

Consumer mailbag

How do we change weather?

Today's Consumer Mailbag question is being answered by John Sobelzer, executive director of East Michigan Environmental Action Council. Questions on consumer and environmental issues should be addressed to Concern Inc., Detroit, 1 Northfield Plaza, Troy 48068.

I have seen several articles on man and the weather. They used the terms advertant and inadvertant weather modification occasionally. Could you explain the difference?

Frank J. Bloomfield Hills

There are three categories of weather modification. First there is what is called inadvertant weather modification. As a term it is restricted to those changes in the weather that are caused by human activities including those whose purpose is to change the weather.

Second, advertant modification refers to the expected changes in the weather resulting from deliberate efforts to alter the weather.

Finally, there are inadvertant impacts of advertant activities. These are the unexpected results of deliberate efforts. Let's examine some inadvertant impacts.

GLOBAL GREENHOUSE—This is the most commonly known example of inadvertant weather modification. Because carbon dioxide permits much more solar energy to pass through it than the infrared energy coming from the heated earth's surface, an increase in carbon dioxide causes a warming of the earth's global temperature.

The rapid increase in the consumption of fossil fuels since the mid 1800s has been projected to raise its levels in the atmosphere by 25 per cent by the end of this century. This would be sufficient to cause a one-degree centigrade increase in earth's

temperature, which is significant. The same amount of decrease was accompanied by the little Ice Age!

DIRTY WINDOWS—Another group of people are worried about the increase in air pollution. Higher smoke and dust levels may cause a larger portion of the solar energy to be reflected into space. With less energy reaching its surface, the earth would cool.

No one is sure how these two factors will interact globally or regionally. But it is clear that what seems to be minor changes in the earth's temperature can have substantial impacts on our climate and weather.

Other human activities can affect the weather in many ways. The large variability in natural weather patterns makes it difficult to show cause and effect, but regional anomalies are showing up. A few of these are discussed in the following paragraphs.

RAIN TOWNS—Studies have found that downwind areas from large metropolitan complexes may have a 10-15 per cent increase in precipitation. Temperatures at city centers may be several degrees Fahrenheit warmer than the neighboring rural areas due to increased energy consumption, reduced evaporation, wind alterations, and air pollution.

GROWING CLOUDS—Irrigation and deforestation alter the vegetation cover and affect dust levels, water evaporation rates, and surface solar reflectivities. As a result they have been cited as increasing the cloud cover and the formation of severe storms among other things.

Overgrazing may affect the weather. In Africa several scientists have postulated that overgrazing in the Sahel area of Africa actually caused the droughts and desertification of that region.

The Lively NEEDLE

By MARY KAY DAVIS

Dear Mary Kay:

My neighbor told me that an expert on finishing needlework is coming to this area. I need all the finishing help I can get, and I'd like to hear her lecture but I don't know when or where she'll be speaking. Can you help me?

Unfortunately, you just missed her. Joan Young, author of "Miracles With the Binding Stitch" spoke to the Needlework and Textile Guild of Michigan on Jan. 17.

But don't be too upset. Joan's book is excellent, and if you're interested in how needlepoint objects are put together, I highly recommend it. It's available at local needlework stores, or directly from Joan herself at 1518 Spruce Drive, Kalamazoo 49008.

But you and your neighbor have another problem as well. Many of the world's best authors and teachers come to southeastern Michigan on their lecture and speaking tours. To know who is coming when, contact (and consider joining) one of the two sponsoring needlework organizations in this area. To learn more about the Embroiderers Guild, contact Betty McMath, 338-2269; for the Needlework and Textile Guild of Michigan, call Mermine Kitchen, 682-3360.

Dear Mary Kay:

Is your new book out yet and, if it is, where can I get one?

Bless you for asking that question. "More Needlepoint from America's Great Quilt Designs" is on sale here and now. Many local stores (book and needlework), have it in stock. You might call ahead before you brave the



By MARY KAY DAVIS

slush to see who carries it, but I think you'll be pleased.

The baby's finally here, though it's been a bit like being 12 months pregnant. Helen and I are both delighted.

Dear Mary Kay:

I thought your column on Embroiderers' Bulge was funny and I think maybe I'm developing some of the same symptoms. But how do you jog in the snow?

I tried it—once. The slush got in my very expensive jogging shoes, some snow got down my neck, and nobody seemed to shovel their sidewalks so all actively had to take place in the middle of the road. There are many brave souls who handle all of this gallantly. I'm not one of them.

But I've discovered cross country skiing and have fallen in love with that. The exercise is at least as good and as long as there's snow, why not dress for it and cope with it gracefully? So now instead of looking for the puffing jogger for your morning's entertainment, look for the skier who's knees are not as supple as they once were. But she's having fun.

The parks, cemeteries and open spaces that are perfect for jogging are also perfect for cross country. And the beauty of that snowy winter landscape is sensational. I'll keep it up till the snow melts, and then it's perfect jogging weather. You can't lose.

Finally, spreading nitrogen fertilizer on our crops might be as dangerous as pushing the nozzle on that aerosol can.

The breaking down of nitrogen that the plant fixes (nitrification) has been implicated as a destroyer of our ozone.

OZONE—A five per cent depletion in ozone has been predicted to increase skin cancer rates by 20,000-60,000 per year in the United States alone. This could occur by 1990. It could also cause a serious decrease in biological productivity of natural ecosystems and agriculture as well. It

might also affect the earth's temperature.

We have all heard that aerosol cans may impair ozone. Now increased fertilizer use and chlorination in water treatment are suspected.

Sure—sure. Predictions—yes. But these predictions aren't biased toward maximizing or minimizing the results. They are just as likely to be underestimates as overestimates.

I think you will agree, the one thing we can all demand is that more research into inadvertant weather modification be undertaken.

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