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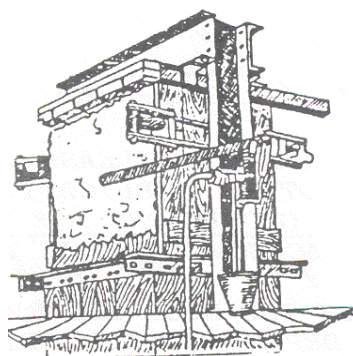
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Plus all the usual features and more!



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EDITORIAL

The 2011 RBA Farmers' Week is now receding into the distance. There is a refresher on the key points from the Department of Agriculture sessions in this edition of the Wool Press, and the CD is available! Once again a wide range of topics were covered and there were a number of animated discussions on various issues. There were sessions which related directly to farm profitability whilst others focused on specific programmes such as the hydatid research project. The 'vibes' from the week were positive. The RBA put a good programme together for the week and have a timely reminder here of the benefits of RBA membership.

Who would have thought that one of the spin offs from airport runway resurfacing would be a source of cost effective lime. It is useful boon to farming. Mac and Colas negotiated what is hopefully an attractive price. Warren sets out a wealth of information on getting the best out of investment in lime. Such inputs come at a price but are largely controllable. Andy investigates the water requirements for pasture growth. This will rely on the vagaries of weather and rainfall to a large extent which is beyond farmer's control, and Mac mentions the added impact of climate change. Will the FIP have to embrace irrigation?

On the wider scene, Pauline provides an account of what sound like very comfortable dog and cat boarding facilities at Fitzroy, providing an option for pet and working dogs. Combating soil erosion is covered by Rebecca using bluegrass at the cleared minefield at Surf Bay as an example. The lessons learnt can be applied to other eroded areas. It is also timely as there should be further work on 'land release' from some minefield/suspect areas this summer. As it is land release rather than mine clearance the level of ground disturbance should be low.

Last week Sally Poncet gave an interesting talk at the Chamber of Commerce on working boats around the Falklands and South Georgia. This covered a number of current vessels and well known boats from the past. It also covered the use of vessels for recent activities such as rat eradication and surveys, as well as the traditional operations of moving sheep and wool between islands.

This Wool Press has a whiff of 'hello and goodbye' about it. Helen recounts her and Warren's introductory visit to the West. They covered a lot of ground and had a lot of first hand exposure to farming in the Falkland's and on the West in particular. Tony reflects on his three years here with a departing message. We wish Tony, Rosie and family well for the future.

John Barton
Director of Natural Resources

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GO WEST

By Helen Thoday

Warren and I spent a week on the West Island directly after Farmers' Week as part of Tony's non-stop induction to the Ag Department. The flight over provided us with a great opportunity to get our bearings and also on the landscape of our new home.

Tony had got 16 responses from farms on the West so we had a packed itinerary and we managed to bump into 3 more farmers away from their properties whilst they were out jogging, teaching and socialising so our number reached 19 meet and greets.



It was a mixture of farm kitchen chats and farm visits. We got to see a lot of the pasture improvement work that has taken place recently, in the last decade and also from years ago. One thing that struck me from the recent re seeds was the difference in uptake of germination, the range of grass types that had made it, some with only Yorkshire fog and some with mixtures regardless of the mix first sown. The Department of Ag does carry out germination tests which you can utilise, the results of which can then be used to adjust seeding rates.

The number of farms using the Department's



soil testing service to identify the pH level was encouraging. This information will prove very useful, particularly to those wishing to buy the newly acquired lime. The results should be used to calculate the liming rate which Warren and Andy can advise on.

I think the thing that grabbed me straight away was the positive affect of ditching, and the fact it can be carried out on the FIP programme was even more encouraging. What a fantastic improvement; reducing losses of livestock and Rovers! But also the subsequent benefits the sheep get from sheltering behind the sod that has been dug out and also the availability of drinking water in a safer situation. Some farms had also provided crossings in the ditches by adding culverts or digging deeper and wider in places to provide a hard bottomed crossing.

We saw plenty of livestock and the cattle we saw looked great. There was a range of breeds and crosses, and mostly with double ear tags! The cattle handling system we saw at Fox Bay was fantastic and following up from Mac's article of yard handling cattle there was no doubt that these cows were very humanised when we went out to see them in camp, happily eating hay only a meter from us, a huge benefit to human and animal welfare during the times you do need to work

with them.

Over our visits we had a great overview of the history of the islands and specifically the West, the changes in the road networks, the boat service and the costs associated with transport of goods or farm outputs an ongoing issue for profit margins.

Another topic which regularly came up was Cobalt deficiency and the future of importations. Following up from the visit I will be looking at the options available. An area highlighted by many farmers who had been on the Falklands all their lives was the water table reductions that have occurred over the last 40 years and the lack of real winters anymore. All this goes into the need to

change and adapt the management of the farm and monitoring some of this is essential so we will be looking again at the weather stations which need repairing after an attack of the raptors!

We specifically thank Helen and Gonz, Deirdre and Gavin, Peter and Shelley and Myles for putting us up and all the other farms that fed and watered us and gave us an insight into their needs and that of the Falklands which in my opinion should directly match the service we provide as Agricultural Advisors. It is amazing to think the next time we see a lot of people it will be the third time and we have only been here two weeks! Also thank you to Tony for organising it all and doing all the driving....although we did offer!



SURF BAY BLUEGRASS PLANTING TRIALS

By Rebecca Upson

Soil erosion is a major concern for farmers and conservationists alike. Coastal areas are particularly vulnerable and some sites require urgent attention. Where bare peat is exposed at coastal locations it is generally appropriate to try and plant the area with Tussac (*Poa flabellata*). Many such projects have and are currently taking place across the islands. At other sites such as sections of Cape Pembroke the soil has eroded away to leave sand and clay exposed. On these areas Tussac planting is not appropriate. Falklands Conservation are working with the Falkland Islands Government to carry out planting and seeding trials with native species on recently cleared mine fields. The data gathered will be used to inform best practices at other sites. In November's Wool Press issue I hope to report back on the seeding trials and rates of natural re-colonisation at Surf Bay and Sapper Hill study sites. Here I would like to focus on the Bluegrass planting trials.

To the best of my knowledge, the grass of choice for planting up areas that have eroded to sand here in the Falklands has always been the introduced grass Marram (*Ammophila arenaria*) or, to a lesser extent, Lyme grass (*Leymus arenarius*). There are reports of Marram planting as early as 1898.

Well known for its ability to colonize sandy sites Marram is not, however, a particularly useful pasture grass. In contrast the native Bluegrass (*Poa alopecurus*), which naturally grows on sandy sites here in the Falklands, appears to be selectively grazed by stock. Bluegrass therefore has the potential to be used to stabilize eroded ground and provide better forage, benefiting both conservation and farming. In addition the growth form of Bluegrass allows a more species rich community to develop at a site, rather than the monocultures typical of a site planted with Marram. One commonly co-occurring species of native dune communities is, for example, Wild Celery (*Apium australe*).

Bluegrass tillers were sustainably collected from Falklands Conservation-owned Middle Island, where this species is the dominant grass. Tillers were planted directly into sand at Surf Bay in

July and October 2010 (Figure 1). The site at Surf Bay was monitored in October and again in April 2011. By April, Bluegrass plants showed an average leaf growth of 10 cm and only 9 % mortality (Table 1, Figure 1). At this site, tillers were planted about 1 m apart, however this grass can be planted as closely as desired. Looking to the future it would be extremely useful if seeding trials could be carried out and monitored so that larger areas could be covered in a less labour-intensive way. Grazing trials to identify appropriate stocking rates and timing for bluegrass dominated pastures are also needed to inform sustainable management of this forage species. A full analysis of the nutrient content of leaves would also aid in understanding its potential benefit to stock.

Table 1: Comparing the height and survival success of Bluegrass and Tussac tillers planted at Surf Bay former minefield site SA-008

	Average height in cm (S.D) of planted grass		Average % of tillers that have died since planting (S.D)
	Oct 2010	April 2011	April 2011
Tussac tiller trial	64 (4)	93 (5)	1 (3)
Bluegrass tiller trial	18 (4)	28 (4)	9 (7)

Over the long term, our trials at Surf Bay will also investigate the ability of Bluegrass to compete with Marram grass as the latter species spreads from the neighbouring fore dunes. Watch this space!



Figure 1: Bluegrass planting trial (monitoring plot 1) in October 2010 (left) and April 2011 (right)

Thanks to the Mount Pleasant Complex Conservation group for enabling us to reach Middle Island and collect the Bluegrass tillers. Thanks also to all the volunteers who helped us plant up the Surf Bay site.

Dates for the Diary

14th August Falkland Day

17th August Dog Dosing (Droncit)

Please remember to contact the Veterinary Service on telephone no 27366, fax no 27352 or email sbowles@doa.gov.fk and advise when your dogs have been dosed

LIME – MAKING THE MOST OF YOUR INVESTMENT

By Warren Landles

Whilst lime is the most essential pasture fertiliser under acidic conditions, the cost attached through purchase, transport and application needs to be paid for by livestock product.

Make the most of your investment through good timing, application method and rate. The type of material being applied is also important.

Farms using the MPA purchased lime have at their disposal a fine material containing a high neutralising value (see analysis). The larger the number of particles in a fine lime means that the lime can be better distributed throughout the soil.

Furthermore, fine material has a bigger surface area and reacts more quickly with soils. On the downside, it has the potential to be blown away, even in a gentle gust.

Therefore getting lime to where it's needed, by setting the spreader to narrow spread widths of around 6 metres, will help ensure an even application within the soil.

Liming benefits

- Lime is a fertiliser
- Balanced pH = soil nutrient release
- Phosphorous and molybdenum availability increased
- Fertilisers become more effective
- Slows up the release of heavy metals, e.g aluminium
- Promotes microbial activity
- Nutritious grasses and clovers are encouraged
- Plant calcium percentage increased
- Palatable pastures = increased stock intake

In addition, using the results of your soil pH tests and knowing the type of pastures or reseeds you are aiming for, will help set the lime application rate. From your own experience you will have seen that some grass types and particularly clovers are more lime sensitive.

MPA Lime analysis

- Neutralizing value 95.25%
- pH in water = 12.61
- Very fine and soluble
- Calcium 30.36 % dry matter
- Magnesium 4.64 % dry matter
- Potassium 0.042 % dry matter
- Phosphorous 0.032 % dry matter

Split applications

On farms planning a reseed or planting a cereal crop, it's worth considering working your lime into the soil. Field work has shown that when a soil pH is recorded below 5 throughout its depth, it is advisable to rotavate/power harrow half the lime dressing and spread the remaining half on worked surface. This could be completed post burning, which would also help remove some ash deposits.

When lime is applied solely as a top dressing on pastures, it will affect the surface layers. With time, rain will gradually wash the material to lower soil layers.

It is also important to allow sufficient time for the soil to adjust to the correct pH before sowing. This can take several weeks, depending on the quality of lime used. Gordon found through laboratory test results using the MPA fine lime on a soil of 4.56 observed a change within two weeks.

More often, it is considered that the economics of liming can be measured in increases in the quality and quantity of products like meat and wool. The benefits to stock of limed pastures are due mainly to increased intake from the more palatable and nutritious grasses/legumes and the higher calcium content.

Keeping up the momentum

The MPA lime represents a great opportunity to help produce and improve healthy pastures. Looking ahead, the need for future

Application checklist

- Timing - correct soil pH before the next growing season
- pH soil test - use your results to determine rate
- How much? Consider crop type grown
- Re-seeding - try to incorporate into soil
- Spreading width – aim for narrow bands
- Keep an eye on the weather – dry soils = slower response
- Soil pH <5 = early response to lime
- Finer material = faster reactivity
- Coarser materials require heavier application

re-liming can be assessed by continuing to monitor soil pH levels. The DOA, through experiments during 2011/12, will be looking at the cost effectiveness of calcified seaweed and how to use this product as part of future liming plans. It also contains a healthy amount of calcium (see analysis), an essential macronutrient for both plant and animal growth.

Please contact either Andy or myself if you need more advice, Tel 27355 or email wlandles@doa.gov.fk or apollard@doa.gov.fk

Calcified Seaweed analysis

(figures can vary depending on sand/stone content)

- pH in water = 8.5
- Coarser and less soluble
- Calcium 32%
- Magnesium 2%
- Sulphur 0.1%
- Iodine 43 mg/kg
- Copper 6 mg/kg
- Manganese 6 mg/kg
- Cobalt < 0.005 mg/kg (none detected)
- Sodium 0.5%
- Phosphorus 0.07%

Mucky Paws
the Falklands first purpose built
Dog Boarding Kennels
and Cattery

• Pauline Sackett & Iain Thom • PO Box 25 • Fitzroy Farm •
• Falkland Islands • FIQQ 1ZZ •
• Tel: +500 21148 • Email: muckypaws@cwimail.fk •

Pauline Sackett and Iain Thom, at Fitzroy Farm, run Mucky Paws, the first boarding kennels to be commercially established in the Falklands.

All dogs are welcome, whether household pets or working dogs.

Mucky Paws Kennels can board 6 dogs in single units or 12 if dogs from the same household/farm can share. Dogs are never kennelled together unless the owner requests that they share a unit.

The daily routine starts at 0530hrs when the dogs are let out for a short run to relieve themselves. First feed is given at 0630. Fresh water is always available. The dogs are checked on throughout the day, and taken for a long walk in the afternoon. Depending on the dog this can be on or off the lead. If requested dogs will be

exercised apart from other dogs. If the dog cannot be safely let off the lead they will be let out in the secure yard for a free run, they will then be taken for a long walk on the lead. Second meal is at 1900hrs, and the dogs are let out to relieve themselves at 2230hrs before lights out at 2300hrs. Kennels are cleaned and scrubbed out daily.

All food, toys, bedding and treats are provided by Mucky Paws. Special diets can be catered for on request. Heating is available and music (BFBS) is played in the background throughout the day. The kennels are purpose built, and are all insulated and very secure.

Your dog can be collected from FIGAS or New Haven.

Mucky Paws have had dogs boarded from Stanley, Mount Pleasant and the West Falkland, from tiny terriers to giant dogs. Pauline & Iain own 6 dogs themselves and are experienced dog handlers. Your dog's health and well being is their first priority and they will always call the Veterinary Department for advice if they feel it is required.

Mucky Paws can care for dogs recuperating from



illness, operations etc. which is especially helpful where the dog needs to be kept confined with limited exercise. Medications can be administered.

Cats are also very welcome at Mucky Paws. They are boarded in their own units, which have viewing windows and exercise areas. All cats are boarded separately and cannot come into contact with others. They are cosy within their insulated and double glazed units, and extra heating can be provided if required. All food, treats, toys and bedding is supplied by Mucky Paws. The unit is very secure, with a gated and enclosed walkway in front of the gates to provide a secure cat area.

Call 21148 or email muckypaws@cwimail.fk if you require any further information. If phoning, evenings are the best time as Pauline and Iain are rarely in throughout the day.

IMPORTANT NOTICE NEW DOG DOSING DATES

As you will all be aware (with the exception of new dog owners), the veterinary service recently conducted a trial which involved the collection of faeces samples from all dogs in the Islands. The results revealed that 8 dogs were infected with the hydatid tapeworm (*E. granulosus*). Based on these results, the veterinary service has decided to increase the frequency of dog dosing from the current 6 weekly interval to a 4 weekly interval (28 days). The rationale behind this change is to make absolutely certain that the frequency of dog dosing is killing the adult tapeworm in the dog's intestine before it reaches sexual maturity and is able to deposit infective eggs into the environment via the dog's faeces. The scientific information available indicates that dosing at 6 weekly intervals should achieve this objective but, in case the tapeworm is behaving differently in the Falkland Islands, a decision has been taken to shorten the periods between dog dosings for at least the remainder of 2011.

The new dates for dog dosing are as follows:

Date	Drug
Wednesday 17 th August 2011	Droncit
Wednesday 14 th September 2011	Droncit
Wednesday 12 th October 2011	Droncit
Wednesday 9 th November 2011	Droncit
Wednesday 7 th December 2011	Droncit
Wednesday 4 th January 2012	Drontal

The only other change to the dosing regime is that on the Wednesday 17th August dosing day, all Stanley dog owners will be given a supply of worming tablets for the remainder of the year. Owners will then be responsible for dosing their dogs at home, and must telephone/fax/email in to the Veterinary service to confirm that this has been done. This is already the case for MPA/Camp dog owners.

If anyone would like further information please do not hesitate to contact the veterinary section of the DoA on 27366 or email sbowles@doa.gov.fk

BIOSECURITY

It is approaching the time of year when you may be thinking about purchasing seed potatoes for planting in the spring. Please be aware of the pests and diseases that may be introduced should you purchase non certified seed.



Root Rot Nematode
Meloidogyne chitwoodii

KEEP OUT

PESTS & DISEASES OF POTATOES

Potato spindle tuber viroid
Potato Cyst Nematode
Root Knot Nematode
Potato Wart Disease
Potato Ring Rot
Brown Rot
(THIS LIST IS NOT EXHAUSTIVE)



Potato Rot Nematode
DITYLENCHUS DESTRUCTOR



Potato spindle tuber viroid

Please note — Effect of increasing generation of infection on severity of tuber symptoms. Healthy tubers (top row), current season infection (2nd row) tubers, third generation infected tubers (3rd row).



Brown Rot
Ralstonia solanacearum



Potato Ring Rot
Clavibacter michiganensis



Potato Wart Disease
Synchytrium endobioticum

PLEASE TAKE THE FOLLOWING STEPS TO PREVENT THE INTRODUCTION OF POTATO PESTS & DISEASES

- USE CERTIFIED SEED
- CERTIFIED SEED TO COMPLY WITH FI IMPORT REGULATIONS
- SEED POTATOES MUST BE IMPORTED UNDER IMPORT PERMIT
- SEED POTATOES MUST BE ACCOMPANIED WITH PHYTOSANITARY CERTIFICATION DECLARING THEM FREE FROM LISTED PESTS & DISEASES
- DO NOT PLANT WARE (EATING POTATOES)
- DO NOT PURCHASE OFF THE SHELF SEED POTATOES

FOR ADVICE OR FURTHER INFORMATION ON BIOSECURITY PROCEDURES AND REGULATIONS
PLEASE CALL DEPARTMENT OF AGRICULTURE ON
27355 OR 27366 OR E MAIL IMPORTS @DOA.GOV.FK

FARMERS' WEEK - KEYPOINTS

Dog Hydatid Trial - Steve Pointing

- Results of the Hydatid trial that took place last year would help to make the decision whether or not to continue with dog dosing.
- Out of 568 faecal samples 18 were sent for further testing.
- 8 of the 18 were positive, 5 were working farm dogs and 3 were pets, although one lived in camp.
- There were no Hydatid cysts found in the sheep sent to the abattoir.
- The results show the tapeworm is still in the Islands.
- Another trial may be done where dogs are pilled every 30 days instead of every 6 weeks.
- Although the tapeworm is still present in the islands it is a very low amount in comparison to some other places in the world.

Cattle Supply & Demand Sometimes Out of Sync - Mac McArthur

- The demand for domestic beef is increasing, but there are still a lot of frozen beef cuts being imported.
- Pregnancy testing can be an important management tool to remove infertile or poor performing cows. It is also very low costing.
- The pregnancy testing results for 2011 range from 20-100%.
- Cattle numbers need to be built up in the Islands, this can be done by breeding more genetically superior heifers and improving nutrition so cows calve annually.
- Utilising 'Angus Stabilizer' bull semen or lease/buy genetically superior NBH or other bulls.
- Beef Booster Project - increase the number of fertile cows, producing high performing bulls and more young beef throughout the year.

New Zealand & Soil Acidity and Nutrient Availability - Andy Pollard

- Introduction to New Zealand farming.
- The similarities and differences between the Falkland Islands and New Zealand.
- Case Study - pasture production on Central Otago (high country similar to the Falklands).
- 2011/2012 experiment on the establishment, growth and dry matter production of 5 pasture legume species in the Falklands.
- Soil acidity and nutrient availability.

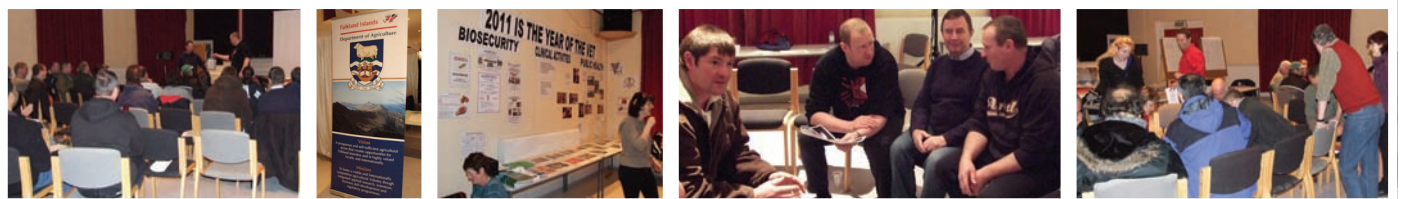
Wool & Meat Enterprise Gross Margins - What Is The Best Option? - Tony Mills

(Discussion - these comments are from individual views)

- Bigger loads of lambs can be moved than sheep. But the fleeces can still be sold from sheep so there is no losing out.
- Some farmers would like to rid their flock of black and white sheep.
- It would be hard to try and do both new season and yearling, farmers need to know which way they want to go.
- There is more money to be made with yearling lambs than new season.
- Farmers have to consider the goal of their flock.
- It was asked whether or not the DoA should breed Texel & Pole Dorset sheep.
- There needs to be enough farmers with organic meat to make it marketable.
- Andy pointed out that New Zealand is moving from meat to dairy, this is based on what is going to make the most money.
- Not many farms use gross margins.

Open Forum

- *Cattle Identification*
 - If the Islands want to export meat they have to follow the EU standards.
 - From 1st January 2013 all farms must be approved to move cattle off their farm.
 - From 1st January 2014 all farms that have cattle must be approved.
 - Approvals involve: an official code, specified tags, double tagging with the same number in each ear, standard format of information on tags, cattle must have the same number throughout its life, DoA will verify tag orders, registration of cattle, animal movement certificates and regular audits.
 - If a tag is lost the DoA will send a replacement tag which will be a separate colour from the year colours.
 - The colour of the tags will have nothing to do with the identity of the cattle.
 - From 1st January 2013, any cattle not tagged will have to either be double tagged or disposed of. Farmers not meeting these requirements may be subjected to prosecution. Traceability only applies to cattle at the moment.
- *New Welfare Regulations*
 - Animal welfare is considered a very serious issue, the current welfare legislation needed to be tidied up and brought under one set of regulations.
 - The minimum requirements of the main export markets including the EU need to be met, giving the Islands a safeguard for future exports.
 - The new regulations and revised welfare codes have been distributed to all farmers, comments can still be made to the Senior Veterinary Officer.
- *Core Testing*
 - 200 kilos is the maximum limit because the machine could break with continued heavier loads.
 - Any lots with all their bales heavier than 200 kilos will have to be hand cored.
- *Livestock Ordinance Forms*
 - Some farmers were wondering if the £200 fine had to be on the cover.
 - Livestock forms are sent to all land/stock owners even though a number of them are not included in the statistics booklet.
 - The size of the font and the table in the Statistics Booklet has been changed to fit the whole page like in previous years.



Seen Anything Strange Lately?!

**DON'T LEAVE IT...
TAG IT...
OR SHOOT IT...**

Call the Veterinary Section on 27366

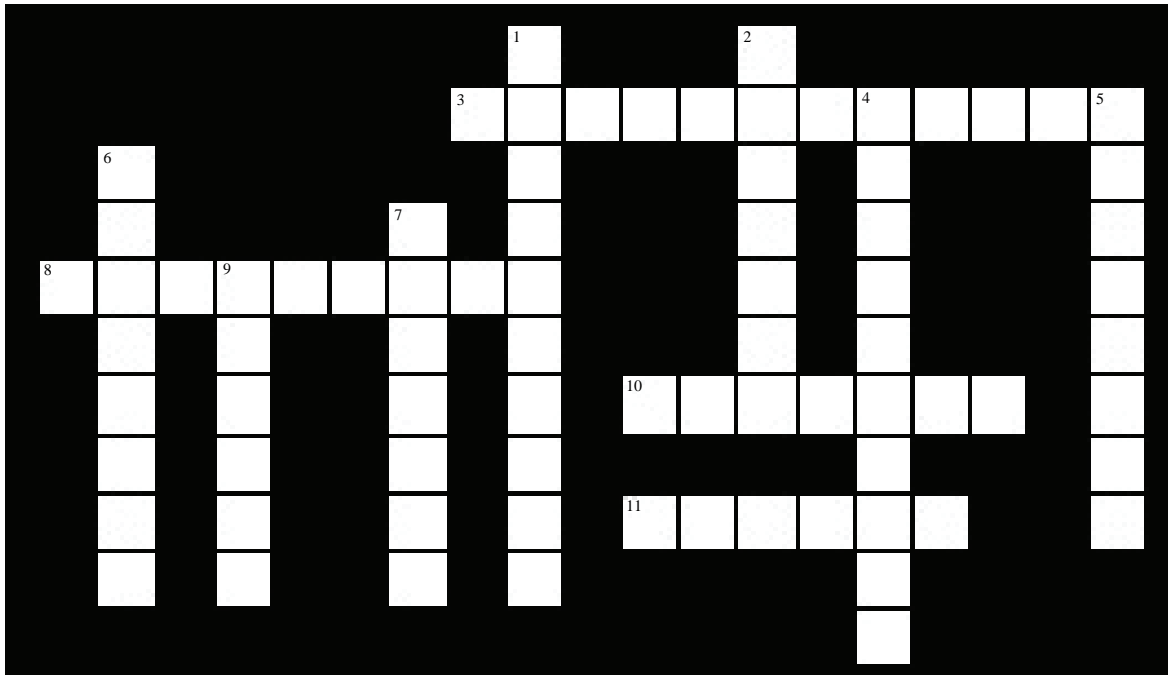
**ACTIVE SURVEILLANCE IS OUR BEST
DEFENCE**



Puzzle Page

How Well Do You Know the Falklands?

Crossword



While looking through the DoA Picture Library I came cross some pictures of settlements/farms and thought it would make an interesting crossword... have fun!

Sudoku and logic puzzles are on the back page.

WATER – IS IT LIMITING PASTURE GROWTH ON YOUR FARM?

By Andrew Pollard

Water is essential for photosynthesis, the process where plants convert solar energy into chemical energy (carbohydrate). High temperatures and high light intensities can be detrimental to the plant (affecting enzyme function) if water availability is limited as plants maintain cool leaf temperatures through transpiration and evaporation from the leaves. Water is also essential for the transportation of nutrients.

Rainfall

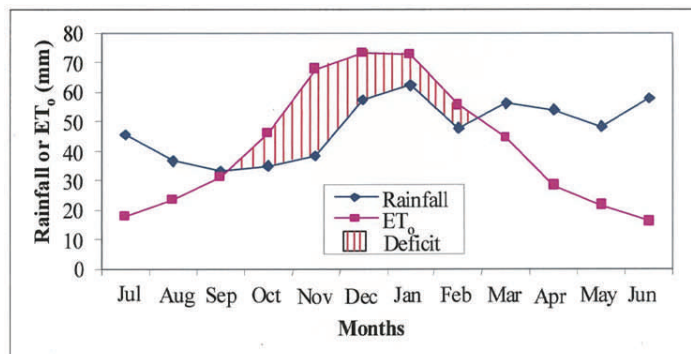
Rainfall in the Falkland Islands is generally low (Port Howard is the real exception). The table below shows the 'complete' annual data for different sites across the Islands. There is a notable rainfall variation within sites in different years, rainfall in 2010 was low. The lowest record was 228mm at Bleaker Island in 2010 and the highest record was 899mm at Port Howard in 2009.

	05	06	07	08	09	10
Bleaker Island		587	472	380		228
Blue Beach						332
Cape Dolphin		395	340		356	
Darwin		413		404	563	
Dunbar					800	
Elephant Beach	496					
Fern Ridge					592	358
Head of the Bay	533	555	474	512	664	471
Moss Side		483	390			
MPA	510	638	547	564	892	535
North Arm					443	328
Pebble Island		448	381	347	579	395
Port Howard		835	721	758	899	648
Saladero			307		463	407
Salvador				458	563	
Shallow Harbour					552	378
South Harbour		378	501	384		
Stanley	540	527	481	522	645	608
Swan Inlet	396	579	433	417	575	340
Wineglass Station	520	653	530			

Evapotranspiration

Water is lost to the atmosphere by evapotranspiration, evaporation from the soil and plant surfaces, and transpiration from the plant. Very little of the water extracted by the plant is not transpired. Short pasture heights and poor ground cover lead to higher

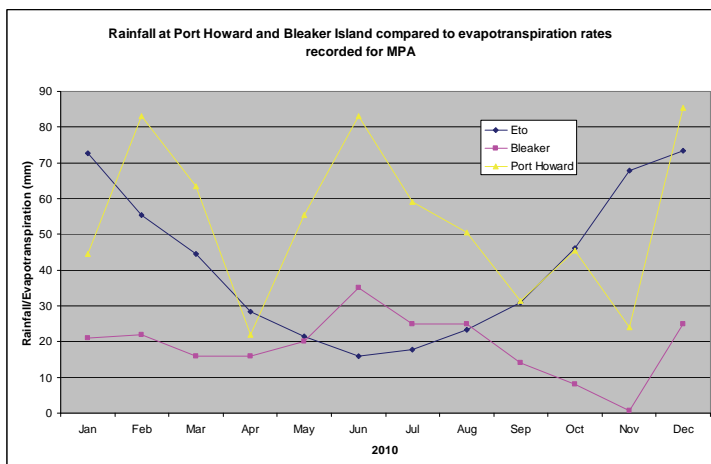
evaporation rates. Evapotranspiration (ET_0) is a complex calculation but can be estimated. Sergio Radic calculated the ET_0 from mean MPA climatic data (Sergio had to make an assumption for pasture height and ground cover). This is illustrated below, along with the mean rainfall data for MPA.



Potential soil moisture deficit

Long-term mean monthly rainfall is insufficient to replenish the soil water used when potential evapotranspiration increases in the summer months. This leads to the development of summer soil moisture deficits that restrict pasture growth (Oct – Feb). A potential soil moisture deficit (PSMD) can be calculated as the difference between potential evapotranspiration and rainfall. When PSMD deficits exceed 100mm pasture production is compromised and significant losses occur when deficits exceed 150mm. Dryland farming regions are generally defined within the farming community as those environments where summer evapotranspiration exceeds summer rainfall in the majority of years. The figure below compares the rainfall in 2010 at Port Howard (648mm) and Bleaker Island (228mm) with the ET_0 rates measured at MPA. It is unlikely that the ET_0 will vary much across the Islands, it is more likely that bigger variations will happen on farm, e.g. North v South facing slopes, North being warmer as it faces the sun. Rainfall on Bleaker Island only exceeded ET_0 from June-August. Port Howard's rainfall rarely was lower than the ET_0 . In relation to pasture growth this means that Port Howard should be able to grow more feed and have a higher stocking rate than Bleaker Island on similar ground. Regarding Bleaker Island the most important analysis may be the quantity of rainfall that occurs in winter. A dry winter would more than likely

lead to lower spring growth and a longer summer drought period.



Soil water content

How much water can the soil hold? Organic matter (which is very high in most FI soils) holds water, a bit like a sponge. Clay soils hold water better than sandy soils, as they have smaller pore spaces. Soil depth is also important, increasing depth means more soil volume for storage. If you were looking to cultivate and grow crops on Bleaker based on the records from 2010, it would be advisable to find a deep soil!

I am particularly keen to calculate the soil water content for differing FI soils over the next season. How do we do this? We will need to take soil cores (we have a corer, the cores are bigger than the normal soil cores for soil tests). The cores are then placed in water for 24 hours so they can absorb as much water as possible. Then the cores are removed and put on a rack to drain for 48-72 hours, they need to be covered to reduce evaporation. After 48-72 hours the soil will contain the water it can physically hold (the



CLIMATE CHANGE - NOT GLOBAL WARMING

By Mac McArthur

Cool World

Scientists around the world are increasingly dropping the term global warming and preferring to refer to climate change as the world has actually cooled by 0.7 degrees Celsius in the past century.

soils water holding capacity). The sample is then weighed, the volume measured and then oven dried. Finally the core will be reweighed and the water holding capacity can be calculated. I would expect areas of Fox Bay to have low water holding capacities (sandy soils).

Water balance calculation

Once the soils water holding capacity has been calculated, we can then use the ET_o and rainfall records to identify drought periods. For example, we make the assumption that the soil water holding capacity on Bleaker Island is 150mm and in August is at field capacity (it is fully replenished). The rainfall data is the 2010 Bleaker Island records. The PSMD in bold indicate moisture stress (> 50% of available water utilised, >-75mm).

Month	Rain (mm)	ET_o	PSMD (mm)
August			0
September	14	31	-17
October	8	46	-34
November	1	68	-84
December	25	73	-132

Using the assumptions this suggests that pasture production on Bleaker Island becomes limited by water in November and pasture yield is severely reduced. This of course is based on a made up soil water holding capacity. If the figure we have used is low then the drought will occur later, if it is high then the pasture will 'burn off' earlier.

Next month I will follow up this article looking at the implications of water stresses for farms and what you may be able to do to reduce the impact.

Volcanic Effects

Sadly the volcanic eruption in Chile's Chaiten Volcano, since its first spewing of volcanic ash has, in just four days, negated every single effort people have made in the past five years to control CO2 emissions on our planet.



It's very disheartening to realise that all of the carbon emission savings people have accomplished while suffering the inconvenience and expense of driving Prius hybrid cars; buying fabric grocery bags instead of using plastic ones; throwing out non-green cleaning supplies; nearly getting hit every day on their bicycles and replacing all of their 33 pence light bulbs with £6.62 light bulbs. All of those things people have done have all gone down the tube in just four days.

There are around 200 active volcanoes on the planet spewing out this high carbon content ash every day. When the volcano Mt Pinatubo erupted in the Philippines in 1991, it spewed out more greenhouse gases into the atmosphere than the entire human race had emitted in its entire years on earth. Mt Pinatubo was active for over one year.

Bushfires

The bush fire season across the Western USA, Australia and Europe this year alone will negate efforts to reduce carbon in our world for the next two to three years. These large bushfires happen nearly every year in susceptible countries.

Alternative Viewpoints

Another viewpoint from scientists working on the question of carbon emissions over the past two years is that volcanoes account for just 1% of global carbon pollution. If this is right there is a lot of scientific work that needs to be done not only in relation to the effects of volcanoes, bush fires and methane emissions from cattle, sheep and other animals, before accurate carbon emissions trading schemes, (taxes) that will have significant negative effects on agricultural industries and farming businesses, are imposed.

The carbon taxes won't stop volcanoes, bushfires or methane gas belching livestock and humans but will make governments around the world feel good and fill the coffers at the expense possibly of agriculture and other industries.

One has to wonder whether Chile, Indonesia, Iceland, the Philippines, the South Shetland Islands and other countries with active volcanoes will be investing in carbon offsets?

Acknowledgement. Article includes viewpoints from a book written by Professor Ian Plimer a member of the School of Earth and Environmental Sciences at the University of Adelaide. South Australia.



'Goodbye' from Sarah Cooper

I have done a range of things over the past 4 months that I never thought I would have done such as helping out with Artificial Insemination of sheep, assisting with a variety of operations, worm faecal egg counts and trying to find owners for missing cats and dogs (which is difficult if they are not micro chipped). My time at the DoA has been great, everyone has been really nice and helped when I needed it. Working here has made me want to further my career in animal studies. Thank you to everyone and hopefully I will get to work with you again.

QUEENSLAND ...BLAH, BLAH, BLAH

By Tony Mills

I have succumbed to the pressure of writing a goodbye type article rather than a technical article. So being a man of few words this should be an easy read!!!

It has been three years since I set foot in the Falkland Islands and there have been many changes in the industry over this time. The most notable of these has been the increase in meat value and the long awaited improvement in wool prices. I have also witnessed a consolidation in the FIP programme and a gradual change in farm ownership which in many ways is seen as a generational shift. Coinciding with this shift there has been an attitudinal shift as well. The main aspect I have noticed with this has been a greater focus on the business with a number of producers drilling down into their operation to find out where changes could be made and the financial impact of these changes. I think this is an area that will continue to develop to a point where you may find that the small number of hours spent in the office will pay dividends from a practical point of view.

Looking forward I am sure there will be further changes. The meat and wool industries will continue to develop with decisions most probably lead by prices. The good thing about this is that there are a number of enterprise options available and real value can be obtained for animals that previously didn't contribute to the bank account in a positive way.

I have been reminded through my work that there is still good value by looking back at the past. Des Humphries provided us with a good

incite on that front last year. Personally I have tried not to discount the value that can be gained by looking back however, I think it is often spoken about but very rarely acted upon. There has been plenty of good work done here in the past which has provided a good base and clearly identified key issues that still remain today. What are we doing to address these?

Often in agriculture there are rarely major leaps forward but rather small gains made by adapting and adjusting current practices or theories. This was brought home to me by a producer here who said we need to address some of the basics before we can get the best out of the 'new' technologies. I would suggest that we are working on this in conjunction with the industry and I am sure there will be evidence of tangible benefits in the long run. The old saying 'nothing good comes easy' is worth remembering and it is still very much the case today given the constant cost/price squeeze.

I have been lucky enough to work with many of you to address key issues that affect your business. With the National stud flock I have listened to your counsel and where possible have tried to utilise it. I have also tried to use this to enhance FIP and I think we have made some useful changes to this programme. I would encourage you to still keep talking with the Department as together real benefits can be found for the whole industry.

Lastly, thank you for time and trust. I have enjoyed working with you and hopefully I have been of some assistance. You never know we just might meet again some day!!! I am sure your ears will bleed a little less now I am on my way!!! Cheers n Beers Mr Havachat.

**The Department of Agriculture
Farmers' Week 2011 Presentations**

Available free on CD

Telephone 27355 or email
tross@doa.gov.fk for your copy

Do you have your wool packs, or wool packs on order?

Due to the current changes in shipping it is essential you think about sourcing wool packs as soon as possible. Please contact your usual supplier, if you have any difficulties please contact me.

Helen Thoday

THE RURAL BUSINESS ASSOCIATION

The RBA has been providing support to the rural business community for many years, and in that time priorities have changed, one thing however has remained the same, its primary goal of helping the rural community to succeed.

The RBA has no affiliation with any organisations; government, private or political, enabling it to negotiate effectively and independently at every level.

The more RBA members, the bigger the rural community's platform, the bigger the voice.

PRACTICAL BENEFITS OF FULL MEMBERSHIP ARE:

- Weekly e-mailed information
- Weekly weather up-dates
- Lobbying at the request of members on related issues
- Obtaining business information at the request of members
- Sheep's Back insurance cover at very competitive rates
- Entry into all Farmer's Week sessions
- Vote at the AGM
- Daily availability during normal office hours for any assistance i.e. obtaining information, sourcing product prices etc.
- Committee Minutes
- Advertising throughout the membership
- Aid in the selling of camp produce to Stanley

CURRENT EVENTS THAT ARE HELD BY THE RBA ARE:

• Annual Sheep Show

Held in April, this annual event has become an integral part of the rural calendar. With classes to suit all, whether you are breeding for wool, meat or both. The show gives you the opportunity to demonstrate your success. It is open to all and visitors are welcome to come along and browse around the food, drink local produce and craft stalls.

• Farmers Week

Bringing together the rural community, Farmers Week is hosted by the RBA and held every year in July. This week long event is packed full of workshops, presentations and training opportunities. It also gives participants the chance to speak directly to decision makers, meet fellow farmers, attend the RBA AGM and enjoy a great social calendar throughout the week.

The RBA has representatives on many committees including TAC, FIDC, Stanley House, AAC, FLH, Environmental Committee, IJS, Education, Agriculture and FIMCO.

The RBA is here to help you get your voice heard.

To become a member call 22432 or email rba@horizon.co.fk.

Departmental Notice

We are in the process of ordering mid-side sample cards and bags from NZWTA. Can everyone who is going to be mid-side sampling this season let us know approximate number of samples you will be taking to allow us to order the correct amounts.



Falklands Conservation Watch Group



We are the junior branch of conservation, sponsored by Standard Chartered Bank . Our current membership stands at 49 children and young people between the ages of 7 – 15, with 11 new members starting in September.

This group of enthusiastic youngsters are keen environmentalists and get involved with conservation activities all over the Islands. Over the years every member has been given the chance to travel to areas of the Falklands they had never visited before, seeing new wildlife, farming activities and helping to clean beaches.

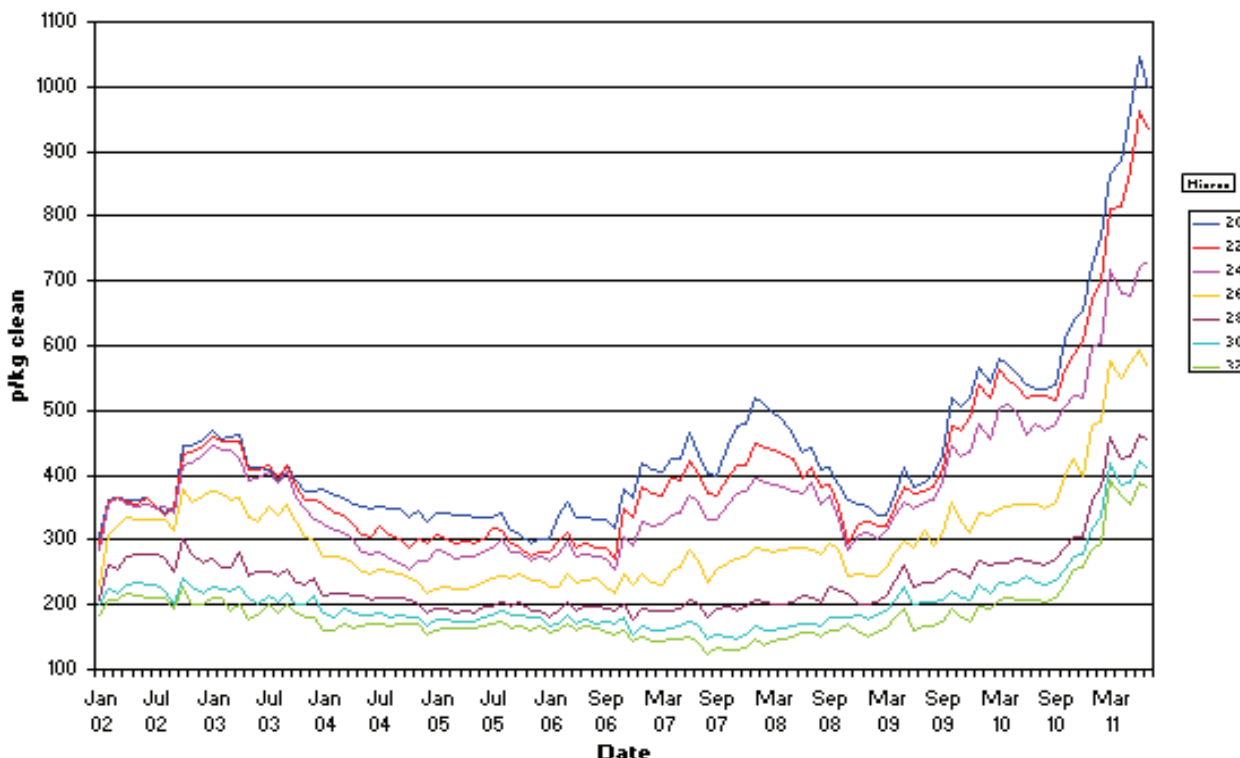
Along the way they learn about plants and wildlife, sustainability and environmental issues. At Volunteer Point they made signs to help ensure the tourists protect the King penguins . They planted Tussac at a number of sites around the coasts. Elephant Beach offers a camp and BBQ annually which is always hugely popular, and last year a Christmas BBQ party was held at Long Island. All of this was possible because of the generosity and support of landowners, farmers and Standard Chartered Bank. The watch group would like to say a huge THANK YOU to you all!

If anyone out there would really like a visit this summer from a small group of young naturalists, keen to camp out or self cater then please give Maggie a call on 32391 or 51567 or leave a message with Farrah at the conservation office.

Email: Watchgroup@conservation.org.fk

Maggie Battersby
Watchgroup Co-ordinator
Falklands Conservation

AWEX Wool Price Summary 2002 - 2011



WOOL PRICE TREND OVER TIME
Based on weekly DoA Wool Reports

WOOL PRESS RECIPE CORNER

Balsamic Lamb with red wine and rosemary.

All recipes were provided by Jenny Luxton on Sea Lion Island

Ingredients

Onion – sliced thick
Leg Lamb – large
Rosemary
½ pt red wine
½ pt chicken stock
4 garlic cloves
¼ pt good balsamic vinegar
Salt and pepper



Method

Heat oven to 120-130c, Gas ½-1

Slice onion and put in bottom of roasting pan – mix liquid ingredients together. Slash leg and put in garlic and rosemary into flesh.

Cover with two layers of tin foil – cook for 4 hours, remove foil and baste and turn oven up to 180c or Gas 4/5 and brown off for approx 1 hour. Make gravy from pan contents and serve with seasonal vegetables.

Seasonal Vegetables

This time of year is good for roast vegetables.

Cut swede, carrot, parsnip and potatoes into small cubes and roast with olive oil, garlic, rosemary, salt and pepper and squeeze of lemon juice poured over the top to accompany lamb.

Lemon Posset Desert

Ingredients

600ml (1pt) double cream
150g (5oz) sugar
5 tbsp lemon juice

Method

Mix in a pan the double cream and sugar, stir while bringing it gently to boil.

Take off heat and stir in the lemon juice, the mixture will thicken, cool and put into ramekins in the fridge to set.

Serve with a sweet biscuit and grated lemon zest for decoration.

Do you have a recipe that you would like to share?

We are always eager to include recipe contributions from readers. All you need to do is send your recipes in via fax number 27352 or email tross@doa.gov.fk

Thank you!!

Some More Puzzles...

Sudoku

6		4		5		9		1
			2		4			
2								5
	5		8	4	7		3	
3			9		1			7
	8		5	6	3		4	
5								8
			1		6			
8		1		9		7		4

Each Sudoku has a unique solution that can be reached logically without guessing. Enter digits from 1 to 9 into the blank spaces. Every row must contain one of each digit. So must every column, as must every 3x3 square.

Good luck!

Logic

1. Below are six animals that have been split. Take a set of three letters from the left column, and a set of three letters from the right column and merge them together again, without changing the order of the letters in each half. Matching sets will not necessarily be on the same row.

For example *WMB + OAT* and *OAT + WMB* both equal *WOMBAT* as the order of the letters *OAT* and *WMB* remain the same. For another example, *RABBIT* could become *RBT + ABI*.

CYO	ARU
WLS	DNE
EAR	FEE
OKY	OTE
RRT	JAR
AGU	BVE

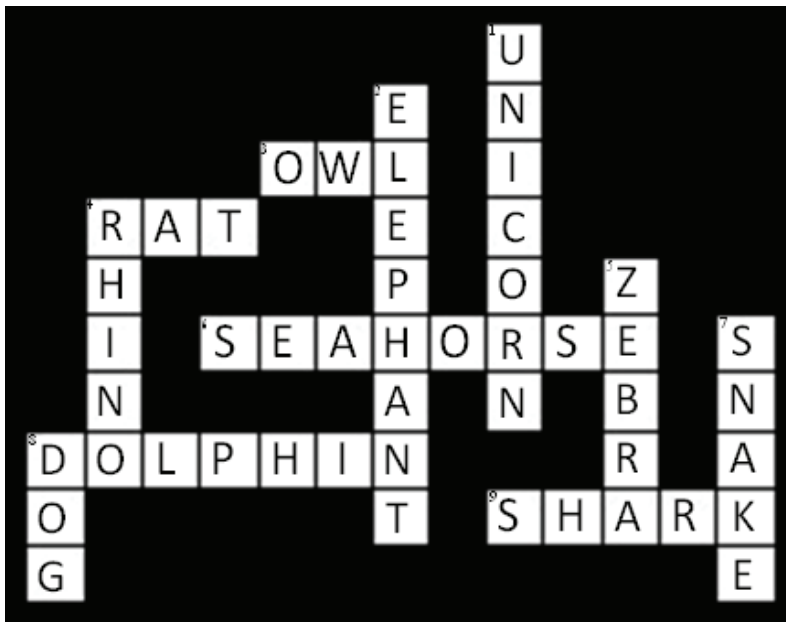
3. What year comes next in this sequence: 1773 1779 1987 1993 1997 1999

2. What is half of two plus two?

2003 2011

HINT: There are two possible answers.

July Solutions



Answer 1. Generous

LEND LE + GE + ND = LEGEND
 LIAR LI + NE + AR = LINEAR
 THAT TH + RO + AT = THROAT
 COIN CO + US + IN = COUSIN

Answer 2.

Otter, Panda,
 Hedgehog, Cheetah,
 Leopard, Giraffe

7	3	4	6	5	2	1	8	9
9	5	8	3	1	7	4	6	2
6	1	2	9	4	8	7	5	3
8	9	1	5	3	4	6	2	7
4	7	5	8	2	6	3	9	1
3	2	6	7	9	1	5	4	8
2	6	3	4	7	9	8	1	5
5	4	9	1	8	3	2	7	6
1	8	7	2	6	5	9	3	4

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Answer 3.

T	O	I	R
R	I	O	T
P	P	P	P
A	N	E	A
L	E	M	L

Ferret, Sealion,
 Tadpole, Polar Bear,