**Wildfires – Prescribed Burning – Drying Climate**

**Impacts on Beekeeping.**

**John Davies………. BICWA Conference May 2019.**

Ladies and Gentlemen,

The theme of this Conference is “Sustainable Beekeeping for the Future”

Looking back over my past 45 years in beekeeping, looking at where the beekeeping industry currently is, there is no doubt our industry is certainly facing some big challenges going forward, none more so than bureaucracy . My focus here this morning is on wildfires, prescribed burning and a rapidly drying climate, all having a significant impact on our principle resource base, that is our native forest, national parks, reserves and other tenues of crown land.

Wildfires are a part of what we face in WA every summer. How do we manage wildfires when they do occur? How do we manage the environment, the public estate with all the integrated issues and pressures, broader social impacts knowing wildfires will occur. It has been the subject of much policy debate over my lifetime as a beekeeper, volunteer fire fighter and representative on many industry committees including the CALM Beekeepers Consultative Committee, West Coast Fire Committee formed after the 1984 West Coast fire, a fire which burnt all the coastal plain from Jurien Bay to Dongara. There have been many shifts in fire policy by Government and the various Government agencies over my time.

For the better, the vast improvement in equipment for firefighting has been the biggest positive. Back in 1984 it was a bunch of farmers battling a massive fire with their own, generally old farm equipment. Today brigades are well equipped, with the back up of air support, access to dozers, graders and it seems an endless pit of money to throw at a wildfire.

For the worst, in my opinion, the current bureaucratic model headed by DFES I have some disagreement with. Major fires still do occur and will continue to occur. Possibly due to restrictions on locals being allowed to access the fire initially, a wait and see attitude while more resources are sourced and command centres are set up etc. The delays in on ground decisions from the central command centre, all issues that contribute to fire escalation. However, the State Governments fire model is not for debate here, there is not time.

What is critical and is the crucial issue for debate is the greatest part of any effective wildfire control policy has always been how we try to negate the serve impacts of wildfire before the wildfire event occurs. Bush fire mitigation really is the key issue. While there have generally been positive policy changes on how we tackle wildfire, the current approach to wildfire mitigation has moved in a negative direction. Wildfire mitigation is now totally out of sequence with the goals and purpose to which mitigation measures are designed. Surely the principle purpose in bush fire mitigation is to minimise the impacts of fire on the environment, as well as other values including life and property. How many people die each year from respiratory failure relating to smoke in the atmosphere, mostly from prescribed burns and farmers burning stubble and bush. Certainly more than die from wildfire.

Control burning or prescribed burning in our forest and other Government lands, surely when the damage inflicted by a prescribed burn is in fact equivalent to or even more serve than the damage inflicted by wildfire, we must question what are we trying to achieve. Effectively, as current policy stands, what we generally have in our forest area is the equivalent to around 200,000 ha of wildfire being delivered in the form of so called prescribed burns each year. While we continue prescribed burns over large areas 20,000 ha or 50,000 acres at a time, in the period before any significant rains in autumn or continue burning in late October/ November when the bush has already dried out, burning at these times in most cases is the equivalent of a wildfire burn, but within controlled boundaries.

My observations over the past two summers, there is little of no visible difference between the forest areas burnt in the Yarlop wildfire and areas burnt in prescribed burns following as a result of the massive surge in control burns carried out particularly in spring 2017 after the additional money provided for an increase in prescribed burning as an outcome of the Yarlop fire. The ridiculous part is that had these additional prescribed burns been carried out before the Yarlop wildfire, they would have made no difference to the outcome of the Yarlop fire. Similarly at cascades if the lightening had struck a few km south the outcome would have been the same regardless of how much PB occurs miles to the north. It questions the effectiveness of relying on the prescribed burning programme as the principle tool in combating wildfire.

Adding an overlay of rapidly drying natural environment due to climate change, the intensity of these control burns is way beyond what is environmentally sustainable. Valley after valley of Jarrah and Red Gum trees out in the middle of the forest 50 km from anywhere, all suckering from the trunk because they have had a wildfire equivalent burn, these tree will take many years to recover and will always be a damaged tree.

The impact on the apiary industry is significant. Vegetation under stress does not yield quantities of nectar. The energy goes into the trees recovery which in many situations is over a number of years. Add climate change slowing the recovery from lack of rain, often the recovery process is still occurring when the area is again burnt. The reduction or deletion of the understory combined with less rainfall, the ground is hotter and dryer. Due to lack of decomposing undergrowth, microbes in the soil which in turn leads us to a forest that is starving.

Often the main honey crop only comes round every 5 to 6 years with lesser crops in between. The disruption to the native eucalyptus long term flowering cycle from regular hot burning is clearly evident in the declining honey and pollen production being experienced by the industry.

We have to ask the question, have the Government Departments charged with responsibility of managing crown land got the right policy mix, indeed has the Government and the community got the right balance. What are we trying to protect, we are constantly told, life and property, this above all else.

Should that be at the sacrifice of the environment? The Department Biosecurity, Conservation & Attractions (DBCA) is charged with the responsibility of managing fire on most crown land. They are also charged with protecting and managing the environment. A policy of 100% burn every six to seven years and I believe in some areas the aim is every 4 years is not environmentally sustainable.

Let us be clear, the intention is not to stop prescribed burning. Prescribed burning needs to remain a key strategic management tool in reducing the impact of wildfire. However, the aim needs to be a return to low intensity, cooler and far less frequent burning, on a strategic risk based assessment supported by sound scientific evidence of the environmental effects while also taking account of all other social issues.

Has there been a shift in prescribed burning management to account for climate change? The answer is probably yes, but I am concerned, the wrong way. As the bush gets dryer, the potential is for hotter wildfires so do we burn more and more often. Simply not the answer.

DBCA continue to con the public that the prescribed burning model reflects the indigenous way of burning. Personally, if I was an indigenous person I would be insulted at this suggestion. My understanding the indigenous people burnt small areas for their own benefit and protection. They didn’t have incendiary bombing aircraft and dozens of personal with fire bugs taking out 20,000ha on a hot afternoon.

I, and I think most beekeepers, are very passionate about the wildlife. The other myth DBCA seem happy to promote to the public is there is no harm to the wildlife, the wildlife can move into the unburnt areas and escape the fire. What a lot of rubbish. With aerial fire starters how can the animals escape, the fire is all around them instantly. In an intensive hot prescribed burn, there is no where for wildlife to escape. How many animals are simply burnt to death or left badly burnt or simply starve as a result of the prescribed burns. One animal per ha, would result in 200,000 animals burnt, five per ha is only a million dead or burnt. The actual number could be thousands of animals per ha if including reptiles invertebrates etc. What’s interesting, the Government with public support can close down a whole cattle trade or live sheep export industry over cruelty to animals, not that I in anyway support animal cruelty, but apparently potentially burning perhaps millions of native animals each year is ok in the name of protecting lives and property.

A return to low intensity burns on a basis of only taking out the thicker areas of fuel less frequently gives the native animals a far greater chance of survival and over time would allow the natural environment to recover from the degraded state that it is now in. The benefits to the beekeeping industry, tourism and other forest users in time would be worth the change in policy.

Such a policy shift would still achieve the requirements of wildfire mitigation, reduced fuel areas to reduce wildfire intensity. Combined with improved firefighting equipment, strategies and techniques, we can achieve a better outcome.

However it will be argued, such a policy shift will cost more money to implement. DBCA argue they don’t have the money, probably true. In my view the money is there, it is just in the wrong Department. The massive budget DFES collects from rate payers across the state annually, a substantial portion needs to be redirected into wildfire mitigation within in all Government agencies responsible for wildfire mitigation. The money is there, Government needs to take charge of it’s effective use, not sit back and watch so much of it been waisted by DFES, again in my opinion. Perhaps a discussion for another day.

We have heard much about climate change over the past couple months. As all the hot air subsides there is not much likely to change in the near future. One area that would help and help the beekeeping industry is stop land clearing. It is my belief that the combined effects of burning and land clearing have accelerated the effects of a drying climate or climate change on the environment in South West WA, which has been cleared by 70% or more. I am a great believer that in early times the vegetation across the whole southwest aided in drawing the moisture in from the ocean during rain events meaning a wetter environment. Extensive land clearing in the 1960’s and 70’s was the beginning of the decline in rainfall. The ongoing clearing and burning on farmland has never stopped, it continues even today, driven by larger machinery and another dollar. All despite so called strict land clearing laws that are just not policed. The bulldozing of old growth red gum, white gum and other species continues on farm land as we speak, quite simply, all land clearing needs to stop. Burning of remanent vegetation on farms needs to stop or be discouraged and firm policies to encourage protection of remanent vegetation be introduced. Unburnt areas have large amounts of carbon stored and which then break down to be integrated back into the soil in the carbon cycle. By burning frequently this carbon does not get a chance to be assimilated back into the soil and is released into the atmosphere to exacerbate climate change, the case for both private and crown lands.

The greatest impact of climate change is being felt on our coastal beekeeping areas. The vegetation is struggling with lack of rain fall. Regrowth is slow, particularly after a fire event. What is not needed is a change to long standing fire policy of buffers, access tracks and firebreaks, a policy established over many years. It has been proposed to move away from the approach of buffers and fire breaks and implement burning large blocks of land similar to the prescribed burning in the SW.

In some areas this policy has already started to be implemented. With a drying climate, there is no doubt a block burning policy along the west coastal heath lands north of Perth will simply be a total environmental disaster.

In conclusion, 45 years ago when I started beekeeping there was dense understory through most timbered areas, mature trees, a generally healthy forest. Through excessive timber harvesting, clear felling, successive control burns, the increase in intensity and frequency of prescribed burns as well as the impact of wildfires, both large and small, add the ever increasing impact of climate change, I have watched much of our natural resource base become stressed or just plain out right degraded.

There is an overwhelming amount of anecdotal evidence, particularly within the beekeeping industry, and I believe mounting scientific evidence demonstrating some of the current Government policies are detrimental to the environment. In particular, prescribed burning, a policy commenced in 1952.

For much of that time it possibly has worked reasonably well. But as the environment has become dryer, it appears our fire managers have become more determined that we must burn hotter and more frequently to combat the threat of wildfire. It is time for Government and society to rethink a different approach.

To achieve a different approach, the first essential step is to change the mind set of the personal charged with the responsibility of managing fire in the natural environment. While the control burning issue is driven solely by people hell bent on proving high intensity frequent prescribed burning is the only solution, it is difficult to see how we might bring about the change in direction so desperately required to save the environment.

The public mindset is changing and time is of the essence if we are to have a healthy thriving natural environment and a sustainable beekeeping industry in the future, change is needed NOW!

Thank you.

John Davies.