## NEWS

of the type that we saw destroyed very effectively in Libya 12 months ago, a Joint Strike Fighter would be reasonably effective in that environment, because these older Soviet radars would not see it," Dr Kopp said.

"But if you are putting it up against the newer generation of much, much more powerful Russian radars and some of the newer Chinese radars, the aircraft is quite detectable, especially from behind and from the lower sides."

Defence simulations expert and former air force fighter pilot Christopher Mills, who works for RepSim, showed the committee computer simulations of a hypothetical air battle in 2018 between either 240 F35s, 240 F22 Raptors or 240 Super Hornets against an equivalent number of Chinese Sukhoi Su-35s off the northern coast of Taiwan. The hypothetical scenario proved devastating for the JSFs and complete annihilation for the Super Hornets.

"We sent out 240 F35As against the Su-35s, and 30 came back — out of 240," Mr Mills said. "We sent out 240 Hornets and not a single Hornet came back. We sent out 240 F22s — 139 came back, and only 33 Sukhois came back. You would not expect an F35 to be able to take on an advanced fighter like the C35. It is an attack aircraft. To reinvent it as an air superiority weapon is a complete mistake. It is not."

The managing director of RepSim Michael Price explained the simulations were done for global policy think tank RAND Corporation under a hypothetical scenario that by 2018 China would have developed high frequency over-the-horizon radar which would defeat the stealth characteristics of both the F22 and the F35. He was particularly damning of the upgraded Super Hornets that Defence hope will cover any delays in delivery of the JSF.

"The Super Hornet has got no stealth at all," Mr Price said. "At the end of the day, it is a technological lemon

for a modern air-to-air combat aircraft. It has got one speed, so it will fall out of the sky as soon as you shoot it."

When asked by MPs, neither Air Power Australia nor RepSim were able to provide the committee with any alternative jet fighter to purchase instead of the JSF. At previous hearings Air Power Australia had suggested keeping F111s operational for longer. They implied at this hearing that more pressure should be placed on the United States government to change its longstanding policy of not selling F22 Raptors overseas and then acquiring them for the Royal Australian Air Force.

The Defence Department and Lockheed Martin, which makes the JSF, are both expected to answer these criticisms at later hearings. •

## **LINKS**

www.aph.gov.au/jfadt jscfadt@aph.gov.au (02) 6277 2313

## Wine quality may decline

asmania's rich biodiversity and agricultural production are under threat from rising temperatures and falling rainfall, according to new climate change research.

Detailed climate modelling conducted by the Antarctic Climate and Ecosystems Cooperative Research Centre shows average temperatures will rise by 2.9 degrees by the end of the century.

While significantly below the predicted global rise of 3.5 degrees over the same period, research centre CEO Dr Anthony Press told a House of Representatives committee inquiry into biodiversity that such a rise would still be enough to change the face of Tasmanian agriculture.

"The example we use a lot to demonstrate just how significant this might be is that Tasmania's reputation as a pinot noir growing region will change significantly," Dr Press said.

By the end of the century areas that grow pinot noir at the moment will be

far too warm to grow good pinot noir,

The research also points to changes in rainfall patterns across the state, with the east and northeast receiving more rain while the southwest wilderness becomes drier, particularly in summer and autumn.

"Those kinds of changes to rainfall, rainfall patterns and temperature have the potential to significantly impact biodiversity," Dr Press said. "There will be some species that will not be able to exist in the range that they are in at the moment."

One example is Tasmania's famous Miena cider gums, which exude a sweet drinkable sap in spring and are endemic to the region. The species is already facing extinction due to recent drought, and the projections made in the research do not point to a promising future.

Droughts, floods and bushfires are all predicted to increase in frequency and severity, which would be potentially devastating for Tasmania's fragile wilderness ecosystems. •



WINE DECLINE: Climate change may affect vintages

## LINKS

www.aph.gov.au/ccea ccea.reps@aph.gov.au (02) 6277 4580