

agweather connection

Agweather unveils new Drift Risk Advisor

Agweather recently added a new product to its roster. The Drift Risk Advisor was introduced in the middle of January, in time for this year's spraying season.

"The Drift Risk Advisor is a tool to help applicators determine potential spray times using weather forecasts," said Randy Taylor, OSU Extension Ag Engineer.

Farmers and professional applicators spray crops in hopes of eliminating unwanted pests. If weather conditions are not ideal, there is a risk of pesticides or herbicides drifting to neighboring cropland. The risk from drift is that spray or vapor from an application will move from the intended target area to a non-target area, said Albert Sutherland, OSU Mesonet Agriculture Coordinator.

"Drift is a major concern in Oklahoma. Drift of pesticide off target can potentially damage sensitive crops in the area," said Taylor. "The damage could range from minor and have no affect on yield to devastating and kill the crop entirely."

Before this tool was developed, producers and applicators could pull up the National Weather Service forecast graphs and tables, then sort through the numbers and charts, said Sutherland.

"I think there was a lot of guesswork used," said Taylor. "Some applicators were combining forecasts to provide guidance on potential spray times.

For almost two years, OSU Cooperative Extension and Mesonet faculty have discussed and developed the new Drift Risk Advisor. It was tested and evaluated by farmers and professional applicators during development.

"This Drift Risk Advisor is for anyone who applies chemical sprays, farmers, custom applicators, lawn care professionals and home owners," said Sutherland.

The new tool is easy to use and straightforward, said Sutherland. After a few inputs, the applicator has an 84-hour forecast table that shows when weather variables fall within or outside of the desired values.

"The important thing to know about this tool is that it is based on a forecast. The user must specify the conditions that are acceptable for spraying," said Taylor. "Changing these conditions could change the results for the advisor. Also the forecast can potentially change. The user should be aware of the actual conditions when they are applying products."

It is important to remember that the Drift Risk Advisor does not replace the best judgment of the applicator or applicator responsibility to follow label restrictions due to actual field conditions.

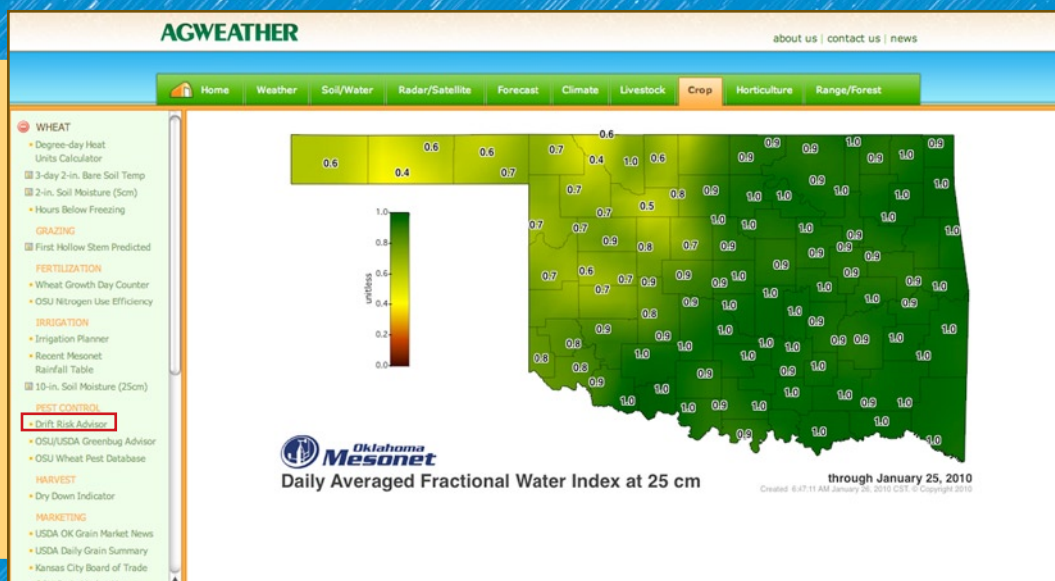
For more information about the Drift Risk Advisor, [e-mail questions to Agweather](#).



INTRODUCING drift risk ADVISOR

Where to find it

- Start at <http://agweather.mesonet.org>
- Click "Crop" from the horizontal menu
- Select "WHEAT," "ALFALFA," "CORN," "COTTON," "SORGHUM," "SOYBEAN," or "PEANUT" from the left menu
- Finally, select "Drift Risk Advisor" from beneath the "PEST CONTROL" subheading
- The Drift Risk Advisor also can be found under the Forecast Tab and in many of the horticultural crops on Agweather



Enter your criteria

- Fill in your parameters for air temperature, relative humidity, wind speed, 1-hour rainfall, dispersion conditions and wind direction

Drift Risk Advisor

Pesticide Application Planner

Weather Variable	Lower Limit	Upper Limit
Air Temperature (F)	<input type="text"/>	<input type="text"/>
Relative Humidity (%)	<input type="text"/>	<input type="text"/>
Wind Speed Average (mph)	<input type="text"/>	<input type="text"/>
1-hour Rainfall (inches)	<input type="text"/>	<input type="text"/>
Dispersion Conditions	<input type="text"/>	

Select wind directions to be avoided by clicking inside circle.

Reset Next

The Drift Risk Advisor is a weather-based forecast tool for planning spray applications. It does not replace the best judgement of the applicator or applicator responsibility to follow label restrictions due to actual field conditions.

Drift Risk Advisor

Pesticide Application Planner

Weather Variable	Lower Limit	Upper Limit
Air Temperature (F)	55	88
Relative Humidity (%)	40	92
Wind Speed Average (mph)	2	10
1-hour Rainfall (inches)		0.02

Dispersion Conditions: **Moderately Good**

Select wind directions to be avoided by clicking inside circle.

Buttons: **Reset** **Next**

The Drift Risk Advisor is a weather-based forecast tool for planning spray applications. It does not replace the best judgement of the applicator or applicator responsibility to follow label restrictions due to actual field conditions.

Criteria has been entered

- For the sake of this example, we selected a temperature between 55 and 88
- Relative humidity was set between 40 and 92
- Wind speed was set between 2 and 10
- One-hour rainfall was set at 0.02
- Dispersion was set to Moderately Good
- Wind directions to be avoided were W, WNW, NW, NNW, and N
- Click "Next"
- Finally, choose the closest Mesonet station and select "Get Data"

Drift Risk Advisor

Pesticide Application Planner

Date and Time	Criteria Met?	Wind Direction	Wind Direction In degrees	Wind Speed	Air Temperature	Relative Humidity	Rainfall per Hour	Dispersion Conditions
Jan 26, 2010 3:00 pm CST	No	SSW	194.1	1 mph	46°F	38%	0.00 in.	4 (MG)
Jan 26, 2010 4:00 pm CST	No	SSE	159.0	1 mph	46°F	41%	0.00 in.	4 (MG)
Jan 26, 2010 5:00 pm CST	No	SE	144.3	2 mph	44°F	43%	0.00 in.	3 (MP)
Jan 26, 2010 6:00 pm CST	No	SE	137.3	2 mph	44°F	46%	0.00 in.	2 (P)
Jan 26, 2010 7:00 pm CST	No	SE	135.1	3 mph	43°F	48%	0.00 in.	2 (P)
Jan 26, 2010 8:00 pm CST	No	SE	133.3	3 mph	42°F	51%	0.00 in.	2 (P)
Jan 26, 2010 9:00 pm CST	No	SE	131.8	3 mph	41°F	54%	0.00 in.	2 (P)
Jan 26, 2010 10:00 pm CST	No	SE	132.6	3 mph	40°F	57%	0.00 in.	2 (P)
Jan 26, 2010 11:00 pm CST	No	SE	133.5	3 mph	40°F	60%	0.00 in.	2 (P)
Jan 27, 2010 12:00 am CST	No	SE	134.4	3 mph	39°F	63%	0.00 in.	2 (P)
Jan 27, 2010 1:00 am CST	No	SE	136.7	3 mph	39°F	64%	0.00 in.	2 (P)
Jan 27, 2010 2:00 am CST	No	SE	138.7	3 mph	39°F	66%	0.00 in.	2 (P)
Jan 27, 2010 3:00 am CST	No	SE	140.3	4 mph	39°F	68%	0.00 in.	3 (MP)
Jan 27, 2010 4:00 am CST	No	SE	142.2	4 mph	39°F	69%	0.00 in.	3 (MP)
Jan 27, 2010 5:00 am CST	No	SSE	147.9	4 mph	38°F	71%	0.00 in.	3 (MP)
Jan 27, 2010 6:00 am CST	No	SSE	159.4	5 mph	38°F	72%	0.00 in.	3 (MP)
Jan 27, 2010 7:00 am CST	No	SSE	159.4	5 mph	40°F	70%	0.00 in.	3 (MP)
Jan 27, 2010 8:00 am CST	No	SSE	167.8	6 mph	42°F	69%	0.00 in.	4 (MG)
Jan 27, 2010 9:00 am CST	No	S	173.1	6 mph	44°F	67%	0.00 in.	4 (MG)
Jan 27, 2010 10:00 am CST	No	S	181.7	6 mph	46°F	63%	0.00 in.	4 (MG)
Jan 27, 2010 11:00 am CST	No	S	189.7	6 mph	53°F	58%	0.00 in.	4 (MG)
Jan 27, 2010 12:00 pm CST	Yes	SSW	196.9	7 mph	58°F	54%	0.00 in.	4 (MG)
Jan 27, 2010 1:00 pm CST	Yes	SSW	202.2	6 mph	58°F	54%	0.00 in.	4 (MG)
Jan 27, 2010 2:00 pm CST	Yes	SSW	208.3	6 mph	61°F	54%	0.00 in.	4 (MG)
Jan 27, 2010 3:00 pm CST	Yes	SW	216.3	6 mph	63°F	55%	0.00 in.	4 (MG)
Jan 27, 2010 4:00 pm CST	Yes	SSW	212.7	4 mph	61°F	57%	0.00 in.	5 (G)
Jan 27, 2010 5:00 pm CST	No	SSW	208.1	3 mph	60°F	60%	0.00 in.	3 (MP)
Jan 27, 2010 6:00 pm CST	No	SSW	197.6	2 mph	59°F	63%	0.00 in.	2 (P)
Jan 27, 2010 7:00 pm CST	No	SSW	210.5	1 mph	57°F	65%	0.00 in.	1 (VP)
Jan 27, 2010 8:00 pm CST	No	NW	308.2	0 mph	55°F	68%	0.00 in.	1 (VP)
Jan 27, 2010 9:00 pm CST	No	N	356.5	1 mph	54°F	71%	0.00 in.	1 (VP)

Advisor table

- According to the weather parameters you entered, this table will show when weather variables fall within or outside of the desired values
- It is important to remember that this information does not replace the best judgment of the applicator or applicator responsibility to follow label restrictions due to actual field conditions

PREVENT DRIFT

By Randy Taylor, OSU Extension Ag Engineer

Drift is the movement of spray particles off target. The spray will be hitting something it wasn't supposed to hit. Drift is caused by weather conditions such as wind, improper equipment setup and operation such as high pressure or using the wrong nozzles. Drift will generally damage sensitive crops in the area being sprayed. Damage can range from minimal, if any yield reduction, to total crop loss. In addition to using the new Drift Risk Advisor, several steps should be taken to prevent drift.

- **Select a nozzle type that provides a coarse droplet**
- **Reduce spraying pressure**
- **Move the boom to the correct distance from the target (generally closer)**
- **Understand the effect of nozzle size (larger nozzles will usually provide larger droplets)**
- **Spray when winds are below 10 mph**
- **Know wind direction**
- **Avoid temperature inversions (very calm weather)**
- **Consider drift additives**