

# HOLISTIC SMALL STOCK HEALTH PROGRAM





# Seasonal disease occurrence in small stock



## AUTUMN LAMBING SEASON



# Health program for a spring lambing season according to the stage of production





# Monthly health program for a spring lambing season

Season	SUMMER	SUMMER	AUTUMN	AUTUMN	AUTUMN	WINTER
Month	Jan	Feb	Mar	Apr	May	June
Reproduction			Teaser rams	Breeding		Pregnancy Diagnosis
External Parasite Control	Blowfly/Tick control	Blowfly/Tick control	Blowfly/Tick control	Paralysis tick / Sheep scab control	Lice / Sheep scab control	Sheep scab control
Internal Parasite Control	X (Treat acc to FAMACHA)	X	Deworm Ewes/Rams	X	X	X
Vaccination Ewes / Rams	Clostridial diseases + Pasteurella OR Pulpy Kidney (Young ewes before breeding)	*Rift Valley fever (S+G) & Wesselsbron (Sheep – Replacement rams / ewes)  Enzootic abortion	*Rift Valley fever (booster if inactivated used) *Clostridial diseases + Pasteurella OR Pulpy Kidney (Ewes/Rams if risk is high)			
	Bluetongue C (Sheep-Ewes) <u>See comments</u>				Bluetongue A (Sheep-Rams only) <u>See comments</u>	Bluetongue B (Sheep-Rams only)
Vaccination Lambs	Brucellosis (Sheep ram lambs)					
	Bluetongue A (Sheep) <u>See comments</u>	Bluetongue B (Sheep)	Bluetongue C (Sheep)			
Nutrition Ewes/Rams		Flush Feeding (Rams start)	Flush Feeding (Ewes start)	*Suppl. Feeding	*Suppl. Feeding	*Suppl. Feeding <b>Twins!</b>
Nutrition Lambs						
Supplements			Vitamins & Minerals Ewe/Ram			Vitamins & Minerals (Winter-flock)
Management	Rams (Sheep): Shave	Class ewes (udders & teeth)				Rams (Sheep): Shave

COMMENT: \* Optional; S – Sheep; G – Goats

The above is a basic plan for an autumn breeding / spring lambing season. Adapt for spring breeding / autumn lambing season & 3 lambing in 2 years system.



# Monthly health program for a spring lambing season - continued

Season	WINTER	WINTER	SPRING	SPRING	SPRING	SUMMER
Month	July	Aug	Sep	Oct	Nov	Dec
Reproduction			Lambing			Wean
External Parasite Control	Sheep scab control	Lice / Sheep scab control		Itch mite control	Blowfly/Tick control	Blowfly/Tick control
Internal Parasite Control	X	Deworm Ewes	X	Deworm Lambs	Deworm Lambs	Deworm Lambs
Vaccination Ewes / Rams		Clostridial diseases Pasteurella  E.coli / Blue udder (Only ewes)				
	Bluetongue C (Sheep-Rams only)				Bluetongue A (Sheep-Ewes)	Bluetongue B (Sheep-Ewes)
Vaccination Lambs				Pulpy Kidney (optional)	Clostridial diseases Pasteurella	Booster for Clostridial diseases Pasteurella
Nutrition Ewes/Rams	*Suppl. Feeding Twins!	Suppl. Feeding. Twins!	Suppl. Feeding	Suppl. Feeding		
Nutrition Lambs			Creep feeding	Creep feeding	Creep feeding	
Supplements		Vitamins & Minerals (Ewes)				Vitamins & Minerals (Lambs)
Management				Lambs: Tails and mark	Ewes (S) / Subadults (S): Shave	

COMMENT: \* Optional; S – Sheep; G – Goats

The above is a basic plan for an autumn breeding / spring lambing season. Adapt for spring breeding / autumn lambing season & 3 lambing in 2 years system.



# Basic Flock Health Program

This basic flock health program below can be used as a guideline. Adapt the program as dictated by disease history, type of farming operation, geographical location etc.

**Please take note of the following:**

- Follow instructions on products carefully – refer to the package insert.
- All products are used at own risk.
- Consult a veterinarian for any enquiries.
- Note that the extra-label (EXL) recommendations are done at own risk, this is based on the personal experience of small stock veterinarian’s and not the manufacturing companies’ recommendations.
- This program guideline is used entirely at your own risk and Kyron Animal Health do not accept any liability due to any products used and / or actions implemented.
- BCS – Body condition score; BSE – Breeding soundness examination

MANAGEMENT		PRODUCT RECOMMENDED & INDICATIONS TO USE & NOTES
<p><b>Reproduction</b></p>	<p><b>Prior to breeding:</b>  <b>Rams:</b> 4-6 Weeks prior to breeding: BSE (Semen evaluation and test for Brucellosis) - ensure ram is fit for breeding. Inject/dose multi-minerals &amp; vitamins. Weigh and do Body Condition Scoring - must be 3-3.5. Teaser rams: Can be used for 10-14 days prior to the breeding season. Of value in especially the off season – stimulate ovulation &amp; shorten breeding season  <b>Ewes:</b> 6-8 Weeks prior to breeding: Condition scoring of ewes - should be 2.5-3.5 at breeding. Class udders and teeth and cull non qualifiers. 3-4 weeks prior to breeding: Inject/dose multi-minerals &amp; vitamins, flush feed to stimulate ovulation and deworm ewes.</p> <p><b>Breeding:</b>  <b>Ram:Ewe ratio:</b> Standard – 1: 25-100 depending on system used  <b>Duration:</b> 35 days (sheep), 42 days (goats). Target 75% pregnant after the first oestrus cycle and 95% after the second oestrus cycle. Can get a higher percentage in goats.  <b>Lambing to breeding interval:</b> Standard 90 days. Shorter times can be used but results may be variable.  <b>Pregnancy Diagnosis:</b> 6 weeks (sheep) &amp; 7 weeks (goats) after breeding. Identify Twins/Triplets. Remove feed and water 8 hours prior to scanning.  <b>Average oestrus cycle length:</b> 19-21 days (goats), 17 days (sheep)  <b>Synchronisation and Artificial insemination</b> – various techniques available. Speak to your vet</p> <p><b>Lambing &amp; Weaning:</b>  <b>Pregnancy duration:</b> 144-152 days (+/- 5 months)  <b>Weaning age:</b> At 2-3 months but depends on the weight of the lamb  <b>Body Condition Scoring:</b> Before lambing 3-3.5 and 2-2.5 at weaning.</p>	<p><b>Complex A&amp;E for Sheep &amp; Goats &amp; or B-Co Bolic</b>  Administer to rams 6 weeks before the breeding season (sperm take 6 weeks to develop). Administer to ewes 6 weeks prior to lambing (this is the time colostrum production starts).</p> <p><b>Deworming: Kyron products for internal parasites</b></p>





# Basic Flock Health Program - continued

MANAGEMENT		PRODUCT RECOMMENDED & INDICATIONS TO USE & NOTES
<p><b>External Parasite Control:</b></p>	<p>Dip according to external parasite burden. It is especially important to evaluate feet and udders and perform foot / spot dipping if required.</p> <p><b>Ticks, Red lice, Blue lice, Mites &amp; Blowfly</b></p> <p><b>Ticks:</b> September to May (Plunge dips / Foot baths / Hand spray / Pour on)</p> <p><b>Lice:</b> Winter (May – September). Two treatments are required with a 10-14 day interval</p> <p><b>Sheep scab:</b> Autumn to Winter (April – August). Two treatments are required with a 8-10 day interval</p> <p><b>Itch mites:</b> Spring to Summer (September – January). Two treatments are required with a 10-14 day interval</p> <p><b>Blowly:</b> Spring to Summer (October - March). Two strategic treatments in spring &amp; mid-summer or monthly if severe</p> <p><b>Screwworm:</b> Tactical treatment as required in summer.</p>	<p><b>Kyron products for external parasites (topical – concentrates / pour-on or injectable solutions)</b></p> <p><b>Topical:</b> Apply on a monthly basis or as required depending on tick burden Apply at strategic times for lice and mites</p> <p>Attila can be used extra-label on sheep and goats. Use at 1ml/5kg and apply on the bare skin areas e.g. axilla / groin. Only use at strategic times of the season or to target specific parasites e.g. lice</p> <p><b>Footbath/foot dip:</b> <b>Kyron products (topical concentrates) for external parasites.</b> Zinc sulphate + a soap (e.g. Omo/ sunlight liquid) can be added to aid in the control of foot rot</p>
<p><b>Internal Parasite Control:</b></p>	<p><b>Tapeworms:</b> Normally only problem in lambs. Liver tapeworm can be a problem in adults.</p> <p><b>Roundworms:</b> All ages are affected</p> <p><b>Liver fluke &amp; Conical fluke:</b> All age groups are affected - geographic location specific (needs open accessible standing water and intermediate host (freshwater snails).</p> <p>Perform 5 Point Check once a week (or at least once a month) to determine necessity of deworming.</p> <p><b>Faecal Egg Counts (FEC):</b> can be beneficial when performed at strategic times e.g. before lambing in spring, before the anticipated spring peak (Nov) &amp; end of summer (March). Faecal flotation is performed to determine roundworm burdens &amp; Faecal sedimentation is performed to determine fluke burdens.</p> <p>Do FAMACHA scoring to monitor blood-sucking roundworms if a problem is detected on FEC or on a regular basis (e.g. monthly to quarterly).</p> <p>(Note: Vaccinations for pulpy kidney disease should be up to date before deworming)</p> <p><b>Ewes:</b> Dose 3-4 weeks before breeding and 4-6 weeks before lambing. Latter is the most important due to late pregnancy /early lactation "decrease" in resistance.</p> <p><b>Lambs:</b> Dose at 6 weeks, 10 weeks and 14 weeks of age as necessary to control tapeworm and roundworm. Only one or two treatments can be used if this provides sufficient control</p> <p><b>Rams:</b> Dose 4-6 weeks prior to breeding when the breeding soundness examination is done. Include a product effective against nasal worm.</p>	<p><b>Kyron products for internal parasites (oral/injectable)</b></p> <p>In case of tapeworm resistance against praziquantel, resorantel (<b>Conifluka + Tape</b>) must be used.</p> <p>In case of resistance against the common available roundworm dewormers combination products like <b>Ovi-dose 4</b> or products containing new generation active ingredients like Monepantel or Derquantel must be used.</p> <p>Organophosphate containing remedies can also be effective against resistant worms.</p> <p>Note that <b>Ovidose 4</b> is effective against the immature and mature stages of conical fluke but only effective against the late immature (6-8 weeks+) and mature stages of liver fluke</p> <p>Note that <b>Levoxy 5.9%</b> is effective against the immature and mature stages of conical fluke but only effective against the mature stages of liver fluke.</p>





# Basic Flock Health Program - continued

MANAGEMENT		PRODUCT RECOMMENDED & INDICATIONS TO USE & NOTES
<p><b>Internal Parasite Control - continued:</b></p>	<p>Treat individual animals when clinical signs of worms are noticed and as required (tactical treatment). Cull animals that require repeated "extra" dosing (more than 3 times in a cycle)</p> <p>For flukes various treatment options exist:</p> <ul style="list-style-type: none"> <li>· Strategic treatments performed in May (late Autumn) and August (early Spring)</li> <li>· Tactical treatment for liver fluke (winter / summer), conical fluke (summer)</li> <li>· For a single highly effective treatment for liver fluke dose 2-3 weeks after the occurrence of the first frost with a product containing Triclabendazole.</li> </ul> <p>Nasal worm: Strategic treatment in winter. Tactical treatment in summer/autumn. Only treat if the health of the animals is affected, as unnecessary treatment promotes development of resistance.</p> <p>Coccidiosis: Management / stress related syndrome. Can be a problem in lambs causing diarrhoea / condition loss.</p> <p>Cryptosporidium: Discuss the prevention and treatment with your veterinarian. The most important for control is: Biosecurity and improvement of immunity. Environmental disinfection; E.coli vaccination of ewes; Probiotic's; Targeted antibiotic treatment; Vitamin, Electrolyte &amp; Mineral supplementation are also part of the control strategy.</p>	<p><b>Maxisulf LA</b> is registered for the treatment of coccidiosis.</p> <p>Various products can be used, consult with your local veterinarian. <b>Vitamin AD<sub>3</sub>E (extra-label) or Complex A&amp;E for Sheep &amp; Goats, Diomec Plus Powder, Complex Forte &amp; Vetcam</b> are all products that can be used.</p>
<p><b>Vaccination:</b></p>	<p><b>Adult vaccinations:</b></p> <p><b>Clostridial diseases</b> <b>Pasteurella / Mannhaemia</b></p> <p>Two time periods when annual adult booster vaccinations can be administered:</p> <ol style="list-style-type: none"> <li>1. 4-6 Weeks prior to lambing - benefit of stimulating passive immunity through colostrum to lambs</li> <li>2. In case of a high disease risk a second annual booster may be administered 3-4 weeks before breeding</li> </ol> <p><b>Anthrax (optional)</b></p> <p><b>E.coli, Rota- and Coronavirus (optional)</b></p> <p>Optional vaccine of importance in diarrhoea / cryptosporidium complex in lambs. They are used on an extra-label basis. Discuss with your local veterinarian.</p>	<p><b>Kyron Animal Health Vaccines</b></p> <p><b>Trio-Sure</b> (Black quarter, Botulism &amp; Anthrax vaccine)</p> <p><b>Botu-Sure &amp; Anthrax Vaccine</b> (Botulism &amp; Anthrax vaccine)</p> <p><b>Deca-Sure</b> (Multi-Clostridial vaccine - 10 strains)</p> <p><b>Oviclos P</b> (Clostridial &amp; Pasteurella multocida/Mannheimia vaccine)</p> <p>We do not recommend the routine use of an Anthrax vaccine in small stock unless required by legislation or in case of a real disease risk in the area.</p> <p><b>Inactivated vaccine. Autogenous vaccines also available for E.coli</b></p>





# Basic Flock Health Program - continued

MANAGEMENT		PRODUCT RECOMMENDED & INDICATIONS TO USE & NOTES
<p><b>Vaccination - continued</b></p>	<p><b>Blue tongue (Only sheep):</b>                      Only mandatory for European breeds (e.g. Merino). Optional for Dorpers &amp; Meat masters depending on the risk.                      3 vaccinations (A, B and C) 3 weeks apart:                      Ewes: @ 9 weeks, 6 weeks and 3 weeks before breeding OR see below                      Rams: @ 1,4 &amp; 7 weeks after breeding OR see below                      Annual vaccination of all animals in Spring/Summer (September to January)                      Part A, B and C can be mixed and administered as one injection ONLY in animals that received part A, B and C at their first vaccination 3 weeks apart. This is an extra-label practise.</p> <p><b>Rift Valley fever (RVF):</b>                      Inactivated vaccine: 8 &amp; 4 weeks before breeding then yearly booster                      Live vaccine (preferred):                      Vaccinate all young replacement ewes and rams as a routine (post weaning / before breeding age). Vaccinate adults during an outbreak / when above average rainfall season is expected</p> <p><b>Chlamydiosis (Enzootic abortion): Only in ewes</b>                      Live vaccine: 4-6 weeks before the breeding season in young replacement ewes. Can repeat after 2 years but not always done.                      Manufacturers of live vaccines recommend no other live vaccine within 2 weeks but some veterinarians do use with live RVF vaccine for example with no adverse effects (extra-label practise).                      Inactivated vaccine: 4-6 weeks before breeding then yearly booster.                      Availability can be problem.                      Sheep and goats are susceptible to this condition and vaccination is strongly advised</p> <p><b>CLA - Caseous Lymphadenitis (Abscessation):</b>                      Various protocols exist: Examples:                      · Vaccinate lambs at 2-3 weeks of age with a booster 4 weeks later. Repeat as required (annually/ bi-annually).                      · Vaccinate young replacement stock before breeding age for three consecutive times, 10-14 days apart. A bi-annual vaccination can further be implemented if required.                      · In case of an outbreak / infected flock: Vaccinate every 3 months (5 vaccinations in total). All small stock on the farm to be vaccinated.</p>	<p>Live vaccine</p> <p>Live or inactivated vaccine</p> <p>Live or inactivated vaccine</p> <p>Inactivated vaccine                      The protective immune generating ability of these vaccines are generally of relatively short duration and seems to be variable between operations. It only aids in the control and additional measures must be implemented to adequately control the disease e.g. Aseptic cleaning of abscesses, burning all discharges &amp; culling of chronically infected animals</p>



# Basic Flock Health Program - continued

MANAGEMENT		PRODUCT RECOMMENDED & INDICATIONS TO USE & NOTES
<p>Vaccination - continued</p>	<p><b>Lamb Vaccinations:</b></p> <p><b>Clostridial diseases</b>  <b>Pasteurella / Mannheimia</b>            Vaccinate at 2-4 months age (before AND at / or after weaning) – First (primary) vaccination then booster 3-4 weeks later. Bi-annual to Annual booster vaccination thereafter.  <b>Anthrax (optional)</b></p> <p><b>Bluetongue (Only Sheep):</b>            Lambs of unvaccinated ewes:            @ 3 months (or earlier if Bluetongue season is eminent)            3 Vaccinations (Bluetongue A, B &amp; C) at 3 week intervals</p> <p>Lambs of vaccinated ewes:            @ 6 months (earlier vaccination inhibited by colostral immunity but see comment below)            3 Vaccinations (Bluetongue A, B &amp; C) at 3 week intervals</p> <p>Age of first vaccination depends on disease history and occurrence. With better genetics and faster growing lambs the physiology of the immune system has changed. Some veterinarians vaccinate from 2-3 months old irrespective of the dam's immune status.</p> <p><b>Brucellosis (Sheep):</b>            Ram lambs: @ 2-4 months of age            In early maturing rams the disease may occur before 4 months, earlier vaccination is recommended with a booster at 4 months of age.            (Not ewes!)</p>	<p><b>Kyron Animal Health Vaccines</b>  <b>Trio-Sure</b> (Black quarter, Botulism &amp; Anthrax vaccine)  <b>Botu-Sure &amp; Anthrax Vaccine</b> (Botulism &amp; Anthrax vaccine)  <b>Deca-Sure</b> (Multi-Clostridial vaccine - 10 strains)  <b>Oviclos P</b> (Clostridial &amp; Pasteurella multocida/Mannheimia vaccine)            We do not recommend the routine use of an Anthrax vaccine in small stock unless required by legislation or in case of a real disease risk in the area.</p> <p><b>Live vaccine</b>            Note that there is an unregistered inactivated vaccine on the market but we cannot comment on the use or efficacy. Please consult with your local veterinarian</p> <p><b>Inactivated vaccine</b></p>
<p>Nutrition:</p>	<p><b>Lick:</b>            Winter lick: Give from April/May (summer rainfall areas)            Summer lick: Give from October/November (summer rainfall areas)</p> <p><b>Bladder stones:</b>            For animals on high concentrate (grain-based) / low roughage feeds (due to high phosphate) this tends to become a problem. The correct Calcium:Phosphate ratio &amp; the inclusion of ammonium sulphate or ammonium chloride (0.5-1%) aids in the control.</p> <p><b>Digestive modifiers:</b>            Of value where small stock utilize poor quality roughage (browse or graze) in winter. Normally used from April/May to October/November (first rains in summer rainfall areas).</p>	<p><b>Various products and formulations available – Consult with feed companies.</b></p> <p><b>Can be added to the feed but some concentrate products / premixes already contain the active</b></p> <p><b>Eze graze can be added to the water, lick or feed.</b>            Use about 1 gram per animal per day.</p>



# Basic Flock Health Program - continued

MANAGEMENT		PRODUCT RECOMMENDED & INDICATIONS TO USE & NOTES
Other:	<p><b>Multi-minerals &amp; vitamins:</b>                      Ewes: Inject 3-4 weeks before breeding and 4-6 weeks before lambing                      Rams: Inject 8 weeks before breeding                      Lambs: Inject at weaning / during grow out</p> <p><b>Tick borne diseases (Heartwater):</b>                      Control only done in areas endemic for Heartwater                      Different methods available:</p> <ul style="list-style-type: none"> <li>· With blood vaccination only partial immunity develops as some challenge strains are much more virulent than the vaccine strain.</li> <li>· Strategic Oxytetracycline blocking program with strategic dipping – Consult a veterinarian. This works well if done correctly and immunity can develop over time</li> <li>· Regular oxytetracycline blocking program esp. in spring, summer and autumn – Development of immunity unpredictable and resistance development to tetracyclines a risk.</li> <li>· Strict tick control program: Very little to no immunity develops.</li> </ul>	<p><b>Complex A &amp; E for Sheep &amp; Goats</b>  <b>B-Co Bolic</b>                      Can be given to lambs at weaning</p> <p><b>Kyroligo</b>                      Injectable multivitamin, amino acid and mineral solution for use as a supplement at strategic times e.g. sick animals, condition for auction etc.</p> <p><b>Live vaccine</b></p> <p><b>Kyron products: Maxitet 10%, Maxitet 13.5% or Maxitet LA</b></p>























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AD<sub>3</sub>E: Reg. No. G3796 Act 36/1947, [NSO]V14/19.1/1241 Act 13/2003. Attila: Reg. No. G4197 Act 36/1947, [NSO]V19/18.2/1442 Act 13/2003. B-Co Bolic: Reg. No. G4005 Act 36/1947, [NSO]V14/19.4/1245 Act 13/2003. Botu-sure: Reg. No. G4258 Act 36/1947, [NSO]V18/24.4/1436 Act 13/2003. Complex A&E Sheep & Goats: Reg. No. G4119 Act 36/1947, [NSO]V17/19.2/1388 Act 13/2003. Complex Forte: Reg. No. V21286 Act 36/1947, Namibia Reg. No. N-FF3503. Conifluke + Tape: Reg. No. G3762 Act 36/1947, [NSO]V14/18.1.3/1253 Act 13/2003. Deca-sure: Reg. No. G4280 Act 36/1947, [NSO]V19/24.4.2/1443 Act 13/2003. Diomec Plus Powder: Reg. No. V27660 Act 36/1947, Namibia Reg. No. N-FF3832. Eze-graze: Reg. No. V26646 Act 36/1947, Namibia Reg. No. N-FF3504. Kyróligo: Reg. No. G3087 Act 36/1947 N-FF4157. Levoxy 5.9 %: Reg. No. G4148 Act 36/1947. Maxisulf LA: Reg. No. G3657 Act 36/1947, [NSO]V14/17.1.7/1243 Act 13/2003. Maxitet 10 %: Reg. No. G3857 Act 36/1947, [NSO]V13/17.1.2/1199 Act 13/2003. Maxitet 13.5 %: Reg. No. G3586 Act 36/1947, [NSO]V05/17.1.2/295 Act 13/2003. Maxitet-LA: Reg. No. G3580 Act 36/1947, [NSO]V05/17.1.2/294 Act 13/2003. Ovi Clos P: Reg. No. G4261 Act 36/1947, [NSO]V18/24.4.2/1435 Act 13/2003. Ovi-Dose 4: Reg. No. G4041 Act 36/1947, [NSO]V14/18.1.8/1247 Act 13/2003. Trio-sure: Reg. No. G4242 Act 36/1947, [NSO]V18/24.4/1439 Act 13/2003. Vetcam: 13/3.1.2/09, Namibia: [NS2]V18/3.1.2.3/1423 Act 13/2003.