Where does African swine fever leave Australian and US pork meat markets? by Hamish Fuller

Introduction

African Swine Fever (ASF) was first discovered in Africa in the 1900's. From there it has spread throughout Europe, Russia and most recently across Asia. To date, the virus has been reported in 37 countries spreading over three continents (Dixon, L. K., Sun, H., & Roberts, H. 2019). The virus has close to 100 per cent mortality with no cure or vaccine that has yet been developed, which exacerbates its impact. A large proportion (75 per cent) (McCracken, C. 2019) of the global pork industry is reported to be still under threat of ASF.

The disease was first reported in China in August 2018 and since then it has had a dramatic impact on the global red meat industry and moreover the global protein production. YIYO China produces approximately half of the global pork production. Due to the outbreak of ASF, heard losses are estimated to be between 40-50 per cent for 2019 (USDA. 2019). This creates drastic supply concerns due to the significant reliance of pork in Asian diets.

African Swine Fever Virus

The virus impacts both domestic and wild pigs, with clinical signs of fever, anorexia and lethargy which leads to death. ASF is spread through arthropods coming into contact with infected pigs, feeding on their blood and transmitting the virus to a new host. Contamination is also propagated through swines coming into direct contact with the tissue and bodily fluids of infected animals (Ma, et. al,. 2020).

Lack of adequate biosecurity procedures can increase the risk of the introduction of ASF to an uncontaminated herd. The ability for the disease to be transmitted through transport and contamination of feed products necessitates strict and succinct precautions to be taken.

There are currently 32 strains of the virus that continue to spread (Ma, et. al,. 2020). While taking over parts of northern Asia, ASF continues to threaten neighbouring countries as it moves south of the continent.

1. Global reduction of ASF

1.1 Combative biosecurity actions

1.1.1 United States

Currently there is no vaccine or treatment for the virus. Terminating and depopulation of all animals that are infected by the disease is currently the most effective way to combat the disease.

The USDA has implemented precautions to minimise the spread of the disease and protect the industry if the disease is spread to the US, these include:

- Institute and promote on-farm biosecurity and best practices that are standard across the industry encompassing all states and stakeholders.

- Restricting the importation of pork and pork products from countries which have been affected by the virus.
- Increase the screening of passengers, luggage and products that are entering from affected countries (USDA. November, 2018).

Prevention is the main focus to combat the disease from entering the US. There has been a focus on developing responsive actions if the virus is detected in the country, limiting the spread.

1.1.2 *Australia*

Australia has taken strict precautions in addressing the threat of ASF. In December of 2019, the Australian government announced a $66.6 million package to reduce the risk of the disease from entering the country. This will deliver:

- An increase in biosecurity officers, with approximately six new detector dogs.
- New 3D x-ray machines that will be appointed at high risk areas in Melbourne and Sydney.
- A new team that will target and identify products that are entering Australia, which have been incorrectly declared.
- Negotiations have been undertaken that will aim to help trade to continue if there is an outbreak of ASF in Australia.
- Development of mobile applications that will assist in the management of passenger biosecurity. This will include the roll-out of a portable device to issue infringements and accept payments, enabling biosecurity officers to infringe on the spot in airports (Australia.gov, December, 2019).

2 Impact of African Swine Fever on the global pork meat industry

2.1 Chinese pork industry

Pork is the highest consumed meat in China, equating to 62 per cent. ASF is significantly impacting the availability of pork meat, and the industry is experiencing significant price abnormalities. This poses a large threat with the potential to effect economic stability. The price abnormalities have already been experienced with an increase to the consumer price index of pork meat in China by 31per cent, since September 2018 (MLA. 2019). The opportunity arises for international markets to fulfil China's demand for pork. The US has redistributed their pork exports, increasing their volume supply to the Chinese market by +7 per cent over the 2018-19 period.

2.1.1 Future outlook

As we look into the future, it is evident that there is a significant shortage of the supply of pork in China. China's importation of pork from Europe was up by 54 per cent (Yun, C. H. 2020) in the first half of 2019, while the number is high, it may not remain stable due to the threat of ASF in the European market and the increase of importation from other foreign countries such as the US.

Due to the significant losses of swine from ASF, in the coming years, China is facing momentous challenges in rebuilding their breeding herd. During the next 1-3 years it is predicted that the swine herd in China will continue to deteriorate, this will subsequently be followed by an increase in the prices of pork to moderate consumption (McCracken, C. (2019). The following years will show the herd start to be rebuilt along with a growing consumption of pork. This could also lead to a rebranded pork industry which follows a new model moving away from wet markets (McCracken, C. 2019). For production and consumption levels of pork to be normalised in comparison to what was seen in 2018, it may take up to 8 to 12 years. However this is limited to the country's ability to adapt and react to their future situations.

2.2 Australian industry

Like many countries, Australia is under significant risk of the spread of ASF. When comparing Australia's pork industry is still growing and relatively small accounting for 2.15 per cent of Australia's total farm production. With only approximately 10 per cent being exported (APL, 2020).

The threat of ASF to Australia lies predominantly within the domestic market. Australia's inability to meet the domestic market supply with onshore products, results in the country importing around 50 per cent of the pork products that are consumed nationally (APL, 2020). ASF has caused a rise for the price of imported pork. This will subsequently see Australia's domestic pork prices increase.

2.3 US industry

The US has started to see an expansion of their pork industry due to the effects of ASF. Since the introduction of ASF in China, the US industry has capitalised and grown by 18 per cent. This is expected to grow further since the release of Phase One trade deal with China.

The Phase one Trade deal the US has implemented with China has allowed for expansion of the allowable product scope for US pork and pork products, including bungs and intestines and processed products to enter China. (USDA & President of The United States Executive Office January, 2020).

In December 2019 the US pork industry recorded that exports were 29 per cent above the previous year, which was the highest ever recorded (Bockelmann, 2020). This is expected to continue as ASF spreads throughout Asia.

3 Opportunities for protein substitutes

3.1 China

ASF has had a tremendous impact on the Chinese diet, creating a large protein gap of ten million metric tonnes (McCracken, C. 2019), which is expected to grow in the coming years. Due to the large scale of the Chinese pork industry the ability for the globe to offset the impact that ASF has had is limited, especially considering the short time frame with which this ASF epidemic has occurred.

It is estimated that China will increase alternative protein substitute imports by 1.4 million metric tonnes (McCracken, C. 2019). This creates a significant opportunity for the US and Australian red meat industries. Increasing their export products, fulfilling the high demand from the Asian market while also capitalising on price spikes. The greatest increases are expected to be shown in the poultry and fish industries (Pitts, & Whitnall, 2019). This is due to their relative ease to respond to the increased

demands, along with their affordability. While beef and sheep meat are also expected to rise, it will be at a slower rate due to their high market costs and the costs associated with production.

3.2 Australia

There is an opportunity for Australia to capitalise on the increased demand of pork alternatives in China. 2019 saw a great growth in the demand and price of beef that was being imported to China. In the first half of 2019 Australia's beef exports to China grew year on year by 68 per cent (MLA. November, 2019) and this trend is expected to continue.

The increase in beef exports is welcomed with elevated prices. Retail beef in China was up by 20 per cent (MLA. November, 2019) in the second half of June. These price highs were also seen in other proteins like lamb and poultry, with ASF being the driving force to this.

3.3 US

The US has the opportunity to greatly increase their meat exports to China which is predominantly driven by the impact of ASF. While in the past trade agreements have impaired the amount and type of meat exported from the US to China. In January 2020 America and China released an updated trade agreement called the "Phase One agreement" this agreement addresses issues which have been problematic in the past and gives the US greater access to the Chinese market especially for pork and beef (Bockelmann, 2020).

Beef exports in China are expected to rise, with the removal of age restrictions and the acceptance of the traceability system that the US has adopted. The amount of US beef that will enter China is expected to rise in the coming years.

Additionally, China has fully revoked restrictions which they imposed on live birds and poultry commodities. Poultry is key in replacing the deficiencies caused by ASF due to its affordability and productivity, creating a great opportunity for the US.

Conclusion

It is evident that African Swine Fever has had a monumental impact on the global meat market and this will continue into the future. Since ASF has been discovered in Asia, the pork industry across the world has been significantly impacted, through both supply and price abnormalities. While the impact ASF has had on the pork industry is undeniable, it has also greatly affected the wider meat industry. With there being inadequate protein available due to ASF affecting the Asian pig population. This opens up a great opportunity for the global meat industry to fulfil this deficiency. Currently the Asian meat industry is under a lot of pressure created by ASF, however for America and Australia it has created great opportunities as we look to implement a sustainable meat industry for years to come.

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