FROM THE SFAG DESK

The new MyPestGuide Reporter

One of the most important and effective innovations in stable fly control that has occurred since the last issue of the SFAG Rag has been the introduction of the DAFWA stable fly reporting app, MyPestGuide Reporter. This innovation, brought about by persistent lobbying by SFAG for a better Central Reporting System, is being widely and increasingly used in the community as more people become aware of it. Thankfully, mobile phone reception has become greatly improved in many rural areas in recent years, which (a) makes reporting via the new app possible, and (b) facilitates providing a wealth of recorded information, including photos, to DAFWA in a timely manner. The app provides the opportunity for sending through up to four photos, either close-ups of flies or your animals’ reactions to them. The key feature is the app records where the report is sent from and logs it onto a map. This can be viewed for everyone on the mypestguidereporter website and is a crucial tool for demonstrating “hotspots”. If you are experiencing an outbreak please report daily! SFAG has advertised and promoted the use of the app on the SFAG website, Facebook page, and in the local press, and you can find the info about it here in this issue of THE SFAG RAG. Unfortunately, the timing of the launching of the app meant it just missed out on being included in the Shire of Gingin’s most recent stable fly publication, Stable Fly Management in the Shire of Gingin which was sent out to residents and ratepayers with their Firebreak Order 2015/16.

Response to SF reports

Of course all reporting mechanisms, however innovative and user friendly, will not be effective if the results are not acted upon and satisfactory outcomes achieved for SF sufferers. Your Committee has been lobbying hard, since the introduction of the Stable Fly Management Plan (SFMP) under the Biosecurity & Agriculture Management (BAM) Act into operation in 2013, for a much better response to complainants, including feedback that inspections by Shire rangers have taken place, whether SF breeding has been found, and what has been done about it. It appears DAFWA have finally responded to our pleas with the appointment of a temporary “on the ground” inspector over the next 6 to 8 weeks in the Shire of Gingin, to work with the Shire inspectors. This is a trial to gauge its effectiveness and we commend DAFWA for this initiative. However, the other local government areas covered under the SFMP, such as Chittering, Wanneroo and Swan, have not been included and are being left to suffer ongoing torment from SF infestations with little, if any, support. This situation is unacceptable.

Regulations under the SFMP

Importantly, SFAG continues to lobby for a more rigorous approach to prosecuting offenders under the Act than has been happening to date. Lobbying has taken place by SFAG’s attendance at all meetings of the Regulatory Reference Group (RRG) for reviews of the SFMP since its inception, meetings with various Directors of DAFWA in order to get some positive action, collaborating with Shire of Gingin and City of Swan staff, requesting support from local MPs, and writing to the Minister for Agriculture & Food, Hon K Baston. On 8 February a response from the Minister has finally revealed to SFAG that, as we have long suspected, the regulatory framework under the SFMP itself is inadequate for effective enforcement of the provisions of the SFMP. Consequently, DAFWA has now undertaken to develop an “alternative, temporary regulatory instrument” under the BAM Act to enable “remedial action” or prosecutions to take place. SFAG will continue to lobby hard for a permanent regulatory framework to provide more security for members into the future.

Excursions and Information Gathering

Your Committee continues to get out and about to check out what is going on around the district in regards to experimentation and innovation to provide solutions to the SF problem. During the year we visited Garden Organics Composting Facility in Aurisch Road, and were impressed with their commitment to compost raw manures without breeding any stable flies. As part of the Gingin Science Festival, we attended Lovegrove’s Turf Farm at Bidaminna on Cowalla Road to have a look at trials conducted by Dr David Cook and DAFWA of pulverised manures amended with lime and then flailed and spread thinly and watered in, to see if stable fly breeding was taking place. The trials turned out to be inconclusive, and a second round is to take place. On 10 February Bob, Jo and Peter represented SFAG at a gathering of 50 plus at the Beermullah Fire Shed. This meeting had been organised by Beermullah residents to discuss the perceived benefits of spalangia wasps as a SF control measure. Guy Izzett from Bugs for Bugs gave a presentation on the tiny spalangia, which predate on fly larvae. Bob gave an update of where your Committee is at with our lobbying for strengthening of the SFMP regulations (see article form the Northern Valleys News in this issue) and of course took the opportunity to encourage more SFAG memberships from Beermullah.
Falling SFAG Membership

Of concern to your Committee is the falling membership of your organisation. Included in this is a small survey. It’s also on the SFAG Facebook page, if you haven’t renewed your membership for 2015/16, we would appreciate your feedback on your reasons for not doing so. Are we not doing enough? Please tell us what you think we can do better. Either do it online, or fill in the form and send to the Secretary at PD Box 114, LG 6044.

SFAG Facebook Page

Some members may not be aware that SFAG is on Facebook. The page has active participation, with members of the Facebook public having their say, some from all over the world, particularly South America, where SF infestation is rife in crop waste, aggravated by a tropical climate. You can be part of it as well. SFAG website and Facebook manager Anne Sibbels does a sterling job monitoring the traffic and keeping the website refreshed and up to date.

BEERMLAH STABLE FLY MEETING

The stable fly pest continues to cause agitated concern amongst local landholders, most recently in the Beermlah region of the Gingin Shire. It seems that this summer has been a particularly bad one for stock owners, with cattle, horses and dogs being badly affected by the biting pests. There have been complaints to the Shire office compared with only seven last year. Beermlah, with its mix of intensive horticulture, feed lots and extensive cattle production, is a prime candidate for potential out of control breeding of stable flies and it’s not surprising that this ongoing problem has come to a head in this locality in recent months.

Concerned local, Rex Cooper, convened a meeting on 11 February in the Rex Cooper’s Brigade Shed for locals and other interested parties to discuss the matter of stable fly control. About 50 people listened as the guest speaker, Guy Izzett representing ‘Bugs for Bugs’, spoke about the use of an integrated approach to the control of the stable fly. Guy’s approach encourages both horticulturists and livestock owners to adopt good farm management practices, to maintain appropriate levels of farm hygiene, to limit chemical use and to use biological control agents. Examples of biological agents are predators such as the tiny Spalangia wasp and a fungal agent known as Metarhizium. Guy spoke of the apparent success of a relatively recent application of Spalangia in a situation where a feed lot was in close proximity to a horticulture enterprise. The incidence of stable fly was much reduced after fortnightly releases of the predatory wasp at both sites and, consequently, both businesses were benefiting from the outcome. Maureen and Kevin Dobra of the Loose Leaf Lettuce Company confirmed what they believed was the success of the use of regular Spalangia wasp releases over the last year.

Bob Wilson, Chairman of the Stable Fly Action Group, reported to the assembled group on the status of the latest round of discussions and interactions with DAFWA, particularly in relation to the imminent re-location to Gingin of a temporary stable fly Inspector to assist with the work being carried out by the Shire inspectors. Bob also mentioned that the SFAG had managed to secure a face to face meeting with the Minister for Agriculture in early March to discuss the many challenges associated with the BAM Act and the Stable Fly Management Plan.

Bob advised caution in relation to the Spalangia results, since this particular trial was not conducted as a controlled experiment and, in fact, trials in Queensland had shown good results only with the house fly. He agreed that if the wasp releases could be monitored properly then Beermlah would likely be a good area in which to carry out a scientific trial.

When the question was asked, a strong show of hands indicated that many attendees were prepared to contribute funds towards further releases of Spalangia wasps in the Beermlah region, to be coordinated by Rex Cooper.

Some of those present spoke of the usefulness of the new DAFWA app, mypestguide, for reporting stable fly outbreaks and they encouraged other landholders to use it. The downloading and use of this app was described in the December issue of the NVN.

SFAG CHAIRMAN’S REPORT - 2015

On reading through my last years Chairmans Report I was struck with how many items that have not changed in the last 12 months, so I would recommend that you have a look on our website and read what I said last year.

However, there have been a few changes during the year that weren’t the same as last year and I’m not sure many of them have been for the better.

I will start with DAFWA… As we all know DAFWA is being starved of money and this has brought on a number of changes to personnel working in the SF Perth NRM in Sandy Pate, with assistance from his lovely wife Val, has decided to retire and will no longer be on the committee. Sandy’s position at Perth NRM has been taken over by Graeme McAlpine, who we welcome onto our committee.

To the rest of the committee who represent at least 3 local government areas but who also work so hard for the benefit of all the people in the affected districts I salute you and encourage you to continue on for another year.

I would especially like to thank Dr Dave for his unwavering quest to find some answers to this SF breeding problem. Like all scientific research it is not all a ‘bed of roses’ with everything you try working out. But despite some disappointments Dave was not fazed, always learning and always looking for the “next” potential solution… never giving up! Dave has also spent his own time in looking for outbreak sources during the year which he doesn’t have to do, and he doesn’t always get thanks for. Well, here is mine Dave… thank you!

I would also like to mention that a couple of months ago Dr Dave was asked to present a paper at a Stable Fly Conference at Boston USA, which had other presentations by scientists from all around the globe. Some of the SF problems in other areas of the world are quite mind-boggling. There are two articles in this SFAG Rag that were supplied by Dave, one of which describes some of the latest developments in the world of SF science and the other a recent SF field day for vegetable growers. We hope to hear that Dr Dave has been funded for another couple of years to continue his research! I would like to give a special acknowledgement to our hard working secretary Jo Ottaway. Jo is without doubt the most efficient secretary and most proficient and professional letter writer that I have had the good fortune to work with. Jo has been absolutely crucial to the ongoing success of the SFAG.

In fact, we pretty much fell apart when Jo took off walking around England for 3 months…. Don’t do that again Jo! Finally, I would like to thank my wife Anne for her support over these past 10 years of monthly meetings and various other meetings and excursions connected with Stable Flies. Sometimes it would have been easier to give up but Anne’s support has kept me going.
Reg Beale – in appreciation

As many members would be aware, longstanding SFAG Committee member Reg Beale did not nominate for re-election to the working committee at the 2015 AGM. Reg has been a SFAG member, and a stalwart of the Committee, since SFAG Inc came into existence in July 2005. He was instrumental in advising and supporting the Committee with the incorporation process that year and, during his tenure as a Councillor of the Shire of Gingin, provided an important link between SFAG and the Council, keeping the stable fly issue active in the minds of Councillors and Shire staff. Importantly, on behalf of the SFAG Committee Reg has contributed by lobbying the Council for Advice Notes to be attached to planning approvals pertaining to developments with the potential to breed stable flies, and regularly researching the Shire Minutes to ensure this had been done, in order to encourage compliance with the Stable Fly Management Plan.

Reg’s contribution to the publication of the SFAG Reg over many years has been invaluable. Until the last couple of issues, he has been responsible for the printing of the newsletter and address labels, together with the Secretary, collating and preparing the newsletter for posting and emailing, a very time-consuming job, for which the Committee is very appreciative.

Reg continues to actively fight, on an individual basis, for a favourable outcome of the stable fly issue. The Committee sincerely thanks Reg for his tireless work on the SFAG Committee over the past ten years. It supports him wholeheartedly and wishes him success in his endeavours.

Graham McAlpine

Graham has worked in the agriculture food supply chain since 1980 assisting various sectors of the industry to manage risk; retain / improve market access; interpret and deal with regulation plus supply chain integration and education.

In the 20 years from 1980, he worked as a horticulture technical officer with the WA Department of Agriculture where his roles included advising on production and post-harvest systems management, domestic and export market access, development of quality standards / metrics / interpretation, development and delivery of Horticulture industry quality assessment programs and projects involving biosecurity implementation, management to the Plant Deed response.

From 1994 on, he was instrumental with other food safety professionals in developing systems and education packages for horticulture producers and supply chain partners to enable them to meet the changing food safety / quality system requirements as more has become known about implications of food safety especially with fresh produce.

From 2001, he has worked with a wide range of industry professional and technical specialists helping develop and fine tune education tools, system and audit requirements in the food safety, environmental and biosecurity management fields. This has often been with the federal government regulator Department of Agriculture / Food Safety Australia New Zealand (FSANZ) and Quality system owners, their directors and their certification body partners.

Since 2001, he has continued to deliver Freshcare and HACCP training and implement food safety, quality and environmental management systems with industry members.

He is now in his second year with Perth NRM in the Sustainable Agriculture program and delivers as a Regional Landcare Facilitator for the group as part of the National Landcare Program.

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A NEW WAY TO REPORT OR FIND EXPERT INFORMATION ON STABLE FLY AND OTHER PESTS

Recently the Department of Agriculture & Food WA released a suite of mobile phone apps, one of which will assist the community with reporting Stable Fly and other pest outbreaks. The new app called MyPestGuide Reporter is available to download free of charge for both i-Phone and Android smart phones. MyPestGuide Reporter lets anyone reports pests and maps it online.

The second app, called MyPestGuide Crops is more often used for identifying and reporting specifically on pests in grain crops. It is suggested that this app is not downloaded unless you wish to search for information about crop pests.

To download the MyPestGuide Reporter on your phone, open your preferred i-Phone or Android (Play Store) app download manager, use the search mechanism. The set up is similar to Apps looking for MyPestGuide Reporter and ask it to download. Follow the instructions to set it up. It is helpful if you register your contact details, so that we can contact you if necessary.

When using the MyPestGuide Reporter app on your smart phone, you have the ability to take and submit up to four photos. The app will automatically locate the observation site (if the phone’s GPS or location remains on), you can describe what you see and where, and then it will store the submitted information in a folder for you.

The report page walks you through attaching photographs, and you can see if the automatic location of the device is on or off. You are able to give an address or other location in the ‘Where’ text box instead, if your GPS is not turned on, or if you wish to report an outbreak in a different location to your current one.

One note in sending a report, in the box ‘Send report to…’ Please click on the arrow, and scroll down to ‘Stable fly reports’ as it will get to the Stable Fly Group much quicker.

Once you have sent the report, the Department of Agriculture & Food, the information is verified by an expert, mapped online as per where the report was sent from based on the location, and discussed if necessary with local shires. (Which is why it’s important to leave the location turned on). Then the photos and information are securely stored on a DAFWA database allowing us to contact you, if required, as well as send a message back to you on your device. To obtain the expert feedback the user needs to refresh or download reports in the main menu as this draws the information from the database onto your phone.

DAFWA can also use the information to respond to the report if an exotic pest is found, and to help gather all similar reports and map them together to highlight pest hotspots or pest outbreaks which might impact an industry.

You are able to ask for someone to ring you on your mobile as soon as they receive the report, and you can agree to or disallow your report to be shared with others publicly on the online map. Sharing allows the build up of useful information and affords DAFWA the opportunity to be able to accumulate a number of similar reports and make them available to the public, as security for example, when representatives of other countries ask us if we are free from certain pests or disease, they can be supplied with up-to-date reports, thus helping to keep our markets open for trade.

INFORMATION ON STABLE FLY AND OTHER PESTS

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STABLE FLY FIELD DAY

The headline of ‘Improve Productivity and Eliminate Stable Flies’ proved to be a positive drawcard for vegetable growers to the recently held Stable Fly Field Day at Bødømark farm centre-pivot irrigated commercial vegetable operation off Indian Ocean Drive. Held on Friday 5th February this year, it attracted over 20 growers who came to see two pieces of agricultural machinery in action and that offer a radical change to how vegetable crop residues are dealt with after harvest (Figure 1). Don Teifer (Stable Fly Project Manager, DAFWA) opened the Field Day and welcomed the growers. Shire officers, vegetablesWA representatives and other interested parties.

The machines were run through both a finished crop of cabbage, cauliflower and finally celery. The amount of vegetable matter left after harvest does not get any more than with cabbages and cauliflowers, and handling the large, reject cabbages in particular posed the greatest challenge. Each machine was run through the residues, either after the residues were firstly broken up with a high speed mulcher, or as they were (Figure 3). Adult fly emergence traps (as those shown below) will be placed over each area treated by the machines to measure how many adult stable flies actually emerge from the soil up to 3-4 weeks later. The expectation is that rapid burial of the residues will prevent stable flies from being able to access the residues as they decompose deep under the soil.

Figure 1. Growers gather around to see both the Celli Ares (Left) and Collari Stone Buriers dealing with vegetable crop residues left after harvest.

The stone buriers or contravator rotary hoes on display were from Inlon Agrimec Group (Ourimbah NSW) (Gary Surman) and Lovegrove Turf Farms (Wattle Grove and Gingin) (Dick Lovegrove) with the Celli Ares 150 and Collari Stone Burier (respectively) used live on-site (Figure 2). Both Gary Surman and Dick Lovegrove explained the key features of the machines and the different widths, tractor horsepower requirements, blade types, and other modifications to the machines that were possible. Dr. David Cook (Entomologist, DAFWA) gave an overview of the research that continues into the machines that were possible. Dr. David Cook (Entomologist, DAFWA and UWA) spoke at last year’s inaugural Gingin Science Festival about how science helps us to better understand stable flies. From the earliest record of stable flies in scientific publications (Protecting cows from flies in 1904) to papers in 1913 and 1914 respectively, looking at a summary of this pest fly’s life history to its ability to transmit anthrax and polioviruses (polio) and flies that frequent privy vaults (toilets), over 100 years of research into this fly shows the breadth and depth of work done to try and control this global pest. Dr. Cook described how the duration of all life history stages of a fly’s life cycle (egg, larvae, pupae) are temperature dependant. Insects must absorb heat from their surrounding environment to be able to develop, similar to pakiolothers such as reptiles that lie in the sun to heat their body tissues to allow them to move, run and hunt.

Figure 2. Each of the stone burier machines being run through cauliflower crop residues left after harvest.

The graph below shows how temperature influences the length of time it takes for stable flies to complete their development. Furthermore, the influence of temperature on the egg to adult emergence time, and adult fly lifespan, is shown in the table below:

<table>
<thead>
<tr>
<th>TEMP (°C)</th>
<th>EGG to ADULT EMERGENCE</th>
<th>ADULT FLY LIFESPAN</th>
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<tbody>
<tr>
<td>15</td>
<td>92 Days</td>
<td>38 Days</td>
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<tr>
<td>20</td>
<td>50 Days</td>
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<td>16 Days</td>
<td>7 Days</td>
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</table>

Dr. Cook then used two detailed examples to illustrate how science has helped us to better understand this fly. The first is how stable flies respond to the volatiles or odours of particular bacterial species found in the rotting substrates (ie plant material, animal manures and combinations of the two) in order to choose a site to lay their eggs. Dr. Cook explained how olfactometers can be used to stimulate choice in flies released down a Y-shaped tube when odours of two different sources are blown down the tube.

Secondly, Dr. Cook illustrated the concept of mark-release-recapture studies that are used to determine how far insects, and stable flies in particular, can disperse from where they emerge (or are allowed to be released from pupae). This technique involves marking the stable fly adults with a fluorescent dust. The emerging adult picks up particles in its ptilinum (eversible sac) that pops the top of pupal case off then collapses after emergence (with particles attached). A series of traps set in a concentric grid around the release point catch flies at varying distances from the release point and can be used to predict their typical dispersal distance. The flies caught in the traps can be put under a UV light source where the particles of dust fluoresce under the light and indicate a marked and released fly. The flies can be caught for up to 1-2 weeks after emergence and models can be used to predict their dispersal.

The graph below is a representation of how far stable flies disperse – they don’t all go a precise distance but there is a normal distribution of distance they travel post-emergence. The x-axis along the bottom indicates the distance travelled (in km) and the y-axis (vertical axis) indicates the proportion of individuals at each distance. As the graph indicates, most flies disperse up to 5km, less out to 15km (few) and the least up to 30km from their point of emergence. Prevailing wind speeds and direction, along with livestock availability, play a crucial role in their dispersal.

Figure 3. Adult fly emergence cages placed over areas of crop residue placed underground using stone burier machinery; these will catch any stable flies that emerge from the soil.

If crop residues are buried promptly after harvest and before they start to decompose and allow stable flies to lay eggs on them, then they should result in a dramatic reduction in stable fly development. This message was repeated during the field day along with the fact that use of stone burier machines provides the following major benefits to growers:

1) They can bury stones and crop residue and bedform in a single pass
2) They will reduce soil tillage and machine use, whilst retaining organic matter
3) They can remove where stable flies breed without the need to spray an insecticide.

The latest Stable Fly Science

In the UK, the first written record of stable flies was in 1914 respectively, looking at a summary of this pest fly’s life history to its ability to transmit anthrax and polioviruses (polio) and flies that frequent privy vaults (toilets), over 100 years of research into this fly shows the breadth and depth of work done to try and control this global pest. Dr. Cook described how the duration of all life history stages of a fly’s life cycle (egg, larvae, pupae) are temperature dependant. Insects must absorb heat from their surrounding environment to be able to develop, similar to pakiolothers such as reptiles that lie in the sun to heat their body tissues to allow them to move, run and hunt.

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STOP PRESS

MEETING WITH MINISTER FOR AGRICULTURE & FOOD

On 21 March Bob and Jo met with the Minister for Agriculture to provide him with an update on SF matters and ask him a few pertinent questions. The meeting was organised by Member for Moore Shane Love, who attended with Shire of Gingin President David Roe and CEO Jeremy Edwards; Dexter Davies, Adviser to previous Agriculture Minister Terry Redman; and Shannon Farmer, SFAG member and SF sufferer. Bob updated the Minister on the current SF problem, and David and Shannon presented him with recent video footage of SF infestations on cattle at Beermullah and Caraban.

Attendees at the RRG Meeting on 16 March were asked if they supported SF remaining under the BAM Act, DAFWA remaining in charge of SF management and control through the SFMP, and whether not they thought SF should be removed from the Declared Pests List! Obviously, this caused concern to SFAG, and we asked for assurance from the Minister that his office, and his department, would remain in control of SF under the BAM Act and SFMP, and that SF would not lose its Declared Pest status. Fortunately, the Minister gave us his assurance that it would.

Of course now we have a new Minister for Agriculture, so we will be requesting a meeting to bring him up to speed with the SF issue, and so it goes on!

SFAG supports the recently announced “3 year Surge” of action by DAFWA and asked the Minister for a full time DAFWA inspector for six months for all Shires covered by the SFMP. He will see what can be done, but could make no promises, as forward estimates suggest DAFWA’s budget could be reduced by 33% over the next three financial years. However an election will be held early in 2017 and things could change.

Build-up of raw poultry manure remains a problem. WABGA are keen to remove rpm from poultry sheds to a single destination where it can be “treated” by the recipient so it does not breed SF. SFAG is concerned that rpm is still being used in some Shires illegally, and would like to see increased monitoring and control of ‘treated’ manures to make them safe, both from a SF breeding and groundwater perspective. SFAG hopes to add a new clause in the SFMP regarding minimum standards, storage, transport and use, and the implementation of a waybill system. Dr Cook has done significant preliminary scientific work on a protocol for “Approved Treatment Processes that Prevent Stable Fly Development” for amended manure based products, which can be used as a basis for further research.