✓ Mokhoa ona litšenyehelo tsa tlhahiso li nyenyane.
- ✓ Leha ho le joalo tšoaetso ea mafu le linoa mali (manyooa le linta) e phahame haholo.
- ✓ Liphoofole li pepesehetse maemo a leholimo a mabe.
- ✓ Tlhahiso e tlaase haholo.
- ✓ Lija masala a lijo tsa batho.

*Sets'oants'o sa likolobe tse bolokolohing*



### B. Thuo e lipakeng tsa Bolokolohi le ho Koalloa (Semi-intensive system):

Tsamaisong ena, liphoofole li fuoa bolulo 'me li lumelloa ho tsoa ho ea ja limela tsa tlhaho. Ho fanoa ka sebaka ho potoloha ntlo e kampetsoeng. O kapantse mekhoa e 'meli (khaho ea lihoko le ho phela kantle).

- ✓ Likolobe li bolokolohing ba ho tsamaea, hona ho thibela mafura a mangata 'meleng.
- ✓ Mokhoa ona o litšenyehelo li tlaase empa o hloka basebetsi,
- ✓ Tšoaetso ea mafu le ea likokoana-hloko li phahame hanyane.
- ✓ Ho boetse ho fanoa ka lijo tsa tlatsetso.

*Sets'oants'o sa likolobe tse ka buleloang*



### C. Thuo e koalletseng (Intensive system):

Tlhahiso e matla: Likolobe tsohle li koalletsoe ka har'a mohaho 'me ha lia lumelloa ho tsoa. Likolobe li holisoa ka har'a lihoko holim'a konkreite kapa mokatong oa tšepe. Lijo, metsi le li fanoa letsatsi le leng le le leng ka bongata bo lekaneng 'me ho bolokoa bohloeki bo nepahetseng.

- ✓ Taolo ea mafu le linoa mali
- ✓ Tšireletso ho maemo a leholimo a fapaneng, libatana le masholu.
- ✓ Sekhahla sa khoho ea likolobe le tlhahiso li phahame haholo.
- ✓ E litšenyehelo li holimo, matlo a likolobe, litoro, bohloeki le ba basebetsi le phepo ea likolobe.

*Sets'oants'o sa likolobe tse koalletsoeng*



## 1.7 MEKHAHLELO EA TLHAHISO EA LIKOLOBE

Sehoai se bolokohing ba ho hlahisa ka bo- mong kapa emeng ea tsena:

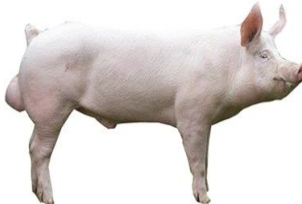
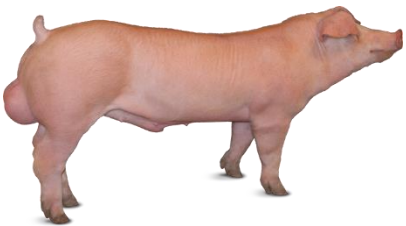

- ✓ **Ho hlahisa malinyane:** Mona sehoai se ruoa kolobe tse tšehali ho re se hlahise malinyane se rekisetse lihoai tse ling ha a futsisetsoa.
- ✓ **Ho tsoalisa le ho nontša:** Sehoai se ruoa tšehali se hlahisa malinyane, se a holise le ho a nontša.
- ✓ **Ho nontša:** Sehoai se reka malinyane ha a qeta ho futsisetsoa e be se holisa le ho nontša malinyane a na.
- ✓ **Ho tsoalisa:** Tlhahiso ea mali a nepahetseng bakeng sa likolobe tse tlo sebelisoa ho ntlafatsa mehlape. E hloka litsebo le chelete.

Khetho ea mofuta oa tlhahiso o tsoa ho thahasello ea mohlahisi ka nngoe, boithuto le ho fumaneha hoa thepa e sebelisoang le mmaraka.

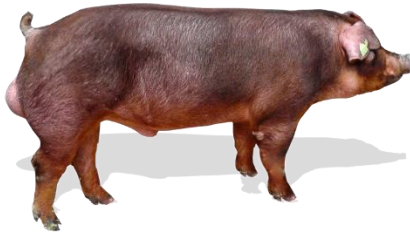
## 1.8 MEFUTA EA LIKOLOBE

Mefuta e khothaletsoang e 'meli e meholo. Mefuta ena ke e mesoeu le e mebala.

Tafole e latelang e bonts'a mefuta ea likolobe le ho hlalosa makhabane a mofuta ka 'nngoe :

Mofuta oa kolobe	Makhabane
<b>Large White</b> 	<ul style="list-style-type: none"><li>• E tšoeu ka litsebe tse qahameng, ke mme ea hloahloa, e etsa malinyane a mangata e hola ka pele, e khona ho mamella maemo a fapaneng a tlhahiso.</li><li>• E phahame ka setopo se sekhutšoane</li><li>• E hlaha (e sebelisoa e le poho)</li></ul>
<b>Landrace</b> 	<ul style="list-style-type: none"><li>• E tšoeu litsebe li oatse ka mahlong, e hola ka pele, e nama e ntle.</li><li>• E tsebe likholo li oetse ka mahlong.</li><li>• E setopo se selelele</li><li>• E bonolo (e sebelisoa e le 'ma ke hona)</li><li>• `Boima: poho 310 – 400; 'meri 250 – 330.</li></ul>
<b>Comborough</b> 	<ul style="list-style-type: none"><li>• E tsoala malinyane a mangata.</li><li>• Ke 'me' a hloahloa.</li><li>• E na le setopo se setle le nama e ntle.</li><li>• E ka sebelisoa nako e telele e ntse e hlahisa hantle tlasa tlhokomelo e ntle.</li><li>• Boima: poho 310 – 400; 'meri 250 – 330 kg</li></ul>

### Duroc



- E sootho ka 'mala
- E tsebe lioeleng
- E phahame haholo
- E setopo se selelele 'me e hola haholo (e ka sebelisoa e le poho
- Boima ba eona : poho 300kg; 'meri 250 kg

### Large black /local breeds



- Likaba ntšo kapa tsa kopanya mmala e mmalooa,
- Li mamella mathata a fapaneng tlhahisong
- E ka fihlela boima ba 100-150 kg
- E tsebe lioeleng
- Li bonolo likhona ho phela le batho le liphoofolo tse ling.
- Li ka phela tlasa tlhokomelo tse fapaneng tsa phepo.
- Nama ea teng e na le tatso e monate ho feta tsohle
- Lina le boiphihlelo baho ntša lebeso le lekaneng malinyane
- Ke 'me ea hloahloa, e holisa malinyane le tlasa tlhokomelo e fokolang.



### Hampshire

- Lina le chebahalo e ikhethileng, e ntšo 'mele kaofela, e na le mola o mosueu o potang maoto a mabeli a kapele ho matha mahetleng.
- Li tloaela sebaka ha bobebe mme li mamella mathata a fapaneng tlhahisong
- Ke mofuta o bonolo
- Nama ea tsona ha ena lefura le lengata.
- Lihlahisa malinyane a phetseng hantle ho fapana le likolobe tse ling.
- Ha lihlokometsoe hantle lihlahisa nama e ngata papisong le kolobe tse ling.

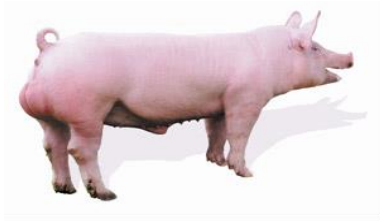
### 'Moulo (cross-breed)



- Ke kolobe e hlahang pakeng tsa ho nehela mefuta e fapaneng e kaba large white, landrace kapa Duroc.
- E hola ka pele ho feta 'ma eona le ntata eona.
- Phetolelo ea lijo nameng e phahame.
- E fana ka nama e lefura le lekaneng.
- E ka fihlela boima ba 200-300 kg

---

## Topigs



- E khona ho tiisetsa maemo a fapaneng
  - E khona ho bontša matšoao a ho palesa ho feta kolobe tse ling
  - E na le maoto a matla
  - E etsa malinyane a matle ka nama e ntle.
-



# KAROLO EA BOBELI: TŠIRELETSO LE TLHOKOMELO EA LERUO LA LIKOLOBE

## 2.1 BOLULO BA LIKOLOBE

Liphoofolo li lokela ho phela moo li sireletsehileng, maemong a lumellanang le polokeho ea bophelo ba tsona le tikoloho.

### A. Ketho ea sebaka

- ✓ Sebaka se be thoko ho Metse.
- ✓ Qoba mokhoabo.
- ✓ Se lumelle katoloso.
- ✓ Se fihlelehe ha bobebe.
- ✓ Metsi a hloekileng a fumanehe ka li nako tsohle.
- ✓ Se be moathameleng oa letsatsi.

### B. Matlo kapa lihoko

Likolobe li hloka tšireletso khahlanong le tse latelang:

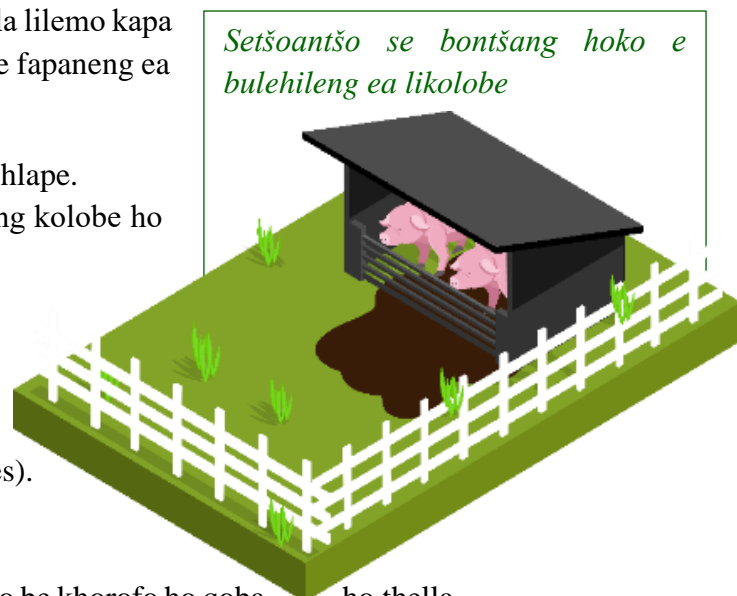
1. Libatana, Masholu,
2. Maemo a mabe a leholimo a kang:
  - ✓ Lipula tse ngata
  - ✓ Moea o batang kapa lifefo
  - ✓ Letsatsi le chesang haholo
  - ✓ Sefako, le tse ling



### C. Lintlha tse lokelang ho eloa hloko ka matlo likolobe

Ho tsoanela hore ho be le matlo a fapaneng ho latela lilemo kapa kholo ka ho fapana ka ha lithoko tsa mekhahlelo e fapaneng ea likolobe e fapane.

- ✓ Lenane la lihoko le laoloa ke lenane la mohlape.
- ✓ Hoko e tsoanela ho ba boholo bo lumellang kolobe ho ithapolla
- ✓ Poho e tsoanela ho lula e le'ngoe ka hokong ea boholo bo ka etsang 3m x 4m (+/-).
- ✓ Ho be le hoko ea tsoalisano, e nang le sekhutloana sa malinyane (farrowing crates).
- ✓ Hoko ea malinyane.
- ✓ Hoko ea nontšo le hoko ea tse tšehali.
- ✓ E liloe ka samente ebe mothipoloho hape ho be khorofu ho qoba ho thella.
- ✓ Moea o foke ka bolokolohi o qoba monkho.



## D. Mefuta ea lihoko

Mefuta ea bolulo ho latela mokhoa oa ho ruoa, tšireletso ea liphoofole khahlanong le maemo a leholimo le liphoofole tse hlaha.

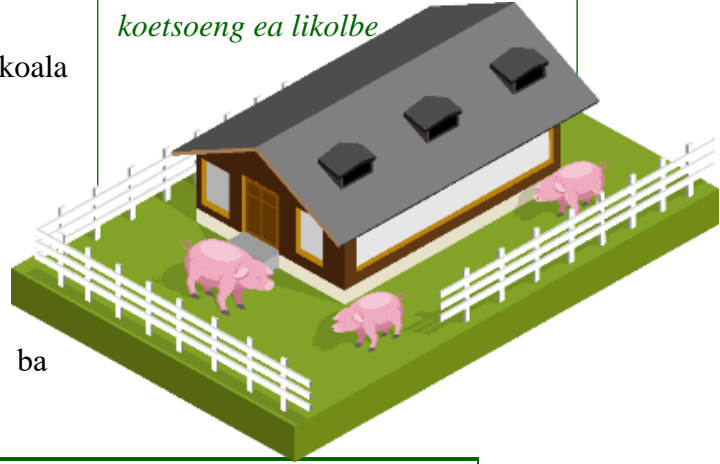
### 1. Matlo a bulehileng

- ✓ Moea o laoloa ka ho bula le ho koala likharetene.
- ✓ Tse ruletsoeng halofo.

### 2. Matlo a koalehileng

- ✓ Maemo a mocheso le lirame a laoloa ka lifehla-moea.

*Setšoantso se bontšang hoko e koetsoeng ea likolbe*



Tafole e latelang e bonts'a lipalo tsa boholo ba mekhahlelo e fapakaneng ea lihoko:

Kolobe	Boholo ba sebaka sa bolulo Kolobe ka nngoe(m <sup>2</sup> )
Hoko ea malinyane	0.25 - 0.5
Hoko ea tse tšehali	2.3
Hoko ea poho	9.3 -12
Hoko ea tsoaliso	2,2- 2.5
Hoko ea nontšetso	0.8m <sup>2</sup> /45kg, 0.95m <sup>2</sup> /90kg & 1.3m <sup>2</sup> /110kg
Hoko ea lithojana	2.5
Hoko ea tse emereng	3.9 – 4.9








**E. Mekhoa ea ho ala lihoko fats'e**

Likolobe li hloka ho alloa ka mokhoa o thata haholo fatše hore li seke tsa fata. Hape ho aloa ebe ho nolofaletsang hore lihoko li hloikisehe hantle, li be makhethe.










**F. Thepa e hlokahalang leruong la likolobe**





Khothaletso ke ho sebelisa lihlahisoa tse fumanehang ha bobebe li bakeng tseo re phelang ho tsona.

Thepa	setsoantso	Mosebesti
linoelo		Likolobe li ka etsetsoa linoelo ka meqomo ea hokeloa pompong
Nipple drinkers	   Linoelo	Mona likolobe linoa ha linyanya
Sejelo sa setene		Linoelo le lijelo ts haeletsoeng tsa setene le samente



<b>Tail docker</b>	 <p>Tail docker</p>	Sekere sena se sebelisoa ho fokotsa mohatla oa kolobe, siea linoko tse tharo.
<b>Ear notcher</b>	 <p>Ear Notcher</p>	Thepa ena e sebilisoa ho tšoaea likolobe litsebeng
<b>Masale</b>	 <p>Masale</p>	Masale a na a ngoloa li nomoro a roesa likolobe
<b>Kiribae</b>	 <p>Kiribae</p>	Kiribaea e sebelisoa ho laela thepa ka ntle le ka hare ho lihoko
<b>Lefielo</b>		Lefielo la brush le thata, lebelisoa ho fiela le ho hlatsoa fatše.
<b>Scraper</b>	 <p>Lefielo</p>	Scraper se sebelisoa ho hohola makaka pele ho hlatsoa. Rekere e hohola hantle ha e enke bohlasoa.
<b>Mofutho (knapsack sprayer)</b>		Mofutho o sebelisoa ha ho futheloa moriana o hlatsoang ka lihokong le ha ho bolaoa likokoana hloko. O ka sebelisoa hape ha kolobe e tšehali e ea hokong ea tsoaliso ho hlatsoa kolobe.



<p><b>Sesepa/detergeant</b></p>	 <p>le tseling hona ke mohlala feela.</p>	<p>Sesepa se sebilisoa ho hlatsoa ka lihokong ka mora ho fiela makaka le ho hlatsoa</p>
<p><b>Sebolaea kokoana/disinfactants</b></p>	 <p>le tse ling.</p>	<p>Libolaea kokoana hloko</p>
<p><b>Kharafu le Digging fork</b></p>	 <p>Likharafu</p>	<p>Lisebelisoa ho tlosa bohlasoa ka lihokong le ka ntle, li hlokola moalo nakong ea tlhokomelo ea malinyane</p>
<p><b>Lethopo</b></p>		<p>Le sebelisoa ho hlatsoa ka lihokong le ho tšela metsi</p>

## 2.2 PHEPO

Karolo ea bohlokoa ea leano la phepo e nepahetseng ke ho etsa qeto e nepahetseng mabapi le hore na ho sebelisoa metsoako efe lijong. Metsoako e fana ka limatlafatsi tseo likolobe li li hlokang bakeng sa boipheliso le tlhahiso.

### A. Lijo

Lijo tse nepahetseng li tšoanela ho ba le metsoako e latelang ka litekanyetso tse nepahetseng:

- ✓ Limatlafatsi- lijo thollo (poone, mabele le koro) bran
- ✓ Lihaha ‘mele- fish meal, blood meal, sonobolomo, soyabean
- ✓ Matsoai – calcium, phosphorus
- ✓ Livitamin- a, b, d, etc
- ✓ Lithibela mafu

#### 1) Phepo ea likolobe e ipapisa le lintlha tse latelang:

- ✓ Kholo ea kolobe

### Setšoantšo sa kolobe e feptjoang



- ✓ Boemo ba sebaka
- ✓ Mofuta oa lijo
- ✓ Mokhoa oa phepo
- ✓ Botona kapa botšehali
- ✓ Maemo a bophelo

Mefuta ea lijo e feptjoang e ipapisa le mosebetsi le kholo ea kolobe ka ngoe:

Ke boikhethelo ba sehoai hore na o batla ho kopanya lijo tse phofo le metsi kapa o lifepa e ntse e le phofo

**TLHOKOMELISO:** ka mehla ha lijo lifetoha, tsoaka lijo tse ntseng li sebelisoa le tse fihlang hore li tsebe ho litloaela haholo malinyaneng.

## 2) Mefuta Ea Lijo Tsa Likolobe.

Mofuta oa lijo	Boholo ba kolobe/lelinyane	Litekanyetso(tsa letsatsi) (li ka hafoloa tsa fuoa hoseng le mantsiboea)
<i>Pig Breeder/ boar or sow meal.</i>	<b>Kolobe tse kholo:</b> Ke lijo tse fuoang likolobe tsa tsoaliso, e ka ba lipoho kapa tse tšehali. Phepo e ipapisa le boemo ba kolobe. Ke tsona feela lijo tseo boima bo laoloang ka ha ha ho hlokehe tse nonneng kapa ho fokola haholo	2-4kg
<i>Pig lactating</i>	<b>Batsoetse:</b> E sebelisoa likolobeng tse anyesang (batsoetse). Hang ho ba kolobe e tsoale e tsoaneloa ho kenyeletsa litlhoko tsa malinyane ao e tlang ho a anyesa, ho tloha letsatsing la bohllano, e ketsa lijo tsa eona u ipapisitse le malinyane ao e a nyesang.	2kg ea kolobe + 0.5kg bakeng sa lelinyane ka ‘ngoe leo e le nyantšang. malinyane ha a le robeli e tla ba $8 \times 0,5\text{kg} + 2 = 6\text{kg}$
<i>Pig creep</i>	<b>Malinyane:</b> Phepo- tlatsetso (7/10days -6wks) lijo tse fuoang malinyane ho tloha ha a le matsatsi a leshome a hlahile ho fihlela a futsisetsoa kapa ho fihlela matsatsi a mahlano ka morao ho ho futsisetsoa. Ka mora ho futsisetsoa lijo li ka kopangoa le metsi.	210g
<i>Pig Weaner</i>	<b>Tse fotsisetsoang (6 wks-10 wks)</b>  Li fuoa malinyane ka mora ho futsisetsoa, e thusa malinyane haholo ka morao ho ho futsisetsoa ka ha metsoako ea teng a fapane ha nyane le ea pig creep ka hoo mathata a kang a letšollo le ho hlorela ‘ma ona le lijo tse fapaneng li ba sieo.	1kg (moo ho khonehang phepo ea mocha o chele)

<i>Pig grower</i>	<p><b>Tse holang</b> (11 wks- 4mnths)</p> <p>Ke khakanyo ea lelinyane ka 'ngoe empa khothaletso ke ho fepa ho latela tlhoko ea kolobe ka 'ngoe le tebello ea sehoai.</p>	2-3kg (moo ho khonehang phepo ea mocha o chele)
<i>Pig finisher</i>	<p><b>Tsa nontšo</b> (4- 6mnths)</p> <p>Lijo tsa likolobe tse nontšoang ho tloha khoeling tse 'ne ho isa tse tšeletseng ha ea mmarakeng. Khothaletso ke ho fepa ho latela tlhoko tsa likolobe. (the eye of the beef master fattens his animals). Ha morui a sa e sakeng ho bona hore na liphoofole lija joang ha ana monyetla oa ho li nontša</p>	+/-2kg (moo ho khonehang phepo ea mocha o chele)

**TLHOKOMELISO:** Lijo tse nepahetseng ho sa khathallehe hore na li entsoe ke mohlalisi o fe, kapa li rekoa kae, ho tlameha ho fumanehe molomong oa mokotla o tšetseng lijo liphepochana tse ngotsoeng li bontša tse latelang:

- Lebitso la lijo
- Metsoako eohle e bontšoe ka litekanyo
- Letsatsi leo lijo li entsoeng ka lona le nako eo li felloang ke matla.

Sehoai se ka fepa ka lijo tseo a ikopanyetsang tsona kapa sa sebelisa motla-o-tutsoe (e kaba phoofo kapa borokolo) o laoloa haholo holo ke tse latelang.

- Boemo ba lijo (phoofo/borokolo)
- Sepheo sa phepo (tsoaliso/ nontšo)
- Mefuta ea lijelo le bolulo.

**TLHOKOMELISO:** Metsoako e meng e teng lijong tsa liphoofole e felloang ke nako ka mora nako e itseng. Lijo tse joalo bonyane ho tloha letsatsing le o li entsoeng ka lona ha li lokeloe ho feta likhoeli tse tharo bonyane li e so sebelisoe, ho tloha moo e meng ea metsoako eo boleng ba eona bo ea theoha. **Lijo litšoanela hore linke bonyane metsotso e pakeng tsa mashome a mabeli ho isa ho a mararo (20-30minutes) li tšetsoe ka lijelong, kamora nako e na li ea silafala le boemo ba tsona bo ea theoha.**

### 3) Mekhoa e 'meli ea ho fepa e sebelisoang:

- Phepo ka tekanyetso:** O sebelisoa likolobeng tse kholo tsa tsoaliso ka ha ha hooa lebelloa hore li none kapa libe lefura, tse nontšoang haholo libekeng tsa ho qetela pele li ea tlabong.
- Phepo ea mocha-o-chele:** Mona lijo li lula li le teng lijelong nako eohle. Ke mokhoa o khothaletsoang haholo holo ho tloha malinyaneng a ntseng a nyanya ho isa nontšong kapa pele ho fetoloa lijo ho tloha ho grower ho ea ho breeder meal.

Qoba tšenyō ea lijo. Lijo tsena li ka aroloa ha beli ka letsatsi,

**TLHOKOMELISO:** Tšebeliso ea masalla a lijo tse seiloeng bathong (lipapa, mahobe, jj “swill”) ke ntho e teng, e kabang kotsi ha e sa sebetsoe ka polokeho. Qoba ho sebelisa lijo tsenang le masalla a nama ho qoba ho fetisa mafu

## B. Metsi

- Metsi a bohlokoa bophelong ba kolobe.
- Litlhoko tsa metsi tsa kolobe ka ‘ngoe li ka itšetleha ka:
  - i. Mofuta oa lijo (phofo/borokolo),
  - ii. Maemo a le holimo (mocheso /mohatsela),
  - iii. kholo ea kolobe le mofuta oa tlhahiso.
- Kolobe e hloka metsi a mangata **ho laola mocheso** oa eona le mesebetsi e meng eohle e kenyeletsang le tlhahiso.
- Metsi a tšoanela ho fumaneha ka linako tsohle ‘me a hloekile

Khakanyo ea tlhokahalo ea metsi mekhahlelong e fapaneng ea tlhahiso likolobeng.

Maemo a kolobe	Tlhoko ea metsi ( liters)
Tse e mereng	5-9
Poho	9
E anyesang	18-25
Malinyane(4-5wks)	3-5
Tse mahareng	5
Tse kholo	10

## C. Poloko ea Lijo

Lijo li etsa karolo e kholo ea litšenyehelo tsa tlhahiso joale ka ha reboletse, boleng ba lijo bo bapala karolo ea mantlha ntlafalong ea tlhahiso liphoofoelong. Lijo tsa likolobe litšoaneloa ho lula moo ho bolokehileng, li pakoe holima (lipallets) lintho tse lumellang moea, ho pholileng, ho ommeng, ho seng letsatsi le chabelang ka bongata, ho senang litoeba kapa likhoto.

*Setšoantšo sa tsela e nepahetseng ea hop aka lijo*



## E la hloko tse latelang:

- ✓ Letsatsi leo lijo li entsoeng ka lona, sena se tla thusa ho tseba nako eo matla a lijo a theohang
- ✓ Letsatsi leo lijo li fihlileng ka lona; lijo tse fihlileng pele li tšoanela/tlameha ho tsoa pele (first come first go) ka ha boleng ba lijo bo ipapisa le nako, matsoai amang ha a safumaneha ka mora likhoeli tse tharo tsa ho hlahisoa ha lijo.
- ✓ Lijo li lokeloa ho bolokoa haufi le matlo a tlhahiso ea likolobe ho qoba ho qhalana le tšenyho ha li le hole.
- ✓ Litoro tsa lijo li tlameha ho ba le moo lijo li pakiloeng ka ho a rola mefuta e fapaneng ea lijo. Meriana ea litoeba ha ea lokeloa ho tšelo fatše ka ha hona so silafatsa lijo
- ✓ Paka mekotla ho ea ka ho fapana ha lijo holima li pallet tsa mapolanka e le hore moea o foke hantle.
- ✓ Chefo ea litoeba e behoa ka hloko ho qoba tšilafalo ea lijo.

*Setšoantšo sa mochini o cheang litali*



## 2.3 BOHLOEKI

Tlhaiso ea likolobe e lokela hoba makhetho hape e boloke bohloeki ho qoba mafu le nelehetsano ea oona, ho silafatsa tikoloho, le ho ama maphelo a batho hampe.

### A. Bohlokoa ba bohloeki/ lipheo

- ✓ Ho bolaea likokoana
- ✓ Ho theola monko
- ✓ Ho thibela mafu
- ✓ Ho ntlafatsa bophelo, boiketlo le polokeho ea likolobe
- ✓ Ho eketsa kholo le katleho ea mohlape

### B. Mekhoa ea ho hloekisa

Mehato ea mantlha ea ho hloekisa le ho bolaea likokoana-hloko:

1. Fiel mantle le lintho tsohle tse tlohang
2. Sebelisa metsi ho fokotsa bohlasoa, Sebelisa sesepa fatše le maboteng.
3. Hloekisa ka metsi
4. E mela ho ome
5. Sebolaea likokoana-hloko se fafatsoa ho ea ka litekanyetso

*Setšoantšo se bontsang tsela tsa ho hloekisa maoto ha ho keno aka lihokong*



## 2.4 BOIKETLO BA LIKOLOBE

Boiketlo ba likolobe bo kenyeletsa mokhoa o motle oa ho rua, o laoloang ke batho ba koetlisitsoeng le ba nang le tsebo bakeng sa litlhoko le tlhokomelo ea likolobe.

Litlhoko tse khethelileng tsa likolobe:

- ✓ Likolobe li lokela ho fumana lijo le metsi tse bolokehileng ka linako tsohle.
- ✓ Tikoloho e bolokehileng ho sireletsa khahlahlong le maemo a mabe a leholimo. Le libatana.
- ✓ Monyetla oa ho bontša mekhoa ea boitšoaro ea tlholeho.
- ✓ Ho sebetsana le 'mele ka mokhoa o fokotsang monyetla oa bohloko bo sa utloahaleng, bo sa hlokahaleng kapa khatello ea maikutlo. (ho faola, ho poma mohatla le meno ho hlokofofatsa liphoofolo)
- ✓ Tšireletso kapa ho hlahlojoa ka potlako le phekolo e nepahetseng ea kotsi kapa lefu
- ✓ Tokoloho bakeng sa ho tsamaea ho hlokahalang, ho kenyetsoa ho ema, ho otlolla, le ho paqama, ho kopana le likolobe tse ling

Sepheo sa melao ea boiketlo ba kolobe ke ho fana ka leseli le lintlha tse netefatsang boiketlo le polokeho ea likolobe litsamaisong tsohle tsa tlhahiso ka kakaretso.




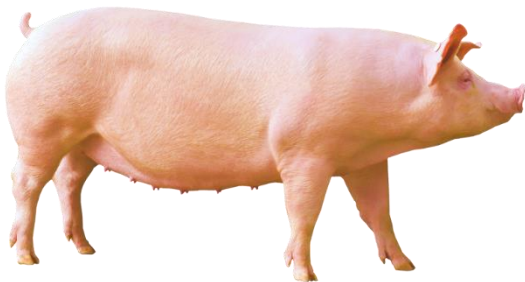


## KAROLO EA BORARO: KATISO EA LERUO LA LIKOLobe

### 3.1 TSOALISO

Leruo la likolobe le ata ka ho tsoalisa ka mekhoa e nepahetseng. Kolobe ke phoofolo e a tang kapele, kaha e etsa malinyane a mangata hape e tsoala khafetsa. Leano la ho nehela le lona le thusa ho hlahisa mefuta e hlokoang ea likolobe.

#### A. Khetho ea kolobe ea tsoaliso

Poho	Sethojana
<ul style="list-style-type: none"> <li>✓ E phahame hantle e tle e fihlele e tšehali.</li> <li>✓ Botona bo bonahale hantle, e be tapole tse peli.</li> <li>✓ E se be maoto a sehole.</li> <li>✓ Li hloke lipha tsa mofuta o fe kapa o fe, (lekoalata le haneletseng (cryptorchidism), mebele e foforehang (false teats)</li> <li>✓ Chebahalo ea tsona e be boemeli ba nnete ba mofuta o li tsoetseng (trueness to type)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Setopo se be selelele</li> <li>✓ 'Mele ese atamelane haholo</li> <li>✓ Molokong o senang pale ea hoja malinyane hape o na le tlhokomelo e ntle ea malinyane</li> <li>✓ E be le metsoele e fihlelehang e 12-14</li> <li>✓ Khetho e etsoe molokong o se nang mafu</li> </ul>
	

### 3.2 TLHOKOMELO EA KOLOBE EA TSOALISO

Poho e na le tšusumetso e kholo tsoalisong ea mohlape o motle. Ha li fane feela ka mohloli oa ntlafatso ea libopeho tsa lefutso, empa li boetse li ama sekhahla sa ho tsoala le palo ea malinyane a tsoaloang.

Poho e ncha e kenang mohlapeng e ka ba mohloli o kenyang mafu mohlapeng. Poho encha ha e fihla e tlameha ho beoa ka thoko ho shejoa mafu, ho etloaetsa sebaka le ho e phomotsa.

Ka mora beke entela poho e fihlang khahlanong le manyooa le linta sena se tlang ho etsoa ka mora khoeli tseling le tseling tse tšeletseng. Fokotsa le ho kuta likholoane tse hotseng haholo ka ha e tla sitoa ho e ma hantle.

Kolobe e khethetsoeng tsoaliso e lokela ho hlokomeloa ka tsela tse latelang:

- ✓ Kolobe e neheloa ha e le likhoeli tse robeli.
- ✓ Ho tloha khoeling ea bo-tšelela e ja 2kg ka letsatsi.

- ✓ Metsi a be teng senoelong ka linako tsohle.
- ✓ Hloekisa lihoko ka matsatsi ohle.
- ✓ E ntela manyooa ho latela lethathamo la kentelo ea manyooa le lekhoekhoe.
- ✓ Sebelisa hoof cutter/ trimmer ho boloka likholoane li le khutšoane.

### 3.3 MATŠOAO A KOLOBE E PALESITSENG

Nako ea ho qala ho palesa ke likhoeli tse 4-5. Kolobe e bontša matšoa a ho palesa nako ea matsatsi a mararo, a tlang ka mekhahlelo e meraro:

#### 1) Mokhahlelo oa pele: (*Early heat signs*)

- ✓ E hloka botsitso
- ✓ Botšehali bo ea topa,
- ✓ Botšehali bo ba le lero le mamina,
- ✓ Mocheso oa mmele o oa phaham

#### 2) Mokhahlelo oa bobeli: (*Service period signs*)

- ✓ O etsahala nakong ea lihora tse 35 -45 ea mopaleso.
- ✓ E palama tse ling
- ✓ E mamella ha boima bo behoa holima eona.
- ✓ E bokolla khafetsa
- ✓ E batla poho
- ✓ Ha e je hantle.
- ✓ E ntša metsi khafetsa.
- ✓ Botšehali ha bo sa tupile ha holo empa bo ntse botsoa lero
- ✓ Nehela kolobe

#### 3) Mokhahlelo oa boraro: (*Post oestrus-period signs*)

- ✓ kolobe ha e sa ema ha ho behoa letsoho kapa boima
- ✓ Ho topa ha botšehali ho ea nyamela.

Se nehele kolobe mopalesong o na oa ho qala e sa le nyane.

Nehela khoeling tse robeli

Ha e sa nka poho e tla pheta mopaleso ka mora matsatsi a mashome a mabeli a motso o mong (21)

*Setšoantšo sa kolobe e emang*



### 3.4 MEKHOA EA HO NEHELA

1. Monehelo oa Letsoho/Lehlakana (AI)
2. Monehelo oa tsholeho moo ho sebelisoang poho

#### A. Monehelo oa letsoho/lehlakana (*Artificial Insemination*)

Ke tšebeliso ea mahlale moo peo ea poho e bolokoang hore e tle sebetse nakong e o e hlokoang. Ha e tšehali e palesitse e ea nkoa ho sebelisoa mahlakana a loketseng morero ona



### i. Melemo ea AI.

- ✓ Tsebeliso ea mali a boleng bo botle.
- ✓ Ho qoba/theola nehelatsano ea mafu.
- ✓ Li tsenyehelo tsa theko le tlhokomelo ea poho ha lieo
- ✓ Ntlafalo ea mohlape le tlhahiso ea nama e ntle

### ii. Mathata

- ✓ Ho fumana mali ha ho bobebe.
- ✓ E hloka litsebo: ha se batho ba bangata ba tsebang tsebeliso ena ea mahlale.
- ✓ Lisebelisoa tsa ho iketsetsa le ho boloka moliko ha li eo Lesotho.

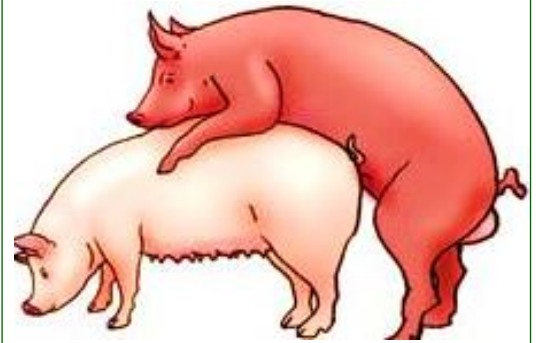
*Setšoantso sa monehelo oa letsoho*



### B. Monehelo oa tlhohleho

- ✓ Ho sebelisoa poho ho nehela e tšehali.
- ✓ 'Meri o lokela ho ea hokong ea poho:
- ✓ Monehelo o a tleha ha o etsoa ho eso chese: hoseng le mantsiboea pele li fepua (e ka nehelo hoseng ea phetoa mantsiboea)
- ✓ Se tlohele liphoofole tseo li le ling e le hore o tlo thuse poho ha ho hlokahala.

*Setšoantšo sa monehelo oa tlhohleho (ka poho)*



**TLHOKOMELISO:** Kolobe e ka 'na ea palesa matsatsi a seng ma kae hoba e tsoale, se nehele kolobe e eo ha feela e ntse e nyantša.

Ha ho ka e tsahala hore kolobe e nehelo e ka makhetlo a mararo e ntse e sa nke poho e khethele (*culling*) ho e isa tlabong ka ha e sitoa ho hlaisa seo u selebeletseng 'me o fokotse litšenyehelo tsa tlhokomelo ea eona. *Ratio 1: 15-20*, Poho e ka nehela lithojana tse 2-3 ka letsatsi, e ntse e fuoa monyetla oa ho phomola.

#### a) Melemo ea ho sebelisa poho:

- ✓ Ho bobebe ho sebelisa poho ha ho hlokahale litsebo tse ikhethileng (joale ka AI)
- ✓ Poho e thokola ho palesa ka baka la lero la tlhohleho.

#### b) Mathata

- ✓ Ho fetola boleng ba mali ho boima.
- ✓ Nehelatsano ea mafu.
- ✓ Litsenyehelo tsa theko le tlhokomelo ea poho li holimo

## 3.5 KEMARO

### A. Tlhokomelo ea kolobe e emereng

- ✓ Kolobe e emara matsatsi a kabang a 115. (**khoeli tse tharo, beke tse tharo, matsatsi a mararo**)

- ✓ Khoeli ea pele ka mora monehelo ke nako eo o tšoanelang hore sehoai se be hlokolosi haholo se e tse bonnete ba hore kolobe ha e khathatsoe ke letho
- ✓ Metsi a hloekileng ka linako tsohle.

Letsatsi ( nakong ea kemaro)	Ketsahalo
21 kamora ho nehela	✓ Sheba matšoao a ho palesa hape
42	✓ Sheba matšoao a ho palesa hape
85	✓ Eketsa lijo
100	✓ Thibela le ho phekola lekhoekhoe le linta
105	✓ Noesa ba keng sa manyooa
108	✓ Hloekisa hoko ka sebolaea kokoana hloko beke pele e tsoala ✓ Hloekisa kolobe, e ise ka moo e tsoallang
112	✓ Theola lijo ho qoba ho tlallana
113	✓ Fepa simile kapa botala haholo e le hore e lule e hlephile

### B. Mabaka a setisang kolobe ho nka poho

Khakanyo ke hore lithojana tse isang ho 20/25 le 12-14 li mmeri lekholong likolobe li ka sitoa ho e tsa malinyane.

Bothata	Tharollo
Lefutso:	Tlhabo
Mmeri o nonne haholo	Tlhokomelo e nepahetseng e kenyeletsa phepo tekanyetso, taolo ea linoamali le bohloeki
Ho ruruoa hoa popelo	E tela setsi sa phekolo ea liphoofolo
Mocheso o phahameng	Qoba ho nehela ha ho chesa, nehela hosing le mantsiboea
Nako e sa nepahalang ea ho nehela	Nehela kolobe nakong ea lihora tse 35- 45 e palesitse.
Poloko e sa nepahaleng ea peo(AI)	Peo ea monehelo e bolokoe ka hloko moo ho pholileng 15–19°C

## 3.6 HO TSOALA

### A. Matšoao a ho tsoala

- ✓ Kolobe ha e tsoala e bokella matlakala (mosuela)
- ✓ E hloka botsitso
- ✓ Lero le metsi letsoa botšehaling bo topileng

- ✓ E tsoka mohatla nakong eo e bothileng
- ✓ E botha khafetsa
- ✓ Khoo e neng e koatse metsoele ea tloha, lebese le ka bonahala ho tsoa.

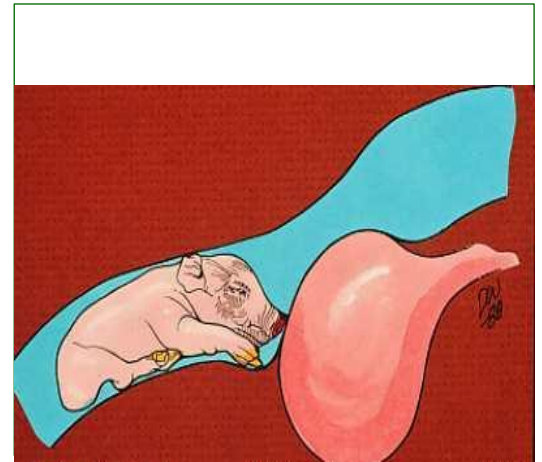
### B. Matsoao a ho fareloa

Hona le a mang a matsoao a bontšang ha kolobe le eto la ho tliša malinyane le le boima, ke alatelang:

- ✓ Ha e se e sa je hantle
- ✓ Matsatsi a 116 a se a fetile
- ✓ Monkho o mobe le metsi a masootho
- ✓ Ho fokola, mokhathala e sitoa ho ema
- ✓ E nka nako e telele ho fihla horeng ho ntša le linyane
- ✓ E kokomosa feela ho sa tsoe lelingane
- ✓ Metsi a tsoa a na le bofubelu hose na matšoao a ho kokomosa

### C. Ho fareloa likolobeng ho ka etsoa ke tseling tsa tse latelang:

- ✓ Malinyane a maholo haholo
- ✓ Ho hloka matla ha popelo
- ✓ Likolobe tse kholo le pelvis e nyane
- ✓ Ho sotheha hoa tsoala
- ✓ Maemo a bophelo haholo ho kula
- ✓ Malinyane a shoeleng ka hara popelo
- ✓ Malinyane a mabeli a hlahang ka nako e le 'ngoe
- ✓ Ho hloleha ha tsoala ho honyela
- ✓ Mmeri o na le khatello ea maikutlo kapa letsoalo
- ✓ Mmeri o nonne haholo
- ✓ Molomo oa tsoala o koalehile kapa o monyenyanane
- ✓ Malinyane a hlaha a furalletse....



Hangata, o ka tlosa lintho tse ngata tse ka susumetsang mathata a ho tsoala nako pele letsatsi le ho tsoala. Ka tlhokomelo e nepahetseng, empa ha bothata bo bonahala hlapa matsoho ka metsi a futhumetseng le sesepa, roala li atlana tse lokileng ke tse khutlang pela setsu, tlotsa ka baseline hore ho thelle, kopanya menoana (kotso) o kenye menoana eo ka botsehaling butle butle ho utloa hore na separakileng tlhaho ea malinyane ke eng ha o se fumane se ntše. **Bitsa ngaka ea liphoofole hang ha o lemoha tse boletsoeng ka holimo mme o sitoa ho thusa**

### D. Nako ea ho tsoala

- ✓ Kolobe e nka hora tse peli ho isa ho tse'ne ho tsoala
- ✓ E ntša lelinyane kamora metsotso e 10-15
- ✓ Tse nyane linka nako e khutšoanyane ha tse holileng eba teletsana
- ✓ Ha ho ka feta nako e telele lelinyane le sa tsoe, kopa thuso ho mosupisi oa liphoofole kapa ngaka ea liphoofole
- ✓ Ha e qetile ho tla tsoa mohlana.
- ✓ Ha kolobe e tsoetse lenane le fetang matsoele, etsetsa a senang moo a nyanyang khatsela.

Ha kolobe e qeta ho tsoala ho na le matšoao a itseng a lokelang ho hlokomeloa.

- ✓ E shebahala e phomotse kapa e na le botsitso,
- ✓ e ea korotla kapa ho bitsa malinyane a eona.
- ✓ Ho thothomela le ho sisinyeha ha leoto la morao hoa emisa. Ha eba sena se ntse se etsahala ho ka etsahala hore ebe kolobe e ntse e na le malinyane a salletseng.

**E. Khatsela ea maiketsetso (ka lebeso le metsi kapa la phoofo):**


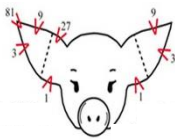


1. Lebeso le metsi: 500ml lebeso, 500ml metsi, 1 mothoebe oa lehe, 5ml cod liver oil, 2.5ml citric acid.
2. Lebeso la phoofo: 100g lebeso le phoofo, 400ml metsi, 1 mothoebe oa lehe, 3ml cod liver oil, 2.5ml citric acid.

**Tšebeliso:**

- ✓ Motsoako o ka sebelisoa o le mocheso o mahareng kapa o futhumetse feela.
- ✓ Qala ka 10-20ml lelinyane ka 'ngoe, fepa ha 'ne (4) ka letsatsi.
- ✓ Ka mora lihora tse tšeletseng (6hrs) letsatsing la boraro le labone.
- ✓ Lihora tse robeli lipakeng ho fihlela lijo tsa malinyane li kenyeletsoa.

**3.7 TLHOKOMELO EA MALINYANE**

Tafole e latelang e hlalosa lintho tseo sehoai se lokelang ho lietsa matsatsing a ho tloha a malinyane a qeta ho hlaha ho fihlela a le libeka li robeli (8wks).

Letsatsi	Ketsahalo
Letsatsi la 1	<ul style="list-style-type: none"> <li>✓ Ha kolobe e qetile ho tsoala poma sekhababa</li> <li>✓ Sisa bolelele ba linoko tse tharo ho isa ho tse 'ne, fasa lefito</li> <li>✓ Tlotsa ka iodine kapa dettol</li> <li>✓ Sefuthumatsi se ea hlokahala haholo mariha (infrared lamp/ heater) ho qoba ho hatoa ke mma le ho tšoaroa ke sefuba.</li> </ul> 
Letsatsi la 1-3	<ul style="list-style-type: none"> <li>✓ Enta malinyane ka ente ea tšepe (iron) <ul style="list-style-type: none"> <li>✓ Tšoaesa (nomora) malinyane bakeng sa ho boloka libuka tsa tse tsoetsoeng. <i>Ear notcher</i> kapa <i>ear tag</i>  </li> <li>✓ Poma meno (ntlha e bohale)- tooth clipper  </li> <li>✓ Khaola lintlha tsa mehatla (noko tse tharo) tail docker  </li> </ul> </li> </ul>

Letsatsi la 7-10	✓ Qalella phepo tlatsetso (creep Feed)
Libeke tse 6-8	✓ Futsisetsa (khoisa) malinyane

#### A. Phepo ea malinyane

- ✓ Malinyane a ja lebese feela matsatsing a leshome a ho qala.
- ✓ Ka mora matsatsi a 7-10 a qalella ho ithuta hoja.
- ✓ Phepo tlatsetso ea malinyane e thusa haholo hobane matsatsi a 21 tlhahiso ea lebese ea 'mamalinyane e fihlela sehlohlolo e be e ea theoha ha litlhoko tsa malinyane tsona li nyoloha haholo.
- ✓ Matsatsing a supileng ho isa a leshome qala ho fepa ka creep feed.

#### B. Mokhoa oa ho fepa

- ✓ Khoeli ea pele e fe 0.5kg lelinyane
- ✓ Khoeli ea bobeli e be 1kg lelinyane ka leng
- ✓ Khoeling ea boraro 1.5kg lelinyane ka leng
- ✓ Khoeling ea bone 2kg le linyane ka leng
- ✓ Mofuta oa lijo o tla fetoha ho latela kholo

#### C. Ho shoa ho holimo hoa malinyane ho tlisoa keng?

Mafu a bolaeang malinyane e kaba bonyane leshome ho isa mashomeng a mararo lekholong pele a futsisetsoa. Ho shoa hona ho phahameng ho supa bofokoli ba tlhokomelo ka kakaretso, haholo bohloeki, taolo ea mafu, bolulo le phepo e nepahetseng. Ho shoa hob a boima bonyane matsatsing a pele a mahlano a hlahile.

Ho hloka tsebo ha bohlokomeli le barui le hona ho kotsi haholo ntlheng ea tsoelo pele ka hona ho ikamahanya le litsibi le basupisi ka linako tsohle e kaba bohlae.

**Boteng ba likokoana-hloko:** Li lutse li le teng ka lihokong tsa likolobe ka libopeho tse fapaneng. Malinyane a hloka mokhoa oa ho itšereletsa, le tsietsing le hloka tšireletso:

- a. Lihoko tse sa tšelang likolobe li hloekisoa li be li tšeloe sebolea kokoan-hloko.
- b. Lihoko li ome, liphomotsoe ho fokotsa phetisetsano ea mafu.
- c. Eba hlokolosi haholo linakong tseo ho entoang, ho faoang le ha ho pongoa meno le mehatla.

**Bolulo e be bo nepahetseng:** ho futhumale ho lekana, ho ome le moea e se be oa o mongata haholo ntlong ea tsoaliso. Ka litsela tsohle moo ho khonehang malinyane a etsoetse sefuthumatsi haholo bosiu le linakong tsa lirame. Litšephe tse ka hokong ea tsoaliso e be tse tla tšireletsa malinyane ho ripitloa ke 'ma oona, e seng tseo re bonang li kentsoe ka hokong ho sa tsebahale lebaka la ho likenya.

Malinyane a fumane metsi a macha nako tsohle, e be a hloekileng. Linoelo e be tseo likolobe le malinyane li kekeng tsa Kenya maoto ha bobebe.

**Phepo:** Qoba ho fepa kolobe haholo kamorao ho hotsoala ho qoba letšollo la malinyane le bakoang ke khora hobane le kaba kotsi. Fepa kolobe hantle o ipapisitse le lenane la malinyane ao e a nyantšang

Ka kakaretso litlha tse latelang li bohlokoa ho qoba litahlehelo tse sa hlokeheng:

- a. Tlhokomelo e ikhethileng malinyaneng beke ea pele a tsoetse, e ka sitana le bosiu
- b. ke ntelo ea tšepe letsatsi hoisa a mararo a tsoetsoe.
- c. Pooma meno a ntja hang hoba ahlahe ho qobisa ho loma mma ha a nyanya le ha a bapala a se ntšane likotsi
- d. E la hloko letšollo la mofuta o fe kapa o fe, nka khato hang hang ho qoba ho shoelloa ke malinyane.
- e. E tsa lebokose la mofuthu bakeng sa malinyane ho a qobisa mohatsela.

### 3.8 TLHOKOMELO EA 'MAMALINYANE (MOTSOETSOE)

- ✓ Theola phepo ea 'mamalinyane ka mora ho futsisetsa
- ✓ Nehela 'mamalinyane beke (5-7days) kamora ho futsisetsa
- ✓ Pheta monehelo kamor'a beke tse tharo (18-21 days) ha kolobe e sa nka poho.
- ✓ Tlhokomelo ea kolobe e mereng joalo ka 7.5

*Setšoantšo sa likolobo tsa bommalinyane*





## KAROLO EA BONE: NOTŠO EA LIKOLobe

### 4.1 NONTŠO EA LIKOLobe (PIG FATTENING)

Mokhahlelo ona lihoai li holisa malinyane ho fihlela tlhoko ea boima bo itseng kapa tlhoko ea moreki. Ho lihoai tse ngata e shebahala e le mesebetsi o bonolo haholo hoo lintlha tse ngata tsa bohlokoa li tloisoang mahlo holimo, hona ho qetelletse ho etsa liphoso tse ngata tse theolang tlhahiso ea lihoai. Lihoai li tlameha ho ela hloko tse latelang:

### 4.2 KHETHO EA KOLOBE EA NONTŠO LE KHOLO/NAKO EA EONA (AGE OF FATTENING)

Hangata kolobe tsa nontšo li qaloa ho tloha ha malinyane a futsisetsoa, hape ho se ho hloailoe tse ka sebelisoang tsoalisong. Ka hoo khetho ea mofuta le tsoaleho ea oona ke ntlha ea bohlokoa haholo. Mefuta ea likolobe e boletsoeng ka holimo e metle haholo bakeng sa nontšo le motsoako oa mefuta eo o motle haholo ba keng sa ho nontšoa. Mohlala: large white/topigs (Poho) X landrace/camborough(Tšehali)

### 4.3 MOKHOA OA PHEPO:

Karolo ea phepo ke ea bohlokoahali haholo kholong le tlhahisong ea nama ea boleng bo bottle, likolobe tse holang ho bohlokoa hore ho sebelisoe phepo ea mocha o chele moo lijo li lulang li le teng ka nako eohle ka sejong. Likolobe li feptjoa ka mokhoa ona ho tloha qalong ea nontšo ho fihlela libeke tse leshome le metso e mene (14wks). Ho tloha bekeng ea leshome le metso e mehlano phepo tekanyetso e ka sebelisoa moo kolobe phepo ea eona e ipapisa le kholo ea eona.

### 4.4 BOLULO:

Likolobe li nontšoa li le ngata ka hoo bolulo bohlahla e le ntlha ea bohlokoahali. Bolulo bo lokela ho sireletsa likolobe mochesong kapa serameng ho ea ka linako tsa selemo. Ntlha ea bohlokoa ke phapang ea kholo le boima (*weight & age difference*) nako eohle likolobe li lule li arotsoe, tse holileng haholo li bolokoe 'moho, hona ho etsoa hore ha lija ho sebe le tse sekisetsoang

## KAROLO EA BOHLANO: MAFU A LIKOLOBE LE PHEKO EA OONA

### 5.1 KOLOBE E PHETSENG HANTLE E SHEBAHALA TJENA:

- ✓ E ba sehlahlo, hlokolosi, e hlokometse tsohle tse etsahalang seabakeng seo e leng ho sona.
- ✓ Mahlo a chatsi, a hloekile ha akoaleha.
- ✓ Ha hona lero le sa tloaelehang le tsoang ka mahlong, ka nkong kapa ka morao
- ✓ Letlalo le ea phatšima, boea bo maname bo boreleli.
- ✓ E ema ka maoto ohle ka ho tšoana, aotlolohile, e bonahala e khatholohile
- ✓ E pefumoloha ha bonolo ha e hemesele

### 5.2 MATŠOAO A HO KULA KA KAKARETSO:

- ✓ Ho hlatsa
- ✓ Ho lahlehelo ke takatso ea lijo
- ✓ Ho hloka sehlahlo
- ✓ Letšollo le tsoakileng le bofubelu
- ✓ Phokolo ea 'mele
- ✓ Ho foforeha ha boea ka letlalo le petsohang kapa le emang makhekhebu,
- ✓ Ho hlanya ha boea,
- ✓ Ho hlotsa,
- ✓ Ho pipitleloa khafetsa.

Mafu a kenella likolobe ha li ka fokolloa ke matla a 'mele a ho itšireletsa. Ka lebaka lena phepo, bolulo le tlhokomelo ke tsa bohlokoahali leruong la likolobe ka kakaretso, hobane li tla laola bophelo ba kolobe le matla a eona a ho itšireletsa khahalong le mafu.

Mafu a khathatsang likolobe joaloka liphoofolo tse ling a mefuta-futa, a bile a lihlopha-hlopha. Ho na le a tšoaetsanang le a sa tšoaetsaneng, mona re ke ke ra bua ka mafu kaofela kapa hona ka kotloloho. Re tla leka ho a akaretisa liqholotso tsa likolobe, mafu a tšoaetsanang ke boikarabello ba bophekoli ba liphoofolo

### 5.3 MAFU A SA TŠOAETSANENG:

Mafu a fumanehang nehelatsanong ea mali/ ka lefutso. Ke mafu a hlaelang kolobe e sa le popong (embryonic period):

- ✓ A amang kolobe e ntse e phela e sa utloe bohloko.
- ✓ Ha a mang e ke ke ea phela,
- ✓ Ha a mang a fokotsa boleng ba eona ba thekiso.



1. **Ho bululoha (Hernia)** E kaba ea mokhubu (**umbilical hernia**) kapa ea lekoalata (**scrotal hernia**). hoba tharasi (botona le botšehali phoofolong e le 'ngoe) Kolobe e ka tseba ho phela, feela matla a eona a thekiso a tla fokola. Ha e lokeloe ho khetheloa tsoaliso
2. **Bosieo ba sebono (atresia ani)** - kolobe e ka hla ea shoa tlhahong kapa ea phela, ha e fumanehile ka nako e ka etsetsoa mokhoa oa ho kaka.

#### Litšoantšo tsa likolobe tse kibehileng sebono



#### Litšoantšo tsa likolobe tse buluhileng mokhubu



### 5.4 KHAELLO EA PHEPO KAPA LIJO TSE FOSAHETSENG:

- ✓ Khaello ea lijo kapa phepo e fetang tekanyo (*shortage or overeating*)
- ✓ Lijo tse sa thuhisehang hantle mohlomong ka lebaka la bongata ba metsoako e meng e itseng, e ke keng ea amoheloa ke mala a kolobe (*cellulosis*)
- ✓ Likhaello tsa –Lihaha 'mele (*proteins*), Matsoai (*minerals, Vitamins- A & D*) *calcium, phosphorus* le tšepe (*iron*).
- ✓ Hlobo ka mefuta ea eona e ka baka boholo ba bofokoli tlhahisong le kholong ea likolobe. Amang a mathata a tlišoang ke hlobo ke alatelang; ho phutsa ha mmeri, metsoele e ea honyela le ho hloka lebese, kemaro e tlaase, malinyane a hlahang a shoele, letšollo, jj.

### 5.5 MAFU A TŠOAETSANOANG

Mokhahlelo o tla fumaneha o tsoa lingoliloeng tsa bophekoli ba liphoofole.

**MAFU A LIKOLOBE: Ka Doctor Matlali.**

#### A. LITAEMANE TSA LETLALO/PIG ERYSIPELAS

**Sesosa**

Ke lefu le bakoang ke bacteria, le bonahala haholo likolobeng tse ntseng li hola phetseng hantle empa lina le kokoana-hloko li e entsa mantle ng e be li tsoaetsa tse ling. Kokoana e ka phela mantleng ka khoeli tse hlano

**Tsoaetso**

1. Li shoa hang-hang
2. Mocheso o phahameng, ebe mocheso o ka foolisa tse emereng
3. Maqeba letlalong le serame sa masapo
4. E ka fitisetsoa ka lieta, liphahlo, litsintsi le liphoofofoplo tse ling

**Mats'oao**

1. Mocheso o phahameng
1. Bo thata ba mahlo, li ka hlatsa ka nako tse ling

2. Shape e kang taemane letlalong
3. Manonyeletso a ruruha
4. Li ka shoa hang hotse seng li hloka matla

#### **Pheko**

Etela setsi sa bophekoli

Thibelo

Kopana le ngaka ea setsi sa haeno bakeng sa likeletso

### **B. MATSOAFO A LIKOLOBE/ENZOOTIC PNEUMONIA OF PIGLETS**

#### **Sesosa**

E bakoa ke mofuta oa bacteria

#### **Tsoaetsano**

Malinyane le bo 'm'a li ka angoa ke lefu lena

1. Tsoaetsoa e etsahala ka hore manyeoa a manyane ka chebahalo a feta ka matsoafong ebe a senya masobana a matsoafo
2. Ho hema maro a oeleng fatse a tse kulang
3. Matlo a mongobo
4. Phepo e sa nepahalang
5. Mokhoa oa ho ruoa le ona o ka baka kenello ea lefu
6. Ka nako e ngoe kolobe e ka sala e ena le tsoaetso empa eka e folile esa bonahala
7. Kholo e sa nepahalang

#### **Mats'oao**

1. Li ka khohlola ho tloha libeke hoesa likhoeling tse ngatanyana
2. Li lieha ho hola
3. Tahlehelo ea lijo
4. Ho hema ka thata

#### **Pheko**

Etela setsi sa bophekoli

#### **Thibelo**

1. Boloka bohloeki
2. Noesetsa manyeoa
3. Ntsa tse kulang
4. Sebaka se bulehileng sebakeng sa malinyane
5. Bo 'm'a ba fuoe lijo tse nang le li hahaha 'mele/vitamins

*Malinyane a kulang*



*Matsoafo a nang le bothata ba serame*



## C. AFRICAN SWINE FEVER

Ke lefu le bakoang ke virus, le tsoara likolobe tsa hae le tse hlaha

### Mats'oao

1. Takatso ea lijo e ea theoha
2. E ea thotofala
3. E ba le 'mala o pherese sefeneng, litsebeng le maotong
4. Eba matetetso meleng/letlalong
5. Mocheso o phahameng oa 42°C
6. Eba le letsollo
7. Ho k aba le lero mahlong le linking

### Ts'oaetso

1. Ho thetsana le likolobe tse ling tse kulang,
2. Hoja nama e nang le tsoaetso ea lefu lena ebile e sa butsoa
3. Ho kopana le likolobe tse hlaha tsenang le tsoaetso

### Pheko

Ha hona pheko

### Thibelo

Ha ho thibelo e ka atlehang

Likolobe tse nang le tsoaetso li lokeloa ho bolaoa

khaello ea mali malinyaneng a likolobe/piglet anemia

E tsoara malinyane a qetang ho hlaha kapa a ntseng a nyanya (2-4 weeks old)

### E Bakoa Ke

1. Thlokahalo ea tsepe (iron) lebeseng la bo 'm'a
2. Malinyane ana le tsepe e nyane ho tloha tlhahong ea ona
3. Haeba bo 'm'a b alula ka samenteng 'me hose lijo tse fejoang lisena tsepe

### Mats'oao

1. **Takatso** ea lijo le boima li ea theoha
2. Kholo e ea ameha
3. Ha lina matla
4. Bothata ba ho hema, le phokolo ea mali
5. Mara a ba masoeu (pale mucous membranes)
6. Letlalo le ea soebana, le khorofa, hape e ka re e ruruhile ka qoqothong (letletse metsi) oedematous haholo ho pota hlooho, molala le mahetla
7. Letlalo le ba le 'mala o isang bosehlang

### Pheko

1. Fa malinyane Iron 72hrs kamora ho tsoaloa (3-5) matsatsi
2. Tlotsa ka paste metsoele ea 'm'a

\*sheba litekanyo tsa Iron le copper lijong tsa likolobe



## 5.6 TAOLO, ENTE, LE PHEKO EA MAFU A LIKOLOBE

Malinyane le tse tšehali	Ketsahalo
Letsatsi la 1-7	✓ Entela tšepe matsatsing a mararo a pele (iron injection intramuscular)
Letsatsi la 35	✓ Thibelo le taolo ea manyooa le linta/lekhoekhoe
Letsatsi la 150	✓ Thibelo le taolo ea manyooa le linta/lekhoekhoe
Letsatsi la 5 pele ho nehelo	✓ Thibelo le taolo ea manyooa le linta/lekhoekhoe
Matsatsi a 14 pele e tsoala	✓ Phekola lekhoekhoe le linta
Matsatsi a 10 pele e tsoala	✓ Noesa ba keng sa manyooa



## KAROLO EA BOTŠELA: TSAMAIŠO EA LERUO LA LIKOLOBE

### 5.7 POLOKO EA LIBUKA / LIREKOTO

Tlaleho ea tšebetso ea polasi eo ho eona mehloli (resources) ea polasi, lihlahisoa (products) tsa polasi, le tlhokomelo ea letsatsi le letsatsi ea tlhahiso ea polasi le mesebetsi ea lichelete ea polasi li ngoloang ka tsela e hlophisehileng. Likenyeletsa le lintlha tse mabapi le litaba tse tobileng tsamaiso ea polasi

Bohlokoa ba poloko ea libuka kapa liraekoto:

- ✓ Lithusa tsamaisong ea letsatsi le letsatsi ea polasi
- ✓ Ho ntlafatsa mokhoa oa tšebetso ka kakaretso
- ✓ Ho hlahisa lintlha tse hlalosang: boemo ba tlhahiso, boemo ba tsoaliso, likatleho mosebetsing, moruo (tšebeliso ea lichelete), tšebeliso ea lijo, Kholo ka kakaretso, boemo ba mafu le boemo ba bophekoli.
- ✓ Li ka sebelisoa ha ho e tsoa boithuto le ho utloisisa mathata a mafu a seoa.
- ✓ Kalimo ea chelete(tšebetso/khahlametso) bankeng kapa ho bafani
- ✓ Basupisi, batšireletsi ba thepa (insurances), le ba kalimanang ka chelate ba ea lihloka.
- ✓ Temo ke khoebo lirekoto tse nepahetseng lithusa ho etsa meralo e nepahetseng bakeng sa polasi
- ✓ Ho tseba chelete e keneng, e tsuileng le phaello kapa tahlehelo

Mefuta ea liraekoto e kenyeletsa: **Tlhahiso:** tsoaliso, nontšo, lijo le emeng.

**Chelete:** E sebelisitsoeng, e keneng ka hara moliko oa polasi (Sheba linoko (Annex))





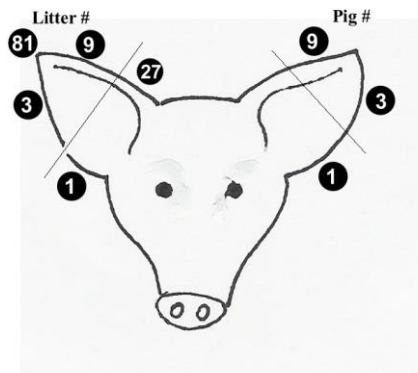






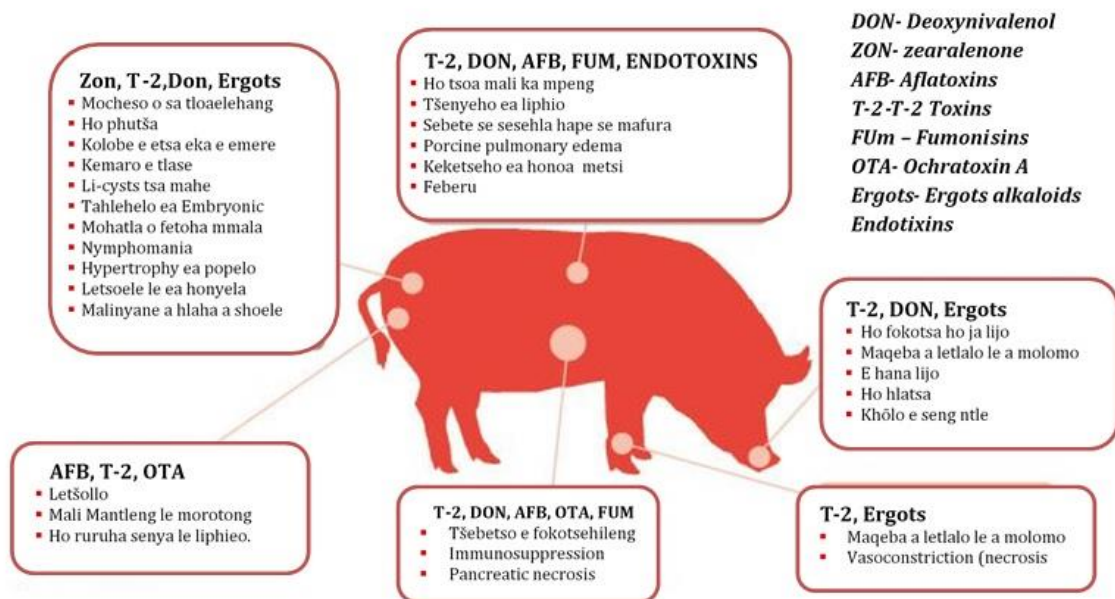
## ANNEX 2

Ho tsoaea ka ear notch



## Annex-3

Tlhaselo ea lijo tse hlobo kolobeng



\*BOLOKA LIBUKA KAMEHLA.

Mehloli ea litaba

Dr Matlali: Training manual for the rvcc project – undp 2021