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Report Name: Typhoon Gaemi's Impact on Taiwan Agriculture

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Post: Taipei

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Report Highlights:

Typhoon Gaemi swept through Taiwan July 24-25, 2024, causing widespread flooding and damage to agriculture particularly in Southern part of Taiwan. The estimated loss - in crop, livestock and fish production - exceeds \$86 million.

Typhoon Gaemi's Impact on Taiwan Agriculture

Typhoon Gaemi swept through Taiwan July 24-25, 2024, causing widespread flooding and damage to agriculture. The loss to agriculture was particularly severe as the typhoon had a larger impact in the Southern part of Taiwan where Taiwan's major agricultural producing regions are located.

According to the Ministry of Agriculture (MOA), the total estimated loss stands at a staggering \$86.4 million as of August 1, 2024. The damages from Typhoon Gaemi have surpassed the damages from all the typhoons in 2023 combined. This report is based on the MOA's Typhoon Gaemi Agricultural Damage Report on August 1, 2024.

Major Crops Impacted

Crops have bore the brunt of Typhoon Gaemi's wrath, with losses estimated at \$58.3 million. The affected area spans 23,060 hectares, with a damage severity of 27%, translating to 6,305 unharvestable hectares. The crops most impacted include bananas, guavas, oranges, bamboo shoots, and pears. These crops were particularly vulnerable due to strong winds and heavy rains, which caused physical damage, waterlogging, and increased risk of fungal infections.

- **Bananas:** Bananas were severely affected, with a damaged area of 3,211 hectares and a damage severity of 27% equivalent to 868 unharvestable hectares and a financial loss of \$8.6 million. Bananas are easily uprooted due to their tall stems and shallow root systems. The strong winds and heavy rains caused many banana plants to snap or become uprooted, and the continuous shaking led to physical damage, downgrading many bananas to lower quality.
- **Guavas:** Guavas suffered significant damage, with a damaged area of 1,466 hectares and a damage severity of 21% equivalent to 301 unharvestable hectares and a financial loss of \$5.1 million. Fruit-bearing guava trees were highly susceptible to the strong winds, which caused extensive fruit drop and branch breakage. The heavy rains also led to waterlogging, further stressing the trees and reducing fruit quality.
- **Oranges:** Oranges were also heavily impacted, with a damaged area of 1,153 hectares and a damage severity of 35% equivalent to 402 unharvestable hectares and a financial loss of \$4.2 million. Strong winds also caused significant fruit drop and branch breakage, while the heavy rains led to waterlogging and increased the risk of fungal infections, further reducing fruit quality.
- **Pears:** Pears were significantly impacted, with a damaged area of 993 hectares and a damage severity of 15% equivalent to 151 unharvestable hectares and a financial loss of \$3.9 million.
- **Bamboo Shoots:** Bamboo shoots experienced a damaged area of 1,973 hectares and a damage severity of 30% equivalent to 587 unharvestable hectares and a financial loss of \$2.9 million. Bamboo shoots, which grow close to the ground, were particularly affected by flooding and soil erosion. The heavy rains caused waterlogging, which led to root rot and reduced the quality of the shoots.

Livestock

The livestock sector has reported losses amounting to \$8.2 million. The damage includes both direct losses of livestock and the destruction of related infrastructure. Chickens were the most severely impacted, followed by ducks, hogs, and geese.

- **Poultry:** Poultry farms were among the hardest hit, with significant losses reported in egg-laying hens, broiler chickens, and ducks. The heavy rains and flooding led to waterlogged conditions in many poultry farms, in addition to causing the death of 193,000 chickens.

Fisheries

The fisheries sector has not been spared, with losses totaling \$17.8 million. The damage includes the destruction of fish farms and related facilities. Oysters were the most impacted, followed by milkfish and clams.

- **Oysters:** Oysters were particularly affected, with a financial loss of \$7.2 million. The strong currents and heavy rains caused by the typhoon led to the destruction of related infrastructure. The continuous exposure to turbulent waters also stressed the oysters, reducing their growth and quality.

Damage to Farm Infrastructure

In addition to the extensive damage to agricultural products, Typhoon Gaemi has also caused significant damage to farm infrastructure, though port facilities were unscathed. The estimated loss for infrastructure stands at \$3.8 million. The primary areas affected include:

- **Farmland:** Loss and burial of farmland, with an estimated loss of \$0.14 million due to 41.1 hectares of submerged farmland and 12.85 hectares of lost farmland.
- **Agricultural Facilities:** Damage to greenhouses, irrigation systems, and storage facilities, with an estimated loss of \$1.8 million.
- **Livestock Facilities:** Many livestock shelters and barns were damaged or destroyed, leading to an estimated loss of \$0.15 million.
- **Fisheries Infrastructure:** Fish farms and related facilities, such as ponds and breeding tanks, were heavily damaged, with an estimated loss of \$0.41 million.

Major Agricultural Losses for Cities and Counties

Area	Loss (\$ million)	Loss (%)	Loss (\$ million)			Major Agriculture Affected
			Crop	Livestock	Fisheries	
Taiwan Total	86.4	100%	58.3	8.2	17.8	
Yunlin County	20.9	24%	16.5	1.6	2.6	Oranges, Bamboo Shoots, Peanuts, Bananas, Poultry, Oysters
Chiayi County	12.8	15%	5.0	2.2	5.6	Bananas, Persimmon, Oysters
Pingtung County	12.4	14%	11.5	0.9	0.0	Bananas, Lemons
Tainan City	11.6	13%	1.9	2.9	6.8	Oranges, Guavas, Poultry, Oysters
Kaohsiung City	8.5	10%	7.5	0.3	0.7	Guavas, Bananas, Papayas
Changhua County	4.8	6%	2.9	0.2	1.7	Peanuts
Nantou County	3.9	5%	2.8	0.1	0.0	Passion Fruit, Bananas

Relief Measures

MOA has declared specific areas for affected crops as agricultural natural disaster cash relief areas. In accordance with MOA's "[Agricultural Natural Disaster Relief Measures](#)" (Link in Chinese), farmers can apply for cash relief if damage severity for specific crops were over 20%; low-interest loans were also provided to applicable affected farmers.

Affected banana farms, for example, can apply for cash relief about \$2,439/hectare. The monetary value for different crops were set in the above-mentioned measures.

(Exchange rate used is approximately 1 USD = 32.8 TWD)

Attachments:

No Attachments.