Paws claws and udder things

September 2020

Gribbles VETERINARY

What's inside?

Welcome

Welcome to a new edition of our newsletter.

This month we introduce you to a new pathologist as well as our new and improved eResults service, a look at what's happening around the country, a fab equine *Case of the Month* and plenty more!

Please just call us on 0800 GRIBBLES if you need our help with anything.

Kind regards,
Karen Cooper
Marketing Administrator

eResults upgraded!

eResults is our very popular free online results service, that enables you to access all your laboratory results at any time day or night on a device of your choosing. This month we are rolling out a new upgraded version of this programme.

The new eResults platform (available from Monday September 21) has increased data security, to ensure that data is secure at all times.

So are there any changes?

eResults will no longer be available as an app, but will be available **from 21 September** as a new mobile-friendly website. You can simply save it as a favourite on your PC or add an icon to your home screen on your phone or mobile device, just like an app (see photo right).

Changing to a website based service allows us to easily make changes and improvements, install updates and going forward we can expand eResults to include more exciting tools! The new platform will also allow for clinics to administrate their own staff profiles - so will be able to amend which results each veterinarian at your clinic has access too, without having to contact Gribbles Veterinary.

I have the old eResults app, what do I need to do?

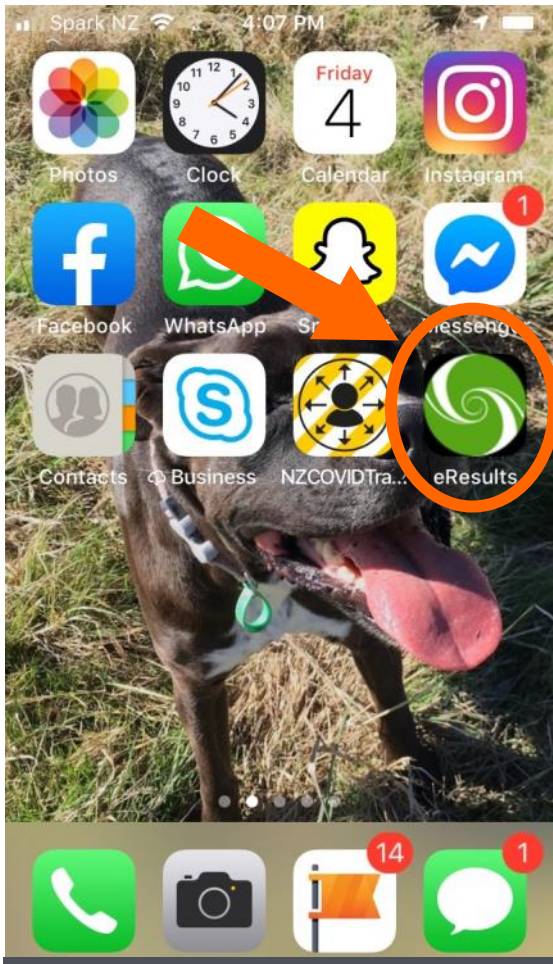
If you have used eResults in the 18 months you simply need to reactivate your account by going to https:/uat.eresults.gribbles.co.nz choose 'forgot my password' to generate a password for the new platform.

If you haven't used eResults in the last year you will need to register for a new account, but don't worry, all your historic results will still available! Go to https:/uat.eresults.gribbles.co.nz and follow the instructions to sign up.

Can I still use the old app?

The old app has been assessed as a security risk and will be switched off at the end of October 2020. Feel free to delete the app from your device and create a link to the new website on your home-screen (see below). You can use the new website from 21 September.

If you are having any issues setting up your new account we have created some "How To" information sheets with easy to follow set up instructions. So please visit our website, or get in touch with your local laboratory or Territory Manager if you need some help.



Spring trace element testing

Now that spring has sprung we thought it a timely to remind you of the recommended trace element panels in our current price book. The suggested panels are examples of appropriate analytes for assessing what is happening in the dairy herd.

1. Autumn Panel

- Important analysis for dairy herds prior to winter.

Samples recommended: 10x serum samples (red top) and 10x liver biopsies from herd

Analyte	Why test this?
Zinc x10	Monitor for facial eczema prevention
GGT x10	Identify subclinical facial eczema damage
Selenium x5	Assess status prior to winter
Liver copper 10	Assess stores prior to winter

Testing for trace element status is an important part of mineral supplementation

2. Transition Panel

- Important analysis for dairy herds to help support a successful transition period.

Samples recommended: 10x serum samples (red top) from herd

Analyte	Why test this?
Calcium Magnesium Phosphate x10	Levels key for metabolic disease prevention
NEFA or BOH x10	Indicator of negative energy balance
Selenium x5	Adequate levels important in periparturient immunity for reducing mastitis, metritis and associated with retained fetal membranes
Vitamin B12 x10	Low levels may indicate suboptimal nutrition affecting the ability of ruminal microflora to synthesise Vit B12

plans on farm. The panels below are recommendations depending on the time of year, but these can be mixed and matched ,or altered to suit your requirements.

If you wish to discuss the best testing combination for your area, or even for a particular farmer, our team of pathologists are happy to discuss your options.

Call us today. 0800 GRIBBLES.

3. Premating Panel

- Important analysis to assess factors that can impact the reproductive performance of the dairy herd.

Samples recommended: 10x serum samples (red top) from herd

Analyte	Why test this?
Calcium x10	Hypocalcaemia can negatively affect fertility
Magnesium x10	Needs to be assessed alongside calcium
BOH x10	Indicator of negative energy balance which can negatively affect fertility
Selenium x5 Copper x10	Deficiency can affect conception rates

What's out there?

In the table right, you will find a summary of recent interesting and common findings from around our network of laboratories.

Did you know . . . all diagnostic cases that come through our doors are coded with regard to clinical history and diagnostic findings? This data is sorted by region and submitted to MPI as part of their national animal surveillance programme. All data is kept anonymous, with only region, animal type/age and the aforementioned coding being provided.

If you would like to read more about New Zealand's passive surveillance programme please visit MPIs website here.

Diagnostic findings	AU[1]	HA	PN[3]	CH[4]	DU[2]
Johne's disease in cattle (and deer[2])	✓	✓	✓	✓	✓
Calf scours - *Cryptosporidium* and *Rotavirus*	✓	✓	✓		
Attaching and effacing *Escherichia coli* in calves	✓				
Dairy cattle mastitis: *Streptococcus uberis*	✓	✓	✓	✓	✓
Staphylococcus aureus			✓	✓	✓
Prototheca sp.	✓	✓	✓		
Salmonella Bovismorbificans in cattle (and dogs[1])	✓	✓	✓	✓	✓
Salmonella Typhimurium in cattle	✓	✓	✓	✓	
Methicillin resistant *Staphylococcus intermedius* group in dogs	✓		✓		
Calcium and/or magnesium deficiency in cattle	✓	✓	✓	✓	✓
Selenium deficiency in horses			✓		
Theileria orientalis in cattle		✓	✓		
Abortions: *Campylobacter fetus* and *jejuni*[3] (sheep)	✓		✓		✓
Salmonella Brandenburg (sheep and cattle[4])				✓	✓
Listeria sp. (sheep)			✓	✓	✓
Ureaplasma diversum (cattle)	✓				
Yersinia pseudotuberculosis in cattle	✓		✓		

Legend: AU (Auckland); HA (Hamilton; PN (Palmerston North); CH (Christchurch); DU (Dunedin)

Case of the month

CATHY HARVEY

Clinical history:

A one year-old, female horse presented with weight loss and diarrhoea. She was euthanased, but was one of four horses that had died in the last 2 months on the same property (with a history of *Salmonella, Cryptosporidium* and *Coronavirus* on the farm).

On post mortem examination pinpoint lesions were observed on the intestinal lining. Findings were otherwise normal. Multiple fixed tissues were submitted to the laboratory for histopathology examination.

Histopathology results:

Caecum – Multifocally the mucosa contains moderate numbers of nematode larvae in the lamina propria surrounded moderate numbers of eosinophils, plasma cells and lymphocytes. In some areas there are also small infiltrates of neutrophils, short bacilli bacteria and deposits of fibrin.

Thank you to Melissa Sim, Franklin Vet Services for submitting this interesting case (along with an excellent clinical history, photographs from the post-mortem and multiple well-fixed tissues).

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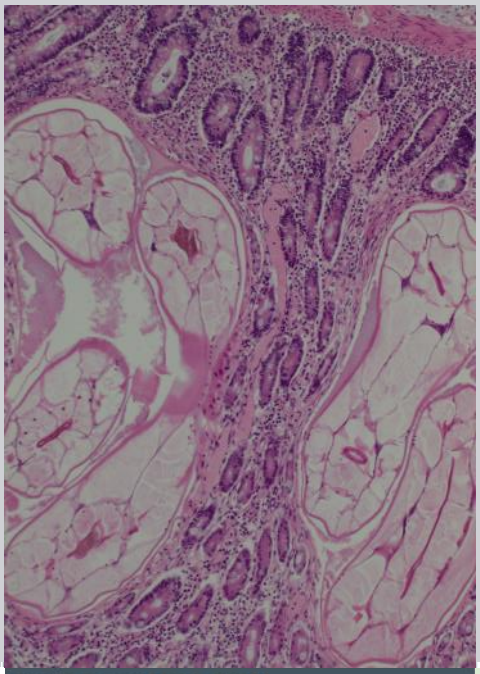


Photograph above and left: Section of caecum with arrows indicating nematode larvae in the mucosa. H&E stain.

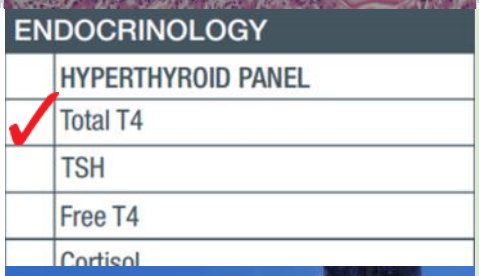
Meet our new pathologist!

We'd like to introduce you to Sandy Weltan, the newest edition to our flock of pathologists. Sandy joined us this week and is working for us remotely off -shore until she is able to travel to New Zealand. We've very excited to have Sandy as part of our team.

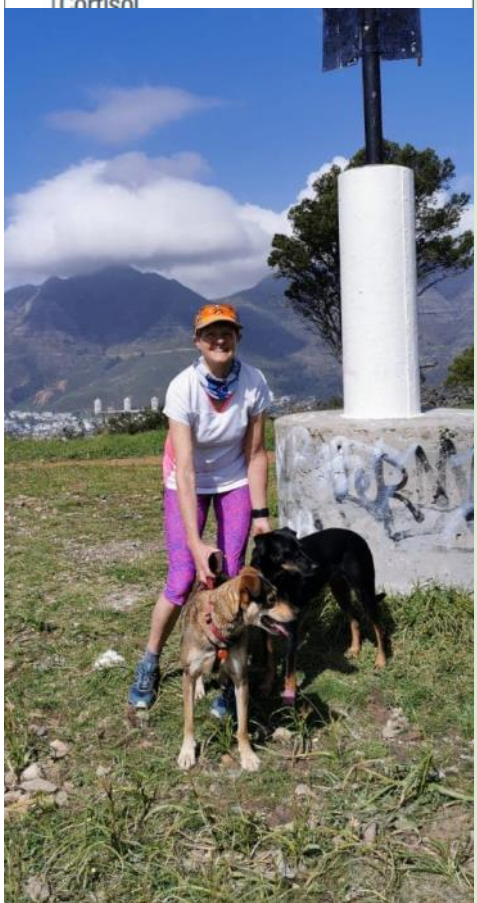
Sandy has a BVSc and MMedVet (CLD) from the University of Pretoria, plus a PhD from the University of Capetown. She has worked extensively in veterinary laboratories, private veterinary practice, as well as in research and teaching positions in South Africa.

Her main clinical pathology interests are cytology and haematopathology.

You can contact Sandy at any time via email—sandy.weltan@gribbles.co.nz and read more about her on our website here.



ENDOCRINOLOGY	
	HYPERTHYROID PANEL
✓	Total T4
	TSH
	Free T4
	Cortisol



Right T4?

There's nothing worse than getting a test result for something you didn't realise you'd asked for!

We often get requests for Free-T4 and find out after the results have been issued that a Total-T4 was the test required. Since it is not practical for us to call each time a Free-T4 request is received, we ask that your clinic staff take extra care when checking the test boxes on our forms. Free-T4 is an expensive test to run and we are not necessarily able to reimburse the cost of this test each time it is requested in error.

If the endocrinology section of the companion animal submission form in you are using does not match that shown above, please contact your local laboratory and they will send you out the current version to use.

Find detailed information on thyroid function testing on our website here.

Case of the month

CONTINUED FROM PAGE 3

Diagnosis: Caecum - (Cyathostominosis) colitis with mucosal larval small strongyles (cyathostomins /cyathostomes) and neutrophilic colitis with short bacilli bacteria.

Discussion: The likely cause of death was the colitis with acute short bacilli bacterial infection (likely *Salmonella*, but culture was not performed for identification), but there was also a significant underling chronic-active Cyathostominosis, which likely predisposed the horse to the bacterial infection.

Subacute to chronic diarrhoea in horses almost always involves the large intestine, with or without concomitant small bowel involvement. *Salmonella* and *Clostridium difficile* typhlocolitis must be suspected in such cases. Extensive mucosal involvement by larval cyathostomes and strongyles and rarely, ulcerative typhlitis resulting from anoplocephelid tapeworms, may also cause chronic diarrhoea and wasting. Co-infection by *Listeria monocytogenes, Salmonella* and cyathostomes probably leads to granulomatous typhlocolitis in the horse.

Small strongyles are essentially non-pathogenic as adults. Cyathostominosis is a disease of horses greater than one year of age and little resistance is apparent to repeated infection. The clinical syndrome larval cyathostominosis occurs as a result of simultaneous emergence of inhabited third stage larvae from the intestinal mucosa, and is a significant cause of morbidity and mortality in horses.

The cyathostomins have a direct life-cycle. Infective third stage larval cyathostomins are ingested, and they migrate into the deep mucosa or submucosa of the caecum and colon to encyst and moult, before emerging to the lumen to moult again and mature into adults. Encysted third or fourth stage larvae may undergo hypobiosis or developmental inhibition, persisting in nodules in the colonic wall for as long as two years. The timing during which inhibition occurs is dependent on the climate. Inhibition occurs during colder months of the year in temperate climates, and during the hot summer in tropical climates.

The most devastating damage occurs when large numbers of encysted inhabited larvae emerge en-masse to continue their development in the intestinal lumen. This occurs in the late winter, spring and early summer in temperate climates. Development of widespread in anthelmintic resistance by cyathostomins, particularly encysted larval stages, is well documented. Affected horses may be of any age; clinical signs are non-specific and include diarrhoea, oedema, anorexia and weight loss.

Subsequently, 37 horses from the property had faeces tested for FEC and *Cyathostome* 4/5th stage larva. Some horses had up to 1200 strongyle eggs/g. Larval culture of a pooled sample of the faeces had 100% *Cyathostome* larvae.

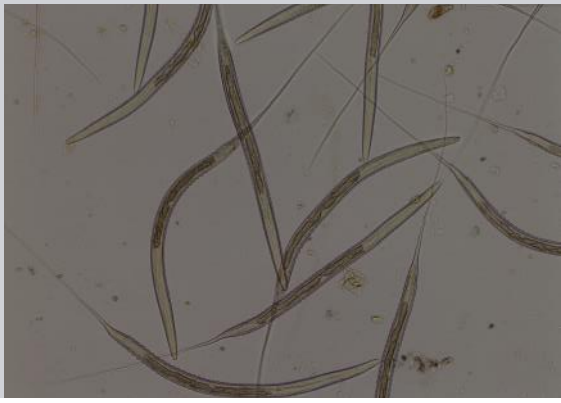
Due to the sensitivity of FEC testing (only using a small amount of faeces compared to the total faecal output), if no eggs are counted in the FEC it is still possible for eggs to be present (false negative). In this case, if clinical signs indicate cyathostomiasis then larval culture is a more sensitive test to diagnosis *Cyathostome* infection compared to FEC or *Cyathostome* 4/5th stage larval tests.

Cyathostome parasitology tests available:

- FEC – Strongyle egg count
  (Does not differentiate large or small strongyles; may be negative depending on stage of infection)
- Cyathostomes – 4/5th stage larvae
  (May be negative depending on stage of infection)
- Larval culture – *hatches any Strongyle eggs to third stage infective larvae, identifying to genus level and performing a differential of the larvae cultured.*

Reference: Jubb, Kennedy and Palmer's Pathology of Domestic Animals, Sixth Edn, 2015.

Photograph below: Cyathostome third stage infective larva from larval culture, wet preparation, 10x magnification.



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