

Modeled yield index

Financial instruments to protect agricultural companies against economic losses due to poor crop yields

Munich Re is a market leader in assessing and mitigating financial risks caused by natural catastrophes, weather variability, crop yield fluctuations and adverse price movements.

What is a modeled yield index?

Modeled yield indices combine crop models with weather, climatic and environmental variables to compute yield. They solve for issues of conventional parametric insurance like long wait times, poor quality and resolution, or complete unavailability of data to match the client's crop exposure.

How does it work?



Risk exposure

Client's input about risk locations, crop types and farming practices



Third-party yield models

Independent agricultural yield models and soil data



Weather data

Third-party information on weather



Modeled yield index

In-season yields calculated in real-time

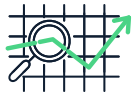
Where and for which crops is it available?

All major cash crops (e.g. soybean, corn, wheat) in North America, Europe and Latin America. In Brazil, the modeled yield index is as well available for sugarcane.

Who can benefit?

Any player along the agricultural value chain: Large producers, grain offtakers, mills and crushers, input suppliers, banks, investment funds, and any other processors.

What's in for you?



Smart

Protect the revenue of your agricultural operations in ways which were impossible so far



Flexible

Tailor the index to match your unique risk exposures and financial needs



Transparent and fast

In real-time, receive a payout based on independent third-party models and your risk profile and farming practices



Effective

Protect your cash flows, profits or your balance sheet

How is payment triggered?

Payment is triggered if the modeled yield, at the end of the crop's season, is below the expected yield.

The Payout = Expected yield x coverage level x tick size (pre-agreed indemnification per 0.01 ton of yield loss)

Example of product definition and associated performance

		Modeled yield*	Payment to client (USD)
Cropland	5,000 ha (provided by the client)		
Crop	Soybeans non irrigated	10,5	0
Maximum cover	4,000,000 USD	9,5	0
Expected yield	10t/ha	8,5	500,000
Covered yield	9t/ha (= 90% coverage level)	7,5	1,500,000
Yield limit	5t/ha	6,5	2,500,000
Exhaust	4t/ha (any yield below this point is not covered)	5,5	3,500,000
Tick* value and size	10,000 USD per 0.01t	4,5	4,000,000

*Indemnification per 0.01 ton of yield loss

*yield of the current season modeled by third-parties

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