

# TATAISO EA LIHOAI



# LERUO LA LIKHOHO

Tokomane ena e hlhisitsoe ka tšhetso ea lichelete ea EU, ACP le IFAD.



Maikutlo a hlhisitsoeng tokomaneng ena ha a bolele maikutlo a EU, ACP kapa IFAD.

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# TATAISO EA LIHOAI KA LERUO LA LIKHOHO

Mokhatlo oa Lesotho oa Lihoai (*LENAFU*)

Lefapha la Liphoofole (*Department of Livestock Services*)

Lekala la Temo

## **Tlhaloso**

Tokomane ena ha e bontše maikutlo a Mokhatlo oa Machaba oa Ntlatso 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 Lihoai (LENAFU).



## **Liteboho**

Liteboho li lebisoa ho lefapha la ntlafatso le bophekoli ba liphoofole ka ho fana ka monyetla ona oa ho ngolla lihoai bukana ena e tlang ho ba tataisa thlahisong ea leruo la likhoho.

Bangoli ba tokomane ena ba leboha LENAFU ka tšebetso e sa thekeseleng nakong eo ho ngoloang tokomane ena.

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## TLHALOSO EA MANTSOE

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*Tlhokomeliso: Mantsoe a senyesemane a sebelisoeng ke ho nolofaletsa sehoai hore se utloisise.*

**Ho alama/fuoama:** Ke ha likhoho li fana ka mocheso o lekaneng sebakeng sa mahe hore a qhotsoe kamor'a matsatsi a 21.

**Mosuoela** – Lintho tse sebelisoang to koahela fats'e ka moo likhoho li tlo ruoeloa/ li ruoela ka teng

**Tsuonyana** – Khoho e sa tsoa qhotsoa.

**Mokokoana** – Khoho e tona e ka tlase ho selemo.

**Mokoko** – Khoho e tona e selemo kappa ho feta.

**Sethojane** – Khoho e ts'ehali e ka tlase ho selemo

**Sethole** – Khoho e ts'ehali e selemo hoe sa holimo.

**Stater meal** – Lijo tse etselitsoe ho qala litsuonyana tsa nama.

**Grower meal** – Lijo tsa bobeli tse fuoang likhoho tsa nama

**Finisher meal** – Lijo tsa ho qetelang tse fuoang likhoho tsa naha

**Layer feed** – Lijo tse likhoho hore li qale ho behele.

**Sentlojane** – Ntlo ea likhoho

**Serobe** – Ntloana ea likhoho e ka sebelisoang ho alama likhohong tsa Sesotho.



## SELELEKELA

Sepheo sa bukana ena ke ho tataisa sehoai ka mekhoha e nepahetseng ea ho hlokomela likhoho tsa nama, tsa mahe le tse ntlafalitsoeng, ka morero oa ho ntlafatsa tlhahiso ho etsoe hloko boiketlo ba tsona.

### Nalane ea leruo la likhoho Lesotho

Leruo la likhoho naheng ea Lesotho, li qalile lilemong tsa bo 1966 ha ho tlhokomeleha hore ho na le khaello ea phepo e nepahetseng (*malnutrition*). Likhoho tsa Sesotho li ne li sa fane ka mahe le nama tse lekaneng ho ntlafatsa phepo ea batho.

Linaha ka mekhahlelo e fapaneng ea bafani li ile tsa fana ka lithuso tse lateng:

- Khaho ea matlo a ho amohela le ho rekisa mahe (*egg circle market outlets*) .
- Makoloi a tsamaisang mahe.
- Mechini e hlophang mahe.
- Lihatsetsi ho boloka mahe.
- Makoloi a thusang basupisi ho tsamaea ka hare le kante ho naha, e le ho ntlafatsa botsebi ba bona le ho fana ka lithupelo ho barui ba likhoho.



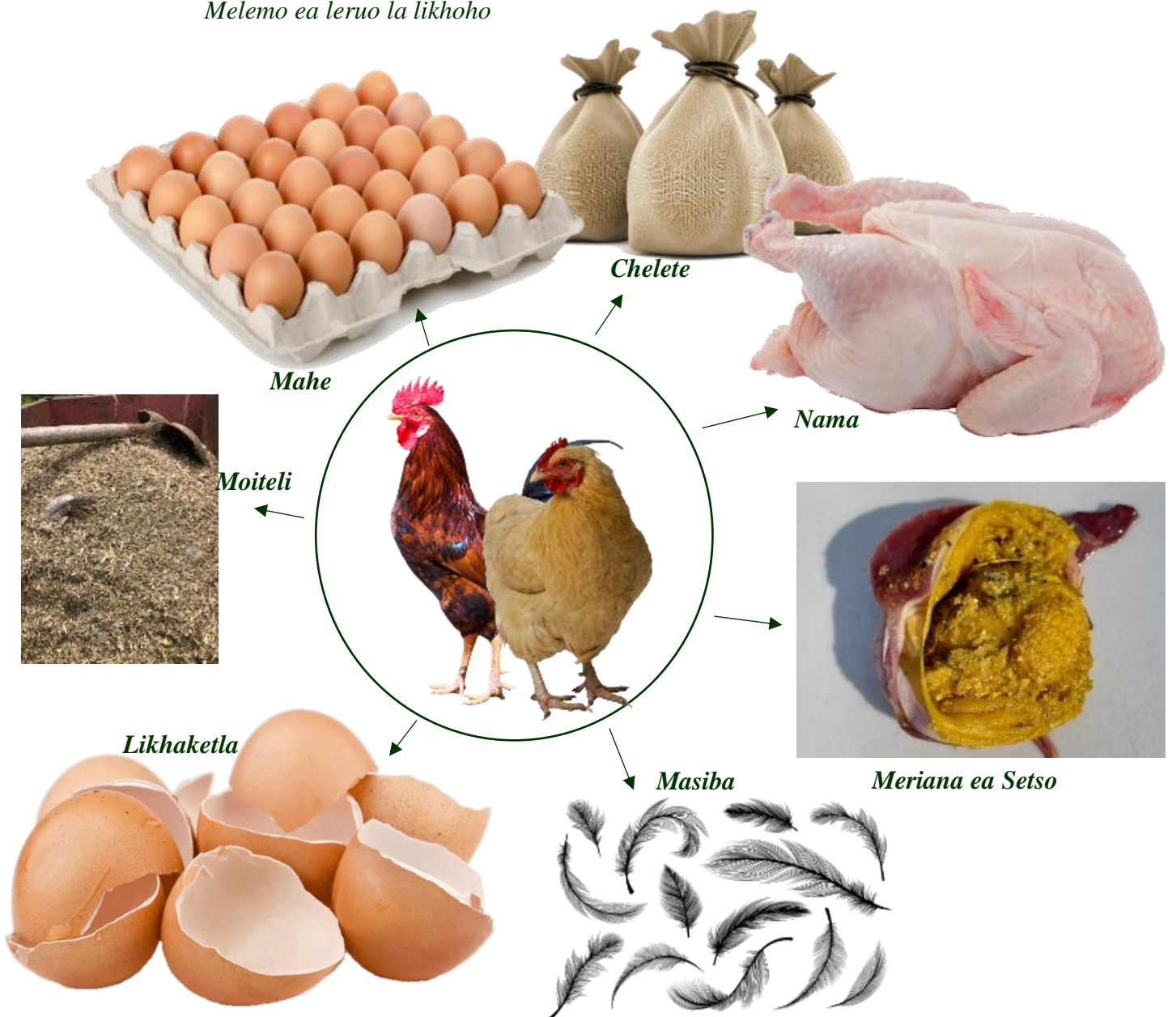
# KAROLO EA PELE: LERUO LA LIKHOHO

## 1.1 MELEMO LE BOHLOKOA BA LERUO LA LIKHOHO

### 1.1.1 Melemo

Melemo ea leruo la likhoho e mengata bakeng sa ho ntlafatsa bophelo. Ke mokhoa o mong o khothaletsoang ho fenyha tlala le bofuma. E meng ea melemo e otlohileng e bontšitsoe ka setšoantšo se latelang:



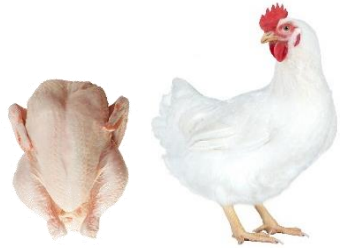
*Melemo ea leruo la likhoho*



### 1.1.2 Makhabane a mefuta e fapaneng ea leruo la likhoho

Leruo la likhoho le ka etsoa ka mekhoha e fapaneng ho latela sehlahisoa sa mantlha se lebelletsoeng ho hlahisoa ka khoho. Mekhoa e akha ho ruoa likhoho tse behelang ka mokoko (tse tloaelehileng ka ho bitsoa tsa Sesotho le mefuta emeng), likhoho tse ruetsoeng ho behela mahe ka bongata (likhoho tsa mahe), le likhoho tse rueloang ho hlahisa nama ea khoho ka bongata (e leng likhoho tsa nama).

*Tafole e latelang e hlalosa makhabane a mofuta oa leruo ka 'ngoe.*

TSA SESOTHO	TSA MAHE	TSA NAMA
 <ol style="list-style-type: none"> <li>1. Li ata ka pele, li ka qhotsa/qhotsisoa ka bongata.</li> <li>2. Lijo bakeng sa lelapa (nama le mahe)</li> <li>3. Li ikhoantlella lijo</li> <li>4. Ha li khathatsoe ke mafu papisong le likhoho tse nyalisitsoeng</li> <li>5. Tlhahiso ea nama ea boleng (<i>organic</i>)</li> <li>6. Li ruoeha ha bobebe (sentlojane)</li> <li>7. Li ka fana ka chelete bakeng sa lelapa (thekiso ea nama le mahe).</li> </ol>	 <ol style="list-style-type: none"> <li>1. Tlhahiso ea mahe.</li> <li>2. Li khona ho fetolela lijo maheng.</li> <li>3. Phaello kapa puseletso ea litšenyehelo eba kapele.</li> <li>4. Tšebeliso ea sebaka se sa sebelisoeng seabakeng sa temo ea lijalo.</li> <li>5. Kholiso ea moruo oa lelapa le naha ho tsoa thekising ea mahe le tsona qetellong ea ho behela</li> </ol>	 <ol style="list-style-type: none"> <li>1. Kotulo ka nako e khutšoane (Ho tloha libekeng tse 'ne (4) ho isa ho tse tšeletseng 6)</li> <li>2. Phetolelo e holimo ea lijo nameng.</li> <li>3. Phaello/puseletso ea litšenyehelo e ba kapele.</li> <li>4. Li ka ruoeloa seabakeng se sa sebelisoeng bakeng sa temo ea lijalo.</li> </ol>

### 1.2 LINTLHA TSE AMANG TLHAHISO EA LIKHOHO

Leruo la likhoho le hloka ho tsoaroa ka tsela e hlokolosi hore le tle le atlehe. Seoai se lokela ho itlhopha le ho rua tsebo ka lintho tsohle tsa bohlokoa tse lokelang ho ba teng leruong la likhoho.



Tafole e latelang e hlalosa litaba tse bohlokoa tsa tlhahiso tseo sehoai se lokelang ho li ela hloko.

<b>Linthla</b>	<b>Tlhaloso</b>
Lenane la likhoho mabapi le ntlo ( <i>stocking density</i> )	Tšubuhlellano e ama lintlha tsohle tse hlahlamang, 'me e ka ama kholo, tlhahiso kapa ea baka mafu.
Moea o hloekileng ( <i>ventilation</i> )	Moea o hloekileng o hloka hahala ka mehla ho thibela mafu, le hore likhoho li heme hantle.
Khanya	Khanya e bohlokoa bakeng sa hore likhoho li hole ka ho lekana hobane li ja hantle.
Mocheso	O lokela hoba o lekaneng bakeng sa kholo e ntle.
Phepo	Li lokela ho ja lijo tse nepahetseng, tse hloekileng kamehla.
Boleng ba tsuonyana	Boleng ba litsuonyana bo ka ama kholo ea tsona.
Bophelo bo botle	Likhoho tse phetseng hantle li hola le ho hlahisa ho latela tebello.
Liente/meriana	Ho thibela le ho phekola mafu a ka amang tlhahiso.
Boiketlo ( <i>Bird welfare</i> )	Tlhokomelo e ntle ea likhoho e ntlafatsa tlhahiso le chai
Bolulo	Ntlo ea likhoho e tsoanela ho lula e hloekile kamehla e sena mongobo le monko ho qoba mafu.
Lijelo le linoelo	Lijelo le linoelo li tsoanela ho lula li hloekile ka palo e nepahetseng.

### 1.3 MEKHOA EA THLAHISO

E le ho khetha mokhoa oa tlhahiso, lihoai li lokela ho nahana tsela eo li tla hlahisa likhoho ka eona, mofuta oa khoebo, mmaraka, litjeho tsa tlhahiso le thahasello ea sehoai ka seng.

**Likhoho tse rueloang ho jeoa-** Ekaba lenane le ka tlase ho 50. Hangata e ba likhoho tsa Sesotho.

**Likhoho tsa khoebo-** E ka ba lenane le fetang 50. Li hlahisa mahe a mangata kapa nama e ngata.

#### 1.3.1 Likhoho tse chalakang (*free range*)

Likhoho li lokolohile ho ea hohle ho iphumanela lijo le ho ithapolla. Likhoho ha li koalloe, li oroha ha li ilo robala le ha li feptjoa.



*Litšantšo tsa Likhoho tse chalakang*

#### 1.3.2 Likhoho tse buleloang ka linako (*Semi-intensive*)

Likhoho li na le ntlo le sebaka se sirelelitsong moo li koalloe teng empa li buleloa ka linako tse itseng ho ichebela lijo le ho ithapolla.

#### 1.3.3 Likhoho tse koalletsoeng kamehla (*Intensive farming*)

Likhoho li lula li koalletsoe kamehla, li ruiloe ka bongata. Phepo, tšebeliso ea thepa e nolofatsang mosebetsi le tlhokomelo ka kakaretso e laoloa ke sehoai.

## 1.4 KHETHO EA SEBAKA

Sehoai se lokela ho ela hloko ho khetha sebaka se nepahetseng sa ho ruela likhoho. Lebaka la bohlokoa ele hore; leruo la likhoho le ka silafatsa tikoloho ha le sa behoa moo ho nepahetseng, bophelo ba likhoho bo ka ba tlokotsing 'me ba ama tlhahiso haeba sebaka se sa nepahala.

Lintlha tsa bohlokoa khethong ea sebaka:

- Se be hole le libaka tsa bolulo.
- Se be thoko le lerata le menko.
- Qoba mokhoabo hobane o ka baka serame le ho hohela likokoana tse ka bakang mafu.
- Se be le mokhoa oa ho atolloa.
- Ho fihlelehe ha bobebe.
- Metsi a hloekileng a fumanehe ka linako tsohle.

## 1.5 MATLO A LIKHOHO

Likhoho li hloka tšireletso khahlanong le maemo a mabe a leholimo joaloka lebatama, lipula tse ngata, sefako, moea o batang kapa lifefo.

### 1.5.1 Mefuta ea matlo

*Matlo a bulehileng:* Moea o laoloa ka ho bula le ho koala likharetene.

*Matlo a koalehileng:* Maemo a mocheso le lirame a laoloa ke sehoai.

*Sentlojana:* Bolulo ba likhoho tsa Sesotho.



*Setsoantšo sa likhoho tse ka sentlojaneng*

### 1.5.2 Khaho ea matlo

- Folamente e phahame ho thibela mongobo.
- Ntlo e shebe leboea-bochabela.
- Ntlo e be kholo ho latela lenane la likhoho.
- E hloekisehe ha bobebe.
- Ntlo e se ke ea nela.
- Matlo a likhoho a arohane bonyane ka 30m.



## Thepa e sebelisoang tlhahisong ea likhoho



Lijelo tsa Litsuonyana



Lijelo

Linoelo



Sefuthumatsi/Mabone



Koranta (bakeng sa ho ala holima moalo)



Thepa e hloekisang (kharafu, lefielo le thata, kiribae, lethompo, le tse ling)





Moalo



### 1.6 MEFUTA EA LIKHOHO





Tafole e latelang e hlalosa mefuta e fapakaneng ea likhoho tsa sesotho, tsa nama le tsa mahe le tse ling tse atlehang ho phela Lesotho.

a) Likhoho tsa mahe le nama (dual purpose)	
Lebitso	Tlhaloso
<p><b>Mamolalana</b></p>	<ul style="list-style-type: none"> <li>• Tlhahiso ea mofuta ona e thehile haholo Lesotho papisong le lilemo tsa fetileng.</li> <li>• Li na le mefuta e sa tsoaneng ea mebala.</li> <li>• Li na le makhabane a ho aha nama.</li> <li>• Li behela mahe a bosootho bo hlakileng.</li> </ul>
<p><b>Khoarahlana (likoekoe)</b></p>	<ul style="list-style-type: none"> <li>• E hlaha Afrika Boroa.</li> <li>• E kopantse Black Australorps, White Leghorns le Plymouth Rocks.</li> <li>• Li botsoa ho fuoama</li> <li>• Li khona ho mamella maemo a mabe a leholimo.</li> <li>• 'Mala oa tsona o amana le botona kapa botšehali: mekoko e ea khanya, lithole li lefifi.</li> </ul>
<p><b>Australorp</b></p>	<ul style="list-style-type: none"> <li>• Li hlaha</li> <li>• Mahe a masootho</li> <li>• E ka phela tlasa maemo a mabe</li> </ul>

<p><b>Orpington</b></p> 	<ul style="list-style-type: none"> <li>• Ho nyalisitsoe Minorca, Plymouth le Langshan.</li> <li>• E hlaha ka mebala e fapakaneng.</li> <li>• Li behela mahe 'me li hlahisa nama e monate hape li fuoama habonolo.</li> <li>• Ke mofuta o sa fofeng hobane li boima.</li> <li>• Li khona ho mamella maemo a mabe a leholimo.</li> <li>• Masiba a tsona a boreleli a etsa hore li batle ho khasa holim'a sehlahla se seng le se seng se tletseng mahe ho boloka litsuonyana</li> <li>• Li khona ho alama mahe a mang kantle ho a tsona.</li> <li>• Li ka behela mahe a 3-5 ka beke hape li fuoama habonolo.</li> </ul>
<p><b>Sussex</b></p> 	<ul style="list-style-type: none"> <li>• Li ba khubelu, tšoeu.</li> <li>• Mahe a bosoeu-bo-lebejana le a bosootho bo hlakileng</li> <li>• E behela mahe a matenya</li> <li>• E ka behela mahe a 250 ka selemo</li> </ul>
<p><b>Boschveld</b></p> 	<ul style="list-style-type: none"> <li>• E kopantse Venda, Ovambo le Matebele.</li> <li>• E ka behela mahe a mane (4) ka beke</li> </ul>

b) Likhoho tsa Mahe	
Lebitso	Tlhaloso
<p><b>Lohmann Brown</b></p> 	<ul style="list-style-type: none"> <li>• E behela mahe a masootho</li> <li>• E qala ho behela bekeng ea leshome le metso e robeli (18)</li> <li>• E behela mahe a 300 ka selemo</li> </ul>
<p><b>Hyline Silver</b></p> 	<ul style="list-style-type: none"> <li>• E behela mahe a 320 ka selemo.</li> <li>• E khona ho itšematlela tlasa maemo a fapaneng a leholimo.</li> <li>• E bonolo</li> <li>• E qala ho behela bekeng ea leshome le metso e robeli (18)</li> <li>• E behela nako ea selemo le khoeli tse tšeletseng.</li> <li>• E Fetolela lijo maheng ka sekhahla se phahameng.</li> </ul>

<p><b>Hyline Brown</b></p> 	<ul style="list-style-type: none"> <li>• E behela mahe a 228 ka selemo</li> <li>• E ka behela selemo le likhoeli tse tšeletseng.</li> <li>• Li khona ho itšematlela tlasa maemo a fapaneng a leholimo.</li> <li>• E bonolo</li> </ul>
<p><b>White leghorn</b></p> 	<ul style="list-style-type: none"> <li>• E behela mahe a 280 ka selemo</li> <li>• E behela mahe a masoeru</li> <li>• Ena le bokhoni ba ho fetolela lijo maheng</li> <li>• E behela ho tloha bekeng ea mashome a mabeli (20)</li> <li>• E letlalo le lesehla</li> </ul>

<b>c) Likhoho tsa Nama</b>	
<b>Lebitso</b>	<b>Tlhaloso</b>
<p><b>Ross 308</b></p> 	<ul style="list-style-type: none"> <li>• Litsoa UK</li> <li>• Li hola kapele</li> <li>• Li sefuba se sephara</li> <li>• Li maoto a arohaneng le letheka le leholo,</li> </ul>
<p><b>Cobb 500</b></p> 	<ul style="list-style-type: none"> <li>• Li tsoa USA</li> <li>• Li 'mele o moholo.</li> <li>• Li rope li tenya hape li matla.</li> <li>• Nama ea teng e letlalo le lesehla</li> </ul>
<p><b>Hubbard</b></p> 	<ul style="list-style-type: none"> <li>• Phetolelo ea lijo nameng e holimo.</li> <li>• 'Mele o matla, maoto a arohaneng le letheka le leholo. Mokokotlo o sephara.</li> <li>• Hlooho e nyane e nang le letlopo le leholo.</li> </ul>
<p><b>Arbo Acres</b></p> 	<ul style="list-style-type: none"> <li>• Li tsoa USA</li> <li>• Maoto le molomo li tšehla</li> <li>• E khetholoha ka matlopo a mafubeli a manyane</li> <li>• Masiba a masoeru ka setono se otlohileng.</li> <li>• Chebahalo e ntle ea sefuba se seholo.</li> </ul>

## 1.7 BOHLOEKI

Bohloeki ke ntho ea bohlokoa haholo leruong la likhoho molemong oa ho baballa leruo khahlanong le mafu, le ho netefatsa hore lihlahisoa tsa likhoho li bolokehile ho jeoa. Sehoai se lokela ho ipapisa le likhothaletso tse latelang ho boloka bohloeki:

- Ina maoto ka hara sethibela likokoana-hloko (*virukill*)
- Ntša likhoho tse shoeleng le tse kulang pele o fepa.
- Hloekisa linoelo le lijelo letsatsi-le-letsatsi.
- Netefatsa hore ho na le moea o lekaneng (*ventilation*) ka matlung ho qoba mongobo le mocheso o mongata.
- Hlokola mosuoela ka *digging fork* ho kenya moea hape o lilibulotse o metsi.
- Tlosa leroele, mobu le moiteli hobane ke sentele sa likoakoana-hloko le linoamali.



*Setšoantšo sa lihoai tse hloekisang*

## 1.8 POLOKO EA LIBUKA

- Sehoai se lokela ho tšepahalla poloko ea libuka.
- Ngola nako le nako ha u qeta ho etsa mosebetsi

### **Ngola tse latelang:**

- Letsatsi la kamohelo ea litsuoanyana/likhoho
- Lenane la likhoho
- Lijo tse rekiloeng/ tse jeloeng
- Likhoho tse kulang le tse shoeleng
- Lenane la mahe
- Thepa

### **Bohlokoa ba litlaleho**

- Ho etsa qeto malebana le bokamoso ba khoebo.
- Li fana ka seriti nakong ea likalimo tsa lichelete.
- Ho tseba lenane la thepa ea likhoho.
- Ho hlokomela liphaello le litahlehelo.

# KAROLO EA BOBELI: LERUO LA LIKHOHO TSA SESOTHO

## 2.1 TLHOKOMELO EA LIKHOHO TSA SESOTHO

### Khetho ea Sethojana

- Khetha sethole mohlapeng o senang nalane ea ho hlaseloa ke mafu.
- Se tsoe mohlapeng o nalane e ntle ea ho behela mahe ka nako, ho fuoama, ho qhotsa le ho holisa litsuonyana
- Se be mmele o lekaneng bakeng sa ho fuoama.
- Se sebe le bohole/bokooa, hape se be bonolo.



*Setšoantšo sa 'malitsuonyana*

### Khetho ea mokoko

- Khetha mokoko o tsoang mohlapeng o senang nalane ea ho hlaseloa ke mafu.
- O be bonolo, o be moholo.
- O tsoe mohlapeng o nang le nalane e ntle ea ho behela mahe ka nako, ho fuoama, ho qhotsa le ho holisa litsuonyana ka ha e le ona o laolang lesika.
- O be mokokotlo o otlohileng.
- O sebe le bohole/bokooa

## 2.2 MONEHELO

Leruo la likhohe tsa sesotho le atisoa ke ha nyalanyo ea mekoko le lithole e le e nepahetseng. Hona ho thusa hore lithole li behele mahe a nang le peo ea mokoko bakeng sa ho qhotsisoa.



*Setšoantšo sa monehelo oa sethole le mokoko*



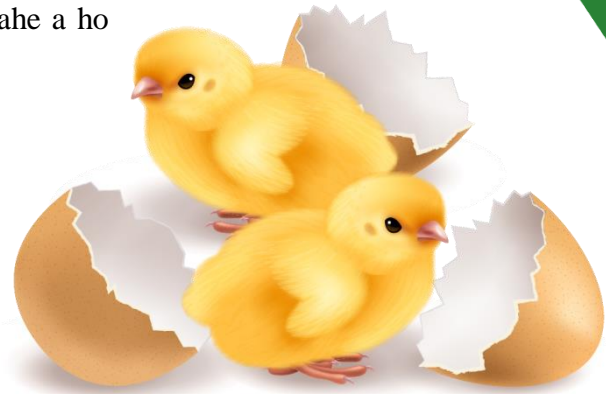
- Khohe ea Sesotho e fihlela boemo ba pehelo ha ena le likhoeli tse tšeletseng
- Mokoko o ka nehela lithole tse 8 - 10.
- Mekoko e mengata e baka litšenyehelo tse sa hlokeheng le temalo ha e loana.
- Mokoko o se be moholo haholo ho lithole ho qoba temalo ea lithole nakong eo o kotang.

### 2.2.1 Phuamiso ea likhoho

- Khoho e qala ho behela ha ena le khoeli tse hlano, mahe a ho qala a manyane ha a isoe qhotsisong.

#### Poloko ea mahe:

- Mahe atlameha ho ntšoa ka serobeng habeli ka letsatsi.
- Boloka mahe moo ho pholileng (eseng ka sehatsetsing) lintlha li sheba ka fatše ha bophara bo sheba holimo (*moea o ka bophareng*).
- Mahe a qhotsisoang a se lule ho feta beke. Se hlatsoe mahe ka metsi.



*Setšoantšo sa litsuonyana tse qetang ho qhotsoa*

#### Khetho ea mahe a qhotsiso

- Khetha mahe a hloekileng, a maholo, a nang le khaketlana e tiileng.
- Mahe a nang le lipha (pshatlehileng, a khaketla li bonolo le a manyane) ha a qhotsehe.

#### Ho fuoamisa

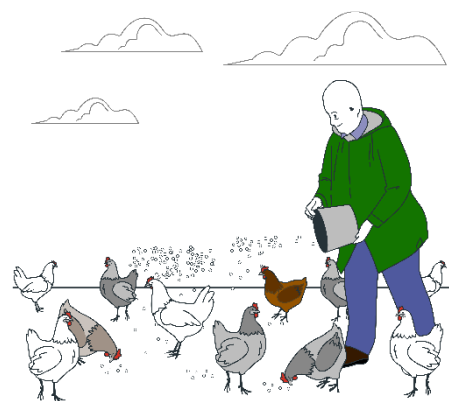
- Beha matlakala ka serobeng bakeng sa mofuthu, bohloeki le ho qoba ho choatleha hoa mahe.
- Mahe a khethiloeng a alamisoa sethole nomoro e tla laoloa ke boholo ba khoho.
- Khoho e tsoa khafetsa, atametsa metsi le lijo ho khoho e alameng ho qoba hore e sie mahe e lo batlana le lijo le metsi, e le ho qoba ho etsa liruo.
- Qoba ho alamisa mahe a khale, alamisa mahe a sa feteng beke.
- Sethole se fuoama mahe matsatsi a mashome a mabeli a motso o mong (*21 days*).

#### Tlhokomelo ea litsuonyana

- ‘Ma litsuonyana oa li hlokomela le ho li sella hang hoba qhotsoe.
- Li fumane le lijo-tlatsetso.
- Li sireletsoe khahlanong le liphoofole tse hlaha li maemo a mabe a leholimo.
- Beha majoe ka har’a linoelo ho thibela litsuonyana ho oela.

### 2.3 PHEPO

- Likhoho li ka ja meroho, poone le lijo thollo tse ling.
- Fepa likhoho limatlafatsi, lihaha-mele le matsoai ele mokhoa oa phepo tlatsetso; tsohle li fumaneha lijong tsa motla-o-tutsoe tse rekoang bakeng sa chai e khotsofatsang.
- Lijo tse rekisoang li na le metsoako eohles mme sehoai ha se lokela ho kopanya letho lijong tseno.
- Phepo e nepahetseng e tlisa khoho le tlhahiso e ntle.
- Boloka lijo moo ho se nang mongobo kaha li ka senyeha ha bobebe.



*Setšoantšo sa phepo ea likhoho tsa Sesotho*



- Lijelo li lokela ho hloekisoa kamehla.
- Lijo tse silafetseng li qhaloe.



*Khoho e fumana metsi a hloekileng*

### 2.3.1 Metsi

- Likhoho li fuoe metsi a hloekileng ka nako tsohle, khoho ka 'ngoe e noe bonyane 100ml ka letsatsi.
- Ha ho chesa haholo likhoho li hloka metsi a mangata ka ha lia thusa ho ipholisa le hore li je hantle ka hona fetisa 100ml habeli.
- Beha metsi meriting hore a lule a pholile.
- Beha senoelo moo hophahameng ho qoba tšilafalo ea metsi.
- Likhoho li hloka metsi a hloeking kamehla kahoo ho bohlokoa ho hloekisa linoelo khafetsa.

### 2.3.2 Tlhokomeliso

- Khetha likhoho/khoho e kulang kapa e lemetseng ho tse phetseng hantle 'me o e okele ka thoko ho qoba tšoaetsano.
- Ha e lemetse e qetele.
- Arola litsuonyana le likhoho tse kholo bakeng sa phepo.



## 2.4 BOHLOEKI

Beha matlakala tlasa kalana le ka lirobeng bakeng sa ho monya mongobo oa makaka, hloekisa bonyane hang ka beke.

- Sentlojane se hloekisoa ka ha likhoho li rata ho ipitika leroleng ka *Sehoai sea hloekisa* sepheo sa ho itlhoekisa le hona ho bolaea tse ling tsa linoamali.

# KAROLO EA BORARO: LERUO LA LIKHOHO TSA NAMA

## 3.1 LIKHOHO TSA NAMA

Likhoho tsa nama li ruoa feela molemong oa tlhahiso ea nama. Liphatsa (*genes*) tsa tsona tsa lefutso li etsa hore li hole ka potlako ho feta likhoho tsa sesotho (matsoalloa) le tsa mahe.

Khoho ea nama ke khoho efe kapa efe e ruoang le ho hōlisetsoa ka ho khetheha bakeng sa tlhahiso ea nama feela. [1] Bongata ba likhoho tsa nama li fihlela boima ba ho hlajoa pakeng tsa libeke tse 'nè le tse tšeletseng, le hoja mefuta e ntseng e hōla butle e fihla boima ba ho hlajoa ha e le libeke tse ka bang 14. Likhoho tsa nama (broilers) tse tloaelehileng li na le masiba a masoeru le letlalo le lesehla.

### Mafapha a bohlokoa leruong la likhoho tsa nama

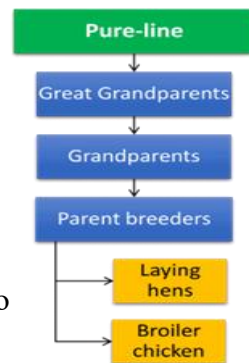
1. Bo nkho 'malitsibana (*grandparent farms*).
2. Qhotsiso ea batsoali (*parent stock*).
3. Lefapha le holisang batsoali (*parent stock rearing*).
4. Qhotsisong (*hatchery*).
5. Kholiso ea litsuonyana tsa nama.
6. Lefapha le hlabang ebile le rekisa nama.



Qotsiso ea likhoho ea fumaneha ka har'a naha ea Lesotho. Leruo la likhoho li oela mafepheng a bo 5 le 6.

Ho netefatsa hore sehoai se hlahisa nama ea boleng, se lokela ho latela methati e nepahetseng ea thuo ea leruo likhoho tsa nama.

Tafole e latelang e hlakisetse sehoai ka ho hlokomela likhoho tsa nama.

Mafapha a tlhahiso



NAKOMATSATSI	MESEBETSI
 <p>Pele likhoho li fihla</p>	<ul style="list-style-type: none"> <li>• Finyeletsa thepa eohle bonyane libeke tse peli pele ho kamohelo ea litsuonyana.</li> <li>• Hloekisa, o bolae le likokoana</li> <li>• Kenya setšireletsi (chick guard) sa bophahamo ba lengole (0.5m).</li> <li>• A la mosuoela botebo ba 3-5cm.</li> <li>• Futhumatsa ntlo (24hours) pele litsuonyana li fihla.</li> <li>• Ala koranta holima mosuoela.</li> <li>• Beha metsi a motsoako oa sekhatolli (<i>stress pack</i>) hoseng pele o lata likhoho.</li> </ul>
 <p>Ha Likhoho li fihla</p>	<ul style="list-style-type: none"> <li>• Netefatsa hore maemo a mocheso le phumantšo ea moea o hloekileng (<i>ventilation</i>) a lokile hore likhoho li phuthulohe le hoba le thahasello ea ho qala ho ja.</li> <li>• Hlahoba ho bona hore ha hona masobana a ka eketsang moea.</li> <li>• Mocheso oa ka tlung o be 28-30<sup>0</sup>C</li> </ul>

- Boima ba khanya (*light intensity*) e lekane ntlo kaofela 'me e be ka tsela e tlang ho lumella likhoho hore li je, li noe.
- Fafatsa lijo (starter) koranteng kaha litsuonyana ke hona li ithutang ho ja.
- Netefatsa hore litsuonyana li omme masiba le mekhubu.
- Hlahloba le ho bala litsuonyana. Ntša tse lipha, tsetela tse shoeleng ngola lenane la tse phelang.
- Li fe sekhatolli matsatsi a 3-4, mme netefatsa hore tsuonyana ka 'ngoe e noele sekhatolli.
- Nka boima ba likhoho ka sehlopha o ngole boima ba tlhaho.
- Li hlahlobe khafetsa ho etsa hore li se hatane.

### Tlhokomeliso

- *Khantša hora tse mashome a mabeli a metso e meraro (23), tima matsatsing a pele a supileng le matsatsing a mararo (3) pele li hlajoa, ntle le mono li fe lihora tse 4 tsa lefifi letsatsi ka leng.*
- *Nka boima ba likhoho beke le beke.*
- *Nyolla linoelo le lijelo beke le beke hoesa ka bolele ba likhoho.*
- *Qhaqholla setšireletsi ha li tsoile phakoeng li apere.*



- Mocheso oa likhoho e be 39-40.5 °C. Sebelisa likhoho tse ka bang 10 ho tsoa libakeng tse 5 tsa ntlo.
- Sebelisa likhoho tse 20-40 ho hlahloba kitsana lihora tse 48 kamor'a hore li fihle. Hona ke ho netefatsa hore likhoho li fumane lijo ka tsela e nepahetseng.
- Ntša koranta kamora matsatsi a mararo.

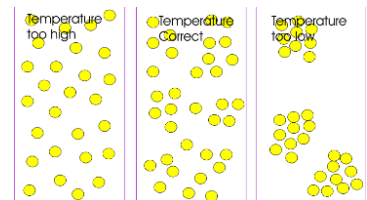
Nako	% ea likhoho tse tletseng
2	75
4	80
8	>80
12	>85
24	>95
48	100

- Kamora matsatsi a mararo (3), atolosa lesakana hanyane ho fihlelletse se tlohile kaofela kamora beke.

### Tlhokomeliso:

#### Ithute boemo ba litsuonyana

- **Mocheso o lekananeng:** Li qhalakana hantle ka hara selika-likoe ingoaea ebe li ja hantle.
- **Ha li hatsetse:** Li khobokana pela mofuthu, li ea lla, li hema haholo li ahlame ha lije hantle.
- **Ha li chesoa ke lebatama:** Li baleha pela mofuthu.



lia



Matsatsi a  
4-35

- Fetola lijo ho tloha ho starter ho ea ho grower ka letsatsi la 10-13.
- Fetola lijo ho tloha ho grower ho ea ho finisher ka letsatsi la 25.
- Tima likhoho lijo letsatsi pele li hlajoa.

### 3.2 PHEPO/LIJO

#### 3.2.1 Mefuta ea lijo tsa likhoho

- Lijo tse qalang (*Starter*)
- Lijo tse holisang (*Grower*)
- Lijo tse qetellang (*Finisher*)



*Sets'oants'o sa lijo tsa likhoho*

# KAROLO EA BONE: LERUO LA LIKHOHO TSA MAHE

## 4.1 KAMOHELO EA LIKHOHO TSA MAHE

Likhoho tsa mahe li ka ba mefuta e 'meli:

- Tse behelang mahe a masoeru – likhoho tsena li bonahala ka mmele o monyenyanane ebile li ja lijo tse nyenyane papisong le likhoho tse ling.
- Tse behelang mahe a masootho – Ke likhoho tse nang le mmele o moholo, hape li ja haholo. Li behela mahe a maholo. Ka lebaka lena, li sebelisoa haholo tlhahisong ea mahe.

### Kamohelo ea likhoho tsa mahe

Likhoho tsena li ka fumaneha ka mekhahlelo e mmeli ea; (1) likhoho tse nang le letsati (*day-old chicks*) kapa (2) likhoho tse qalang ho behela (*Point-of-lay*).

Ela hloko lintlha tse lateng nakong ea kamohelo ea likhoho:

- Likhoho li phetse hantle ha li na mafu.
- Batla tlaleho ea liete.
- Li pongoe melomo hantle li se jane.
- Batla ho tseba na li tsoa ho kae.
- Kopa bukana ea tataiso ea tsona ho morekisis oa hao.
- Tseba letsatsi la tlhaho la likhoho

**N:B** Mofuta o mong le o mong oa likhoho tsa nama o na le tsela eo o hlokomeloang ka ona.

**Mofuta oa likhoho** -sena se thusa hore na efela ele mofuta oa khoho oo sehoai se neng se o lebelletse.

**Lengolo la liente** – lengolo le bohlokoa ho tseba na likhoho li se li fumane liente tsa mefuta efeng hore ho be bobebe ho ngaka ea liphoofolo ho tseba mofuta oa pheko nakong eo likhoho li kulang hape le kholo e ntle.

### Khetho ea khoho ea mahe

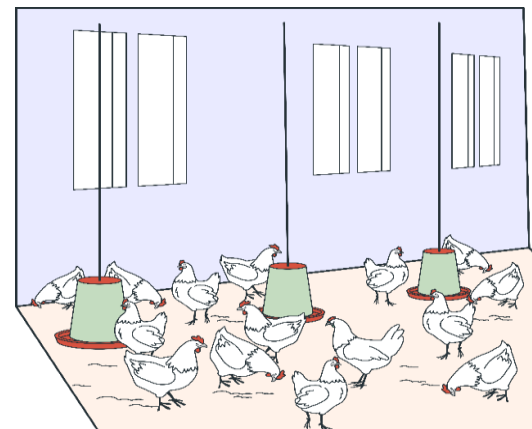
Khetha mofuta oa likhoho (*breed*) o tla atleha sebakeng seo o ilo ruela ho sona, le hore na khoebo ea hau ke ea mofuta o feng. Likhoho ha li behele mahe a lekanang.

## 4.2 MEKHOA EA HO RUA LIKHOHO TSA MAHE

1. **Likhoho tsa fatše (*Deep litter*):** Likhoho li alloa mosuela bakeng sa ho sireletsa likhoho hammoho le mahe hore a seke a choatleha.

### 4.2.1 Melemo ea ho ruela likhoho fatše

- E lamella ho ruoa likhoho tse ngata
- Likhoho li khona ho ithapolla.
- Li ka fumana mofuthu ka lebaka la moalo.
- Li fumana lijo tse eketsehileng ka ho thonaka fatše.
- Mosuoela o ka fetoha manyolo ha ose o putile.



Setšoantšo sa. Likhoho tsa fatše

#### 4.2.2 Liqholotso tsa ho ruela fatše

- Mokhoa ona oa ho rua o ka atisa mafu.
- E hloka chelete e ngata bakeng sa ho aha matlo
- Likhoho li ka ja le ho pshatla mahe ha a lieha ho phuthoa.
- Mahe a silafala ha bobebe.
- Tšebeliso ea mosuoela e holimo, mosuela ha o fumanehe ha bobebe.

#### 2. Likhoho tsa kalaneng (*Battery cage*):

- Likhoho li koaltoa ka likalaneng bophelo bohle ba tsona.
- Li fepeloa ka teng, hape li behella ka teng.

#### 4.2.1 Bohlokoa ba leruo la likalaneng

- Mafu le likokoanyana li ka behoa taolong kapele.
- T'sebeliso ea sebaka se senyane.
- Mahe a hloekileng.
- Khetho bakeng sa ho fokotsoa ha likhoho ka mabaka a fapaneng e ba bobebe.



Setšoantšo sa Likhoho tsa likalaneng

#### 4.2.2 Liqholotso tsa ho ruela likhoho likalaneng

- Mokhoa ona oa ho rua o phahame ka litjeo (theko ea li *cage*).
- Likhoho li ka jana ha li petetsane kahoo ho bohlokoa ho tšela likhoho tse lekaneng ka hara *cage*. Palo ka hara *cage* e laoloa ke boholo ba likalana le mofuta oa khoho.
- “*Cage*” ka ‘ngoe e nka lenane le tlase la likhoho

#### 4.1 TLHOKOMELO EA LIKHOHO

Tlhokomelo e ntle ea likhoho e tisa kotulo e ntle le phaello bakeng sa batho ba ruileng likhoho ho etsa khoebo.

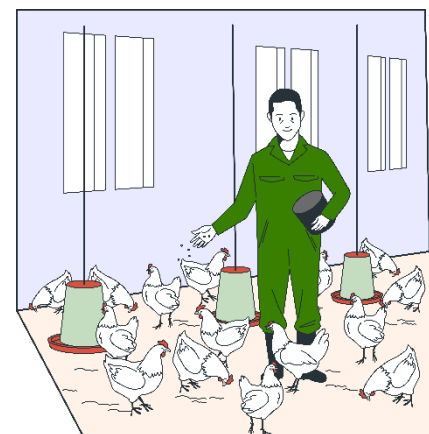
#### 4.2 NAKONG EA HA LIKHOHO LI FIHLA

Boitokisetso bakeng sa ho amohela likhoho tsa mahe tse letsatsi, bo tsšoana le ba likhoho tsa nama.

#### 4.3 PHEPO

##### 4.3.1 Lijo

- Phepo e laoloa ke nako eo likhoho li fihlang li le ho eona. (*day old/pullets*)
- Lijo tse nepahetseng li phahamisa kotulo ea mahe.
- Fepa lijo tsa motla-o-tutsoe molemong oa ho phahamisa chai.
- Lijo be teng ka lijelong ka linako tsohle.
- Metsi a likhoho a tlameha a ba hloekile ka linako tsohle.



Setšoantšo sa phepo

#### Mokhoa oa ho fepa le mofuta ea lijo

- *starter mash*- Letsatsi ho isa ho libeke tse 6.

- *grower mash*- Libeke tse 7 ho isa hotse 17.
- *laying mash* –Libeke tse 18 ho fihlela qetellong.

#### Khakanyo ea lijo tse jeoang ke likhoho tsa mahe

Nako (libeke)	Tekanyo ea khoho 'ngoe ka letsatsi (g)	Tekanyetso ea likhoho tse lekholo(100) ka letsatsi (kg)
1	12-15	1.2- 1.5
2	15-21	1.5- 2.1
3	21-35	2.1-3.5
4-6	35-50	3.5-5.0
7-8	55-60	5.5-6.0
16-27	68-80	6.8-8.0
Ka holimo ho 28	120-140	12-14

#### 4.4 KHANYA (LIGHT)

- Khanya ntlong ea likhoho e tšoanela e ebe teng bonyane lihora tse leshome le metso e tšeletseng molemong oa tlhahiso e phahameng.
- Tlatsetso ea mabone molemong oa keketso ea khanya ea lihora tsa letsatsi haholo nakong ea mariha.
- Likhoho li na le bukana ea tataiso e bonts'ang tsela ea ho bonesetsoa.

#### 4.5 MOALO (BEDDING)

- Moalo o lekaneng bakeng sa likhoho tsa mahe tse ruetsoeng fatše ke bonyane 5cm.
- Mosuoela o tlameha o lule o omme ka linako tsohle.
- O tlameha o lule o phethophetholoa khafetsa.
- Sehoai se tlameha ho sebelisa lithibela likoana-hloko ka tlasa tataiso ea mosupisi kamehla.



Lethathamo le latelang le bontša mefuta ea lisebelisoa ho etsa mosuoela *Setšoantšo sa moalo*

1. Mafoforetsane a lifate tse sakhuoeng (*Pine shavings*)
2. Lehlabathe (*Sand*)
3. Pampiri e sebelitseng (*Recycled paper*)
4. Joang bo ommeng (*Grass clipping*)
5. Matlakala (*Straws*)
6. 'Moko (*Hay*)

#### 4.6 MOEA O LOKOLOHILENG (VENTILATION)

Ka tlholeho likhoho li hloka moea o hloekileng ho feta liphoofole tse ling. Monko o mobe ka ntlong ea likhoho ke sesupo sa moea o sa potoloheng hantle. Matlo a likhoho a tšoanela a hahoe ka sebopeho seo moea o hloekileng o kenang e boetse e lumella o sa hloekang ho tsoa.

- E thusa ho fokotsa boemo ba mocheso, mongobo le lerole tse sa hlokahaleng ka ntlong ea likhoho.

- Moea ha osa potolohe hantle o ka baka hore likhoho li bipetsane li qetelle li shoele ka hona ho bohlokoa hore sehoai se ele hloko hore ntlo e bulehile ho lekana.
- Moea osa hloekang o ka phahamisa sekhahla sa tšoaetso ea mafu.

#### 4.6.1 Metsi

- Metsi joalo ka lijo a bapala karolo e kholo kholong ea khoho le tlhahisong ea mahe ka hona sehoai se ele hloko hore se fa likhoho metsi a hloeking ka linako tsohle.
- Likhoho li noa lipakeng tsa 30-50% bongata ba metsi ha mocheso ele 32<sup>0</sup>C.
- Khoho e noa metsi makhetlo a mabei ho isa ho a mararo ho lekan le lijo tseo e li jeleng (1:2-3).

#### 4.7 SEBAKA SE HLOKAHALANG BAKENG SA LERUO LA LIKHOHO TSA MAHE

Boemo ba khoho	kalaneng	fatše
Tsuonyana/ <i>Brooder house</i>	0.5 m <sup>2</sup> /khoho	0.7 m <sup>2</sup> /khoho
Lithojana/ <i>Grower house</i>	0.6 m <sup>2</sup> /khoho	0.1 m <sup>2</sup> /khoho
Likhoho tse behelang/ <i>Layer house</i>	0.7 m <sup>2</sup> /khoho	0.2 m <sup>2</sup> /khoho

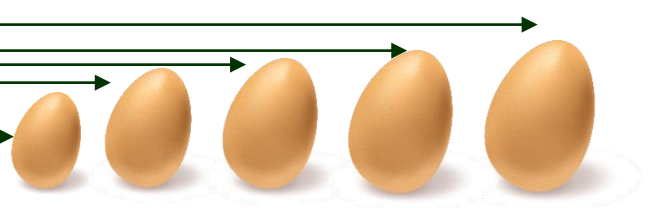
#### 4.8 TLHAHISO EA MAHE (EGG PRODUCTION)

- Ho nka lihora tse ka bang 24-26 hore lehe le leng le le leng le hole 'me khoho ka 'ngoe e behela lehe hamorao letsatsi ka leng.
- Phutha mahe kamehla ka hokong.
- Nka lehe le le leng ho a pshatlehileng o thuo hang ka beke o tsebe ho hlokemela haeba bothata bo le teng.
- Mahe a lokeloa ho hloekisoa kamehla a lule sebakeng se pholileng moo a sa chabelloeng ke letsatsi.

Nako	Se etsahalang
Libekeng tse 18	5% ea likhoho e qala ho behela
Bekeng ea 21	10% ea likhoho e qala ho behela
Bekeng ea 26-30	Li behela haholo (ho ka fapana mofuta oa likhoho)
<ul style="list-style-type: none"> <li>✓ Kamora ho behela (<i>max eggs</i>), li emisa ho behela matsatsi a mmaloa.</li> <li>✓ Tlhahiso e tla theoha.</li> <li>✓ Tlhahiso le boholo (size) ba mahe li tla boela li nyolohe butle.</li> <li>✓ Likhoho li hola ho fihlelletse li le libeke tse 40.</li> <li>✓ Boima le boholo ba lehe lia eketseha ho fihlelletse li le libeke tse 50.</li> </ul>	

#### 4.1 BOIMA BA MAHE

- A lijoabela - *Jumbo* -ho feta 66g
- A matenya-tenya - *extra large* - 61-66g
- A matenya - *large* - 51-61g.
- A bohareng - *medium* -45-56g
- A manyane - *small* -35-43g





## 4.2 KENTO (VACCINATION)

### Matšoao a khoho e phetseng hantle ke:

- Masiba a hloekileng.
- Molala o chorileng.
- Hlooho e phahameng.
- Motsamao o batsi.
- Mahlo a hlakileng.
- Setono se hloeking.
- Maoto a hloekileng a tiileng hantle.

### Bohlokoa ba ho enta likhoho ke:

- Ho thibela mafu
- Ho boloka khoho e se na mafu a tšoaetsanoang a likhoho.
- Fokotsa sekhahla sa likhoho tse shoang.

### Lethathamo la liente tsa likhoho

Letsatsi	Lefu	Ente	Mokhoa oa ho enta
1	Choabokate	Lasota	metsing
10	Choabokate	Lasota	metsing
27	Choabokate	Lasota	mesting
47	Deworming	Piperazine	metsing/lijong
52	Choabokate	Lasota	metsing
100	Deworming	Piperazine	metsing/lijong
112	Choabokate	Lasota	metsing
280	Choabokate	Lasota	metsing
281	Deworming	Piperazine	metsing/lijong

*(Veterinary services, Department of Livestock Services)*

## 4.3 HO POMA MOLOMO (DEBEAKING)

### Melemo ea ho poma molomo

- Hore likhoho li se lematsane.
- E thusa ho fokotsa tahlehelo ea lijo.
- Poma melomo ka bobeli.
- Se ke oa polomela melomo hong.
- Poma melomo ka tlasa tataiso ea bosupisi.

# KAROLO EA BOHLANO: QHOTSISO EA MAHE

## 5.1 MEFUTA EA QHOTSISO

**5.1.1 Qhotsiso ea tlholeho:** Khoho e alama mahe nako ea matsatsi 21 hore a qhotsoe, 'me e fana aka mecheso le mongobo o hlokahalang.

Koho kmaora ho behela mahe a se makae, e ka qoma ea batla ho alama ebang mahe a sa phuthoe. Mahe a lokela a phuthoe kamehla haeba sehoai se sa lakatse ho fuoamisa koho hape a se netefatse hore ha hona libaka tse potelletseng moo sethole se ka ipatang teng e aba sea fuoama.

Koho e alama mahe ho fana ka mocheso o nepahetseng hore a qotsoe. Sethole se phethola mahe. Ha se se se tlo batla ho qala ho fuoama, sethole se lahla masiba a sefubeng (*Setšoantšong se latelang*).



*Setšoantšo sa Sethole se lahlileng masiba a sefuba*

***A mang a mats'oao a koho e alamang ke a latelang:***

- Sethole se qeta nako e telele se le ka serobeng mahe a le teng kappa a le sieo.
- E qhala masibi mme e bonahala ekare e kholo.
- Ho kobola ha motho a e atamela.
- Koho e fokotsa ho ja.

**5.1.2 Qhotsiso ea maiketsetso:** Mochine o sebelisoa ho qhotsisa mahe ka ntle ho koho nako ea matsatsi a 21. Mocheso le mongobo o lekaneng o laoloa ke mochine. Mechine ena e fumanaha ka boholo bo fapakaneng.

Qhotsiso e mekhahlelo e 'meli; (1) moo mahe a amoheloang (*setters*) nako ea matsatsi a 18 le (2) qhotsisong (*hatcher*), moo mahe a lulang nako ea matsatsi mararo. Ho mechine ea qhotsiso e menyenyane, mekhahlelo ena e kopane, 'me ha ho hlokahale hore mahe a fetisoe. Mechine e joalo e hloka feela mocheso oa 38°C.

## 5.2 TLHOKOMELO EA LIKHOHO TSE FANANG KA MAHE A QHOTSISO

***(Likhofo tsa qhotsiso li hloka botsebi bo phethehileng hore li hlokomeloe e le hore li behele ka nepo).***

### 5.3 HO PHUTHA MAHE A QHOTSISOANG

#### Tlhokomelo ea mahe

- Sehoai se lokela ho ba hlokolosi nakong ea ho tsamaisa mahe kamehla ho thibela likokoana-hloko.
- Boloka lehe ka ho shebisa ntlha fatše.
- Ntša mahe a maholo (70g) haholo kapa a manyenyane (48g) haholo.
- Se ke oa hloekisa mahe a ilo qhoqitsoa ho thibela (a lokeloa ho phuthoa lirobeng a hloekile).

#### Poloko ea mahe a qhotsiso (egg storage)

- Sepheho sa poloko ea mahe ke ho thibela hore mahe a qale ho etsa tsuonyana.
- Mahe a lokela ho belokoa ka ntlong eo mocheso le mongolo li laolehang.
- Mahe a bolokoa ho mocheso oa 17-21°C.
- Netefatsa kamehla hore mahe a bolokiloe moo ho hloekileng.
- Fokotsa motsamao o mongata ka phaposing ea polokelo ea mahe.
- Likamore tsa polokelo ea mahe li lokela ho bolokoa li hloekile ho thibela hore mahe a silafale.
- Ho lokela ho lula ho omile ka polokelong ea mahe.
- Mongobo o tliša tšoetso ea likokoana-hloko, o etsa le hore litšila le lerole li lule habobebe holima mahe a qhotsisoang.
- Qoba ho tsoara mahe khafetsa hore a se pshatlehe, (mahe a mang a ka se bonahane ha bobebe ka mahlo haa peperaneng, *Figure 5.2*), mme a kenya likokoahloko (*bacteria*).



*Figure 5.2 Lehe le peperaneng*

- Se sebelise phaposi ea polokelo ea mahe bakeng sa polokelo ea lisebelisoa tse ling kapa thepa ho fokotsa motsamao o mongata.

**Table 5.1:** Maemo a ho boloka mahe ho latela nako ea poloko

Nako (matsatsi)	Mocheso (°C)	Mongobo (%)
1-6	18-19	50-60
7-10	16-17	50-60
>11	15-16	60-70

## 5.4 LINTLHA TSA BOHLOKOA QHOTSISONG EA MAHE

### 5.4.1 Mocheso (*temperature*)

- Mocheso e be 37.8°C - 38°C.
- Mocheso o phahameng haholo o ka baka; (1) litsuonyane tse qhotsoang pele ho nako, (2) metsi a fokolang mmeleng oa tsuonyana (*dehydration*), (3) ho fokotsa sekahla sa ho monya mothoebe hang kamora qhotsiso (4) le mokhubu o sa foleng.
- Mocheso e tlaase haholo o ka theola boleng ba tsuonyana hape o lelefatsa nako ea ho qeta qhotsiso “*hatch window*”.
- Pokello ea mocheso sebakeng se le seng (e.g. phapang e boholo ba mahe, phallo ea moea) o ka eketsa nako ea qhotsiso (hatch window) ea ama tlhahiso ea tsuonyana.

### 5.4.2 Mongobo (*humidity*)

- Mongobo o be ho 45 (likhoho tsa mahe) le 55-60%.
- Mongobo o mongata haholo o etsa lehe le liehe ho lahla mongobo (‘*me se na se fokotsa moea o ka leheng sebakeng sa hore tsuonyana e phezumolohe*’).
- Mongobo o tlase haholo o etsa lehe le lahle mongobo oa lona kapele (‘*me le etsa tsuonyana e be le komello*’).
- Tahlehelo e nepahetseng ea mongobo e eketsa boholo moea oa lehe e le ho lumella e tsuonyana phunye lehe sebakeng se nepahetseng.



### 5.4.3 Bolokolohi ba moea (*ventilation*)

- Moea ona o thusa hore tsuonyana e ka leheng e phezumulohe.
- Sehoai se lokela ho netefatsa hore moea o foka ka bolokolohi empa mocheso e ntse e le o lekaneng sebakeng sa mahe.

## 5.5 HO FUOAMISA KA MOCHINE

### 5.5.1 Ho fuoamisa ka mochine (*incubation*)

- Beha mahe ka ho shebisa ntlha tlaase.
- Mahe a lula ka machining nako ea matsatsi a 21.
- Hloekisa mochine oa qhotsiso (*incubator*) beke pele mahe a fihla ebe sehoai se laeta mochine ho nefatatsa hore o tla atleha ho boloka mocheso le mongobo o nepahetseng.

### 5.5.2 Phetolo ea mahe (*egg turning*)

- Ho thibela tsuonyana ka leheng ho mamarela khaketlana.
- Seoai se khothaletsa ho phethola mahe makhetlo a ka bang 5 ka letsatsi.

### 5.5.3 Poneso (*candling*)

- E etsoa pele mahe a kengoa ka machining oa qhotsiso (ho lemoha mahe a peperaneng) le kamor'a libeke tse peli pele mahe a isoa machining oa qhotsiso (ho hlokomela mahe a mokoko-*fertile eggs*)
- E etsoa pele mahe a isoa ho mochini oa qhotsiso ka letsatsi la bo 18.
- *Mahe a peperaneng a kenya likokoana-hloko e be tsuonyana e shoa e ntse e le ka leheng.*
- *Mahe ao e seng a mokoko aa bola 'mme a phahlohe haa a ke machining.*
- Seoai se lokela ho ba hlokolosi nakong ena ho qoba ho bolaea tsuonyana e ntseng e hola ka leheng.
- Mahe a se lule kante ho mochine ho feta metsotso e 5-10.

### 5.5.4 Phetiso ea mahe (*egg transfer*)

- Mahe a tlosoa mochining (*incubator*) kamora matsatsi a 18 ho isa 19 ho ea machining oa qhotsiso.
- Phetiso ea mahe e lokela e nke nako e sa feteng metsotso e 20 hore mahe a se fole.
- Sebelisa libasekete (*hatchery baskets*) tse hloekileng tse se nang mongobo.
- Mochine (*incubator*) o lokela ho lula o sebetsa ho fihlela lehe la ho qetela le tlosoa.
- Eba le lisebelisoa tsohle tse hlokaalang 'me netefatsa hore mochine oa ho qhotsisa e lokile pele o qala ho fetisa mahe.

### 5.5.5 Qhotsisong (*hatchery*)

- Mahe haa sa fetoloa haa le ka machining oa qhotsiso.
- Tlhokahalo ea mocheso e ea fokotseha 'me lehe le hloka mongobo o holimo.
- Ho tlolehile hore mahe a phahlohe haeba a sa hlokomeloa hantle.
- Sepheho ke ho nyenyefatsa nako lipakeng tsa ha tsuonyana ea pele e qhotsa e ea ho qetela (*hatch window*). Ha e le telele, litsuonyana li ka ts'oaroa ke mafu habonolo. Tebello ke hore ka nako ea lihora tse 24, mahe ohle a be a qhotsitse.
- Litsuonyana li ka boela tsa fumana liente.

### 5.5.6 Tlhokomelo ea litsuonyana

- Litsuonyana li bolokoa mabokoseng a bolokang mocheso o lekaneng (32-34°C) le moea ha li emetse ho isoa libakeng tsa kholiso.
- Tsuonyana e ka phela matsatsi a 3 kante ho lijo empa ho bohlokoa hore e fumane lijo kapele.

## 5.6 MESEBETSI E MENG

### 5.6.1 Bohloeki

- Bohloeki bo thusa ho fihlela qhotsiso e phahameng ea mahe. Bohloeki bo ka fokotsa sekhahla sa tsoetso ea likokoana-hloko, ba ntlafatsa boleng ba litsuonyana, mme ba fokotsa sekhahla sa ho shoa ha litsuonyang hang kamor'a qhotsiso.
- Lisebelisoa tsohle li lokela ho lule li hloekile.
- Lisebelisoa li lokeloa ho sebetsa hantle kamehla ho qoba tahlehelo.

### 5.6.2 Tlhokomelo ea mechine ea qhotsiso

- Sehoai se lokela ho ela hloko hore mechine e sebelisoang e na le mekhoa e fapakaneng ea tšebeliso ho latela mofuta oa mochine. Ho bohlokoa ho tseba/ho fumana tataiso e nepahetseng ea thepa pele o ka qala ho e sebelisa.
- Litekanyo tse nepahetseng tsa mocheso le mongobo li lokela ho sebelisoa kamehla.
- Mongobo o sa nepahalang o ka theola boleng ba tsuonyana.
- Tahlehelo e nepahetseng ea mongobo e eketsa boholo ba moea oa lehe e le ho lumella hore tsuonyana e phunye lehe sebakeng se nepahetseng, 'me ka hona mafu (*red & injured hocks*).
- Hloekisa mochine oa qhotsiso (*incubator*) beke pele mahe a fihla ebe sehoai se laeta mochine ho nefatatsa hore o tla atleha ho boloka mocheso le mongobo o nepahetseng.

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