

Therapeutic gaps in the sheep & goats sector

Hearing of 06/06/23

Participants: Julien Visse (vet practitioner in Lacaune, SNGTV sheep commission), Claire Combelles (vet practitioner in Valençay, SNGTV caprine commission), Christophe Hugnet (vet practitioner in the Drôme, representative of the CSMV), Carine Paraud (Anses Niort) **Excused:** Sylvie Blain (vet practitioner in Touraine, SNGTV caprine commission)

for ANMV: L Baduel, S Barreteau, N Bridoux, C Miras, J. Bietrix, L. Fabry **Excused:** B. Leroux

Reminder of the responsibility for the comments made during the hearing and reported in this report:

- The identification of therapeutic gaps (and details of situations expressed and alternatives considered) are the responsibility of the representatives of the veterinary profession
- The ANMV provides additional information or answers to the technical and regulatory questions addressed. These supplements are systematically preceded by "Info ANMV : ..." to distinguish the origin of the words expressed.

Table summarising the comments of the representatives of the veterinary profession (*new elements since the last meeting – indicated in blue*):

| Pathology | Problem encountered: PhV: Pharmacovigilance (efficacy or safety perceived as unsatisfactory) Disp: Availability, shortage Reg: Regulatory (cascade application, withdrawal period, restricted access) 0 VMP: Absence of <u>appropriate</u> veterinary medicinal products (VMPs) 0 TS: Lack of therapeutic solution | Problem Type: PhV, Disp, Reg 0 VMP 0 TS | Alternatives identified | PRIORITIES | |
|---|--|--|--|----------------------|----------|
| | | | | Major: M minor: m | |
| | | | | Sheep | Goats |
| Digestive strongyloses, with increased resistance to benzimidazoles, levamisole and eprinomectin | <p>Feedback from the field of lack of efficacy of benzimidazoles, levamisole and eprinomectin (and not only when pour-on). Questionable relevance of the pour-on route, especially in sheep and goats, as it does not allow targeted treatment (licking). In addition, the pharmacokinetic properties are very heterogeneous. Risk also for the user's safety.</p> <p>Recent studies (ENVT) have confirmed that the situation is very worrying with significant declines in efficacy for all anthelmintic families.</p> <p>Anses Info: the survey conducted in the 2 Sèvres (Anses PARASCOPE project) showed that the most used anthelmintic (in volume and exposure) is oral moxidectin and that the efficacy was insufficient (< 95%) for all anthelmintics used (fenbendazole, ivermectin, monepantel and moxidectin) in the farms included in the survey.</p> <p>Monepantel (ZOLVIX), which belongs to another family, has a MA only for sheep. Despite a milk MRL, it "Must not be used in animals producing milk for human consumption" (see §4.11 of the SPC). However, it "can be used in breeding sheep including pregnant and lactating sheep" (see §4.7 of the SPC).</p> | PhV | <p>Eprinomectin solution for injection (EPRECIS) has a marketing authorisation (MA) extended to sheep and goats since November 2020. Interesting only when there is no resistance to eprinomectin.</p> <p>ZOLVIX (monepantel-based drug, anthelmintic of the amino-acetonitrile derivatives family effective against nematodes resistant to other classes of anthelmintics).</p> <p>To be able to use it in the dairy sector (MRL exists for milk) without risk for the consumer, a residue study is needed to define a milk withdrawal period (WP). This alternative to benzimidazoles and ivermectin would be interesting, even if the treatment could be administered only at dry-off and/or during dry periods. Indeed, the dry period is long, particularly for sheep (5 months + 28 days of non-marketing of milk). In goats, the dry period is shorter (about 2 months) with 7 days of milk withdrawal. The cost of treatment remains high. 25-30% resistance to benzimidazoles is reported.</p> | M n°1 | M n°1 |

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| | <p>ANMV Info: In the absence of a dedicated depletion study and knowing that a milk withdrawal period (WP) of 35 days is indicated in the MA of this VMP in New Zealand, a fixed WP of at least 35 days should therefore be applied during in case of treatment at dry-off.</p> | Reg | <p>The need for alternatives is therefore urgent in goats and sheep (Pyrenees in particular).</p> <p>The Moredun Institute has developed a vaccine against <i>Haemonchus</i>, available in Australia (BARBERVAX®) and the US. See https://doi.org/10.1016/bs.apar.2016.02.011; 10.1016/d.vetpar.2018.11.006 Wish for new MAs in the EU for vaccines.</p> | | |
| Cryptosporidiosis | <p>Goats: safety concerns with halofuginone (off-label use): it's rather a dose problem on goat kids because the product is suitable for cattle - Administration difficulties. Paromomycin satisfactory.</p> <p>Sheep: paromomycin (off-label use): abomasal ulcers at twice the dose (i.e. 100 mg/kg PV), every 2 days, for 7 days. 1x dose would be sufficient to resolve clinical signs in most cases.</p> <p>First pathology but over-diagnosed: not necessarily linked to clinical signs. Lab diagnosis concerns: it would be necessary to better identify the responsible Coli and request a cryptosporidium count to avoid over-use of paromomycin.</p> <p>50% prevalence in sheep herds with "criminals association": <i>E. coli</i> and <i>Cryptosporidium</i>. Diarrhea at 4-8 days, tenesmus and colics, immunochromatography test (speed V-Diar 4) in 10 minutes (many false positives, overdiagnosis).</p> <p>Disinfection difficult because carried by mothers.</p> | 0 VMP | <p>Paromomycin sulphate (Parofor®) in the context of the cascade is widely used in sheep and goats, good efficacy reported.</p> <p>Info ANMV: MA dated 20/06/22 for GABBROVET multi 140 mg/mL solution for pre-ruminant cattle and pigs, indicated for colibacillosis (dosage: 25-50 mg/kg/day for 3 to 5 days; WP meat and offal: 20 days) and cryptosporidiosis (dosage: 150 mg/kg/day for 5 days; WP meat and offal: 110 days).</p> <p>In case of "cascade" use in sheep or goats for cryptosporidiosis: fixed WP of 165 days.</p> <p>Conclusion from the field: not usable for "Roquefort" lambs during fattening. OK for renewal female lambs and breeding female kids. Halofuginone authorised in cattle can be used in the context of the cascade (different species, same indication).</p> <p>Is there a project of MA for a vaccine? for which species?</p> <p>Reporting of alternative products on the market: Kryptophyt (food additive with Yucca extract) and Multigen (oral immunoglobulin). Reinforcement of the intestinal flora (lactic acid bacteria). Phytotherapy: how effective?</p> | M n°2 | M n°5 |
| Neonatal colibacillosis | <p>IMOCOLIBOV efficacy depends on the strains involved in goats and sheep (and according to the passive immunity acquired via the colostrum). Random availability from distributors. Cessation of marketing will inevitably lead to an increase in the use of antibiotics (particularly colistin). There should be an obligation to transfer MA in the event of marketing cessation, for political and societal reasons, and also for animal welfare consideration.</p> <p>Certain groups of breeders are said to have access to certain vaccines and not veterinarians (to be specified further).</p> <p>Lack of information on possible serotypes of <i>E. Coli</i> responsible for septicemic, diarrheal, soft lamb, drooling lamb.</p> <p>Problem of non-typable serotypes. Lack of feedback on field use (only sharing info from users). Vaccines should be used with high valences.</p> | Disp | <p>Overall, the strengthening of biosecurity and zootechnical measures (colostral intake) is important.</p> <p>Existence of the IMOCOLIBOV vaccine, with MA for sheep. Vaccine usable in goats but with a fixed WP, which is of 1day thanks to the NVR.</p> <p>ANMV Info: FENCOVIS MA granted on 27/06/22 (MA only for Cattle)- replacing Boehringer's TRIVACTON 6 (indicated only for cattle but used via the cascade) but subject to several successive shortages, like IMOCOLIBOV (authorised for cattle & sheep).</p> <p>IMOCOLIBOV will no longer be marketed at the end of 2023 (last batch scheduled for September).</p> | M n° 2bis | |

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| | <p>Auto-vaccines: very long production (10 weeks), not acceptable. CEVA recommendations without defined protocol or precise data. No more "checkable" guarantees on auto-vaccines, strains may vary from one year to the next.</p> <p>Quinolone use possible but too late (post AB gram) => 25 to 50% mortality - multi-resistance (average: 16% in meat sheep, 10% in dairy sheep)</p> | 0 VMP | <p>In the case of multiple valences, exceptional release in the event of problems encountered on one valence is sometimes carried out, as it has sometimes be accepted for enterotoxemia vaccines, for example.</p> <p>Tetanus valence is essential in lambs. An "Ultrachoice 8" Zoetis vaccine exists in the US/Canada for cattle and sheep against clostridia but does not contain colibacilli.</p> <p>Auto-vaccines (but development too long). Some requests for auto-vaccines – but genotyping requested according to the matrix. Difficult in goats farms (seasonal births), interesting in lambs but too expensive and without guarantee of efficacy.</p> | | |
| <p>Respiratory pasteurellosis (with increased prevalence of <i>Pasteurella multocida</i> ± mycoplasma not always identified)</p> | <p>OVILIS PASTOVAX moderately effective in sheep (because of the low number of strains in the vaccine), operates moderately in goats. Under-reporting of lack of efficacy as it is not always easy to document. However, it is essential to be able to identify the modalities of appearance (weather, building, age of animals, immunity, etc.) Critical lack of a <i>Pasteurella</i> vaccine for goats (+ atmosphere parameters to be adjusted). The typing of <i>Pasteurella</i> strains cannot be done at present: it is an issue. Autovaccine, yes but: - Sampling matrix (deep nasal swab, lung, etc.) not allowed if non-genotyped resistant to EST. Difficult in goats, unlike sheep - Pharmacovigilance showing the lack of efficacy of a commercial vaccine adapted to the isolated strain - Absence of the <i>Mannheimia haemolytica</i> serotype from the commercial vaccine (but serotyping problem, etc.).</p> | PhV 0 VMP | <p>Injectable antibiotic (macrolides with good pulmonary diffusion) for metaphylaxis. Ingestion of 250 to 500 mL of colostrum at birth. Mixed vaccine combining salmonella valences (SALMOPAST) not very useful or specific vaccine but not including all strains involved in ovine and caprine disease (OVILIS PASTOVAX).</p> <p>Autovaccines (see opposite). ANMV Info: Authorisations have been issued by the ANMV.</p> | | M n°2 |
| <p>Contagious echtyma</p> | <p>Mortality of lambs and mammals (viral disease). A commercial vaccine exists (ECHTYBEL®) with results perceived variable in the field (better efficacy via intradermal than subcutaneous route) – effective in 70% of cases in sheep when used in ID and curative (as soon as the 1st lesions appear). ANMV Info: Some declarations reported to the ANMV of lack of efficacy in sheep and goats. ECHTYBEL availability concerns - <u>to be monitored</u> (ANMV). ANMV Info: shortage from 09/2022 to 03/2023, OK since. Vaccine must be kept. Beware of any risk of abandoning MA. OVERVAC® import no more possible. ANMV info: The Spanish MA has been suspended.</p> | Disp, PhV | <p>Only existing vaccine = must be kept. Various alternative therapies (homeopathy, phytotherapy, etc.) Echtymatisation (scarification from samples of crusts taken from infected herd): isotherapy prohibited.</p> | | M n°3 |

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| Paratuberculosis | Absence of vaccine in France | 0 VMP | Possible import of the Spanish GUDAIR vaccine (many import requests) and less expensive than Silirum. Very good efficacy, but does not prevent excretion in sheep. Make sure that there is no cross-reaction with tuberculin. | | M n°3 |
| Hormons | WP issues for CHRONOGEST LC goats sponges: 36 h whereas 0 day for SYNCROPART and CHRONOGEST CR. Efficacy concerns in sheep (young prepubescent animals) - see livestock management. Environmental and societal considerations with respect to PMSG production (on pregnant mares). Impact ++ (in non-organic sector) in case of unavailability ANMV info: follow-up at EU level | Reg PhV | Flugestone sponges in goats | | M n°4 |
| Mycoplasma mastitis | Only two intramammary antibiotics at dry-off with MA for sheep, and only 1 for goats (Nafpenzal): lack of efficacy on Mycoplasma (resurgence in certain regions). To avoid the presence of residues in milk, only Nafpenzal can be used for goats. Absence of vaccine. No vaccine solution exists on the market, even via the cascade. Critical in goats - slaughter | 0 VMP | Possibility of importing from Spain inactivated sheep vaccines (<i>M. agalactiae</i>) AGALAX Tres, AGALAX Uno (inactivated vaccine) and ALGONTEX. Autovaccines: good results If lack of efficacy is reported to pharmacovigilance: possibility of asking for an autovaccine from an isolation in milk. | | M n°4 |
| Sheep scabies | Too many treatments with macrocyclic lactones, risk of consecutive resistance on digestive strongyles. New serological tool ID. ANMV Info: Problems of elimination of the pest control baths due to toxicity for the environment and for the user (experienced case of urgent transfer of a breeder to hospital by helicopter). Human cases are regularly reported to ANMV with phoxime or deltamethrin-based VMPs. Information on the circumstances of use or on the target species is not always provided. Cases often come from poison control centers. Often cases of accidental contact at the time of application or accidental ingestions of prepared dilutions. Symptoms vary: headache, digestive disorders, irritation at the site of contact (skin, eyes, mouth), respiratory disorders following inhalation. For information, see ppt C. Piquemal AFVAC 2022 & article on human cases published in the Semaine vétérinaire in 2022. | (0 VMP) | Balneations but difficulties in the elimination of treatment products + toxicity for the user. ANMV info: See ANSES self-referral (with 90 recommendations): Opinion published on 30/05/23 - ANSES OPINION and REPORT on the assessment of risks to human health and the environment and recommendations for their control, as part of the administration of veterinary external pest control drugs in the form of baths, showers and sprays in ruminant farms See ppt S. Barreteau at JNGTV 2023. We do not currently have better diagnostic tools Is not a problem in goats | minor | |
| Border disease | No efficacy. No foetal protection. Low prevalence (<1% in Roquefort). In lambs in fattening units => use ++ of antibiotics (oxytetracycline and sulfa – dimethoxin) | 0 VMP | Serological screening and elimination. BVD vaccines not effective against Border disease in sheep and goats | minor | |

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| <p>Prevention of staphylococcal dermatosis of teats/ staphylococcal mastitis</p> | <p>Efficacy of VIMCO: perceived on the field as not convincing on cell counts. No indication for staphylococcal dermatosis*. Complicated to conclude on effectiveness (due to the impact of <i>Morel micrococcus</i>). <i>A priori</i> lack of efficacy in the field on goats. ANMV Info: only 1 case of PhV declared in 2023 (dairy goats clinical mastitis) but quoted “N”, due to vaccination too long ago. Good advertising but no information on efficacy in sheep. The breeders who vaccinate are those with the best milking techniques. Many farms use amoxicillin or penicillin.</p> | <p>0 VMP</p> | <p>Hygiene solves 90% of problems. VIMCO® (Hipra): indication for staphylococcal* mastitis in sheep and goats. Indication: Reduction of subclinical mastitis => interest for milk quality Autovaccines with <i>Morel micrococcus</i>: fairly good results 20 years ago. *ANMV post-meeting note: SPC indications: “Active immunisation of healthy animals in herds with recurrent mastitis problems in order to reduce the incidence of subclinical mastitis (reduction of udder lesions, somatic cell count and <i>S. aureus</i> count) caused by <i>Staphylococcus aureus</i> etc.”</p> | <p>minor</p> | <p>minor</p> |
| <p>Caseous disease or caseous lymphadenitis (<i>Corynebacterium</i>)</p> | <p>Absence of vaccine in France Use of autovaccines (risk???) is possible in the theoretical case of a lack of efficacy of the imported vaccine. However, the efficacy of autovaccines is low (low immunogenic agent). Less critical disease in sheep, more in goats (prevalence approximately 30%, with limited consequences).</p> | <p>0 VMP</p> | <p>Possible import of a Spanish vaccine for <i>Corynebacterium pseudotuberculosis</i> (rare in sheep) caseous lymphadenitis. Abscess disease due to the <i>Morel micrococcus (staphylococcus)</i> can be prevented using VIMCO® (Hipra) with cross-protection (<i>Staphylococcus aureus/ Morel micrococcus</i>); non convincing efficacy.</p> | <p>minor</p> | <p>minor</p> |
| <p>Piroplasmiasis</p> | <p>No VMP authorised for sheep. The CARBESIA meat WP of 213 days is not applicable.</p> | <p>0 VMP Reg</p> | <p>Only one VMP, authorised for cattle: CARBESIA</p> | <p>minor</p> | <p>minor</p> |
| <p>Uterine infections</p> | <p>No VMP with MA – only VMPs authorised in the bovine species Abandonment (11/30/22) of the MA for Auréomycin Merial (BI). A single intrauterine chlortetracycline oblet remains available for cows & mares: Centraureo° Oblet (Virbac). WP= 7 days (meat) and 0 day (milk)</p> | <p>0 VMP</p> | <p>HISTABIOSONE: MA for goats. Compliance with the fixed WP of the cascade is not problematic in this case. ANMV Info: CENTRAUREO: “cascade” fixed WP are now shorter thanks to Reg 2019/6: 1 day for milk and 11 days for meat WP</p> | <p>minor</p> | <p>minor</p> |
| <p>Ringworm</p> | <p>Absence of vaccine with MA for sheep and goats</p> | <p>0 VMP</p> | <p>Vaccines authorised for cattle: Info ANMV: Return of BOVILIS Ringvac but suspension due to Brexit. TRICHOLOR (MA dated 18/05/22), new vaccine from Ceva against bovine ringworm BOVIGEN T (MA dated 04/2021) from Virbac IMAVERAL but no sheep or goat MA</p> | <p>minor</p> | <p>minor</p> |
| <p>Cestodosis</p> | <p>CESTOCUR: too concentrated (3 mL/20 kg) for the use in young animals. Lack of efficiency because volume is too low. ANMV info: 9 declarations of lack of efficacy in sheep between 2015 and 2020 + 2 cases of lack of efficacy declared in 2023 in sheep</p> | <p>PhV</p> | | <p>minor</p> | |
| <p>Intramammary</p> | <p>Only 2 intramammary with MA for sheep (NAFPENZAL T and CEFOVET HL) and only 1 with MA for goats (NAFPENZAL T).</p> | <p>0 VMP</p> | | <p>minor</p> | <p>minor</p> |

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| Adenomatosis (sheep) | Big problem affecting the Causse lamb (adults are affected) | 0 VMP | None | minor | |
| Visna maedi (sheep)(lentivirus viral disease) | | 0 TS | Slaughter of the herd | minor | |

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| Therapeutic gap: resolution in progress with existing solution | Initial problem of the sector | Type of problem | Solution / Alternatives Reason for: Resolution in progress / Disappearance of the therapeutic gap | GAP initially Major: M minor: m | |
|---|--|--------------------|--|---------------------------------------|-------|
| <p>Myiasis due to <i>Wohlfahrtia magnifica</i> and <i>Lucilia sericata</i></p> | <p>Geographical extension of myiasis due to <i>Wohlfahrtia</i>. Lack of effective treatments due to the location of these myiasis and their seasonality (insufficient duration of action of existing VMPs). No action of CLIK pour-on on areas without wool and under the hoof (manual removal required). No new PhV declarations of lack of efficacy on <i>Wohlfahrtia</i> in sheep since 2018</p> | PhV | <p>Local care (trimming, removal of larvae) and information/training of GDS have made good progress on the difficulties encountered previously. Use of essential oils (need to inform users), BUTOX or VERSATRINE (off-label use).</p> | M N°4 | |
| <p>Anti-inflammatory, analgesic.</p> | <p>No NSAIDs with MA for sheep: animal welfare concerns for convenience operations (caudectomy, dehorning, etc.). Absence of defined milk WP. => Absence of pain control in dairy sheep and goats</p> | 0 VMP | <p>No VMPs with MA for sheep, but “cascade” fixed WP now more advantageous thanks to the 2019/6 Reg. Ideally, wish for MA for the species concerned with 1-day milk WP. => drugs authorised for cattle with Milk and Meat WP such as (see below): Tolfenamic acid: milk WP= 0 day (IM), 12 to 24h (IV) => cascade fixed milk WP of 1day (IM) Flunixin meglumine: milk WP: 24h to 36h, meat WP: 10 to 31days in cattle => Flunixin via cascade with NVR: Meat WP=⁽²⁾ 4d (IV); ⁽¹⁾⁽³⁾ 10d => 15d (IV), 31d => 47d (IM); ⁽⁴⁾ 7d Milk WP = ⁽¹⁾ ⁽²⁾ ⁽³⁾ 24h (IV), 36h (IM), ⁽⁴⁾ 36h=> 3 d ⁽¹⁾FINADYNE, EMDOFLUXIN, CRONYXIN, WELICOX, FLUNIJECT, ANTALZEN, GENIXINE ⁽²⁾MEGANYL (IV), ⁽³⁾FLUNIXYL, FLUNIXIN, (IV), ⁽⁴⁾FINADYNE transdermal Dexamethasone: 11 VPMs with MA marketing for goats with a milk WP of 3 to 7 days, no MA for sheep Ketoprofen: MRL status: “No LMR required” but EPMAR recommends a 4-day WP. A 1-day WP was allowed when specific submitted depletion studies warranted it.</p> | minor | minor |
| <p>Treatments against flies</p> | <p>There are no VMPs against flies that could be used in goats with fixed “cascade” WP shorter than 7 days.</p> | Reg | <p>VMPS with MA for sheep & goats such as: SEBACIL, EPRINEX multi (milk WP of 0 day), DIMPYGAL (milk WP: 4 milkings). With NVR, the WP for cattle has to be multiplied by 1.5 in case of off-label use for sheep or 1 day if 0 day for cattle. => milk WP in sheep and goats is now of 1 day for FLECTRON, DELTANIL for on and 1,5 day for BUTOX and VERSATRINE</p> | minor | minor |

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| Q fever | No MA of COXEVAC for sheep | 0 VMP | COXEVAC, vaccine (MA 2010) "phase 1", but indicated only in cattle and goats and without MA in sheep Extension to sheep accepted on 04/2023 (EMA) | | |
| Footrot | FOOTVAX: Vaccine not allowed for sheep in lactation § 4.7 SPC: "It is preferable to avoid vaccinating sheep in the period of 4 weeks before and 4 weeks after lambing. For dairy sheep, it is recommended to vaccinate lactating sheep after weaning or after reaching peak milk production. " Recent changes in the FOOTVAX SPC | (1) VMP | Modification of the MA | | |
| SONO (sheep) Ovarian nasal obstruction syndrome | Disease developing in a regional context (Basque Country), with imprecise aetiology, but involving <i>Oestrus ovis</i> infestations associated with local hypersensitivity reactions. The control of oestrosis in milk sheep farming remains problematic due to the WP of the drugs active against that parasite. | Reg | Extension of indication (<i>Oestrus ovis</i>) for Eprinex multi (2022) | | |

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Changes in gaps since the last hearing in April 2021:

Favorable trend for:

- Sheep myiasis due to *Wohlfahrtia magnifica*, a major gap in the process of being resolved thanks to local elimination of larvae and training
- Anti-inflammatories and analgesics, without MA for sheep, thanks to the shorter fixed “cascade” WP allowed by Reg 2019/6
- Treatments against flies, without MA for sheep or goats, thanks to the shorter fixed “cascade” WP allowed by Reg 2019/6
- Q fever, thanks to the extension to sheep of the marketing authorisation of the existing vaccine
- Footrot, thanks to the modification of the marketing authorisation now allowing the vaccination of dairy sheep
- Nasal obstruction of sheep syndrome (SONO), thanks to the extension of the indication of marketing authorisation for *Oestrus ovis*

Less favorable trend for:

- Neonatal colibacillosis and enterotoxaemia, with increasing problems with the availability of rare existing vaccines
- Contagious ecthyma of sheep with only one vaccine available and sometimes subject to shortages
- Hormons that can be used in sheep with availability concerns

| |  Sheep | |  Goats | |
|-------------------------|--|--|---|--|
| | Meeting of 16/04/21 | Meeting of 06/06/23 | Meeting of 16/04/21 | Meeting of 06/06/23 |
| MAJOR priorities | 1. Digestive strongyloses, with increased resistance to benzimidazoles, levamisole and eprinomectin 2. Cryptosporidiosis 2. bis Neonatal colibacillosis 3. Sheep scabies 4. Myiasis at <i>Wohlfahrtia magnifica</i> and <i>Lucilia sericata</i> 5. Border disease | 2. Neonatal colibacillosis/enterotoxemia → 2. bis Cryptosporidiosis 3. Contagious ecthyma 4. Hormons | 1. Digestive strongyloses, with increased resistance to benzimidazoles, levamisole and eprinomectin 2. Respiratory pasteurellosis 3. Mycoplasma mastitis 4. Paratuberculosis 5. Cryptosporidiosis | 2. Respiratory pasteurellosis 3. Paratuberculosis 4. Mycoplasma mastitis 5. Cryptosporidiosis |
| Minor Priorities | <ul style="list-style-type: none"> • Respiratory pasteurellosis • Mycoplasma mastitis • Paratuberculosis • Coccidiosis • Contagious ecthyma • Prevention of staphylococcal dermatosis of teats/ mastitis | <ul style="list-style-type: none"> • Respiratory pasteurellosis • Mycoplasma mastitis • Paratuberculosis • Coccidiosis • Prevention of staphylococcal dermatosis of teats/ mastitis | <ul style="list-style-type: none"> • Neonatal colibacillosis • Coccidiosis • Prevention of staphylococcal dermatosis of teats/ mastitis | <ul style="list-style-type: none"> • Neonatal colibacillosis • Coccidiosis • Prevention of staphylococcal dermatosis of teats/ mastitis |

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| | <ul style="list-style-type: none"> • Anti-inflammatories, analgesics • Q fever • Caseous disease • Piroplasmosis • Uterine infections • Ringworm • Hormons • SONO • Cestodosis • Intramammaries • Adenomatosis • Visna Maedi • Footrot | <ul style="list-style-type: none"> • Caseous disease • Piroplasmosis • Uterine infections • Ringworm • Border disease • Sheep scabies • Cestodosis • Intramammaries • Adenomatosis • Visna Maedi | <ul style="list-style-type: none"> • Caseous disease • Uterine infections • Ringworm • Hormons • Intramammaries | <ul style="list-style-type: none"> • Caseous disease • Uterine infections • Ringworm • Hormons • Intramammaries |
| Resolution in progress | <ul style="list-style-type: none"> ➤ Treatments against flies | <ul style="list-style-type: none"> ➤ Treatments against flies thanks to Reg 2019/6 => shorter "cascade" milk WP ➤ Myiasis due to <i>Wohlfahrtia magnifica</i> thanks to local management and training ➤ Anti-inflammatories, analgesics thanks to Reg 2019/6 => shorter "cascade" milk WP | | <ul style="list-style-type: none"> ➤ Treatments against flies thanks to Reg 2019/6 => shorter "cascade" milk WP ➤ Anti-inflammatories, analgesics thanks to Reg 2019/6 => shorter "cascade" milk WP |
| Existing solution | <ul style="list-style-type: none"> ➤ Antispasmodic ➤ Urinary lithiasis ➤ Schmallenberg disease ➤ Salmonella abortions ➤ Fasciolosis ➤ Anaesthetics | <ul style="list-style-type: none"> ☑ Fever Q thanks to MA extension to sheep (04/23) ☑ SONO thanks to the extension of the indication of Eprinex multi (2022) ☑ Footrot thanks to MA modification | | |