Expanding industrial meteorology

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The growth of industrial meteorology offers opportunities for meteorologists and for those businessmen who are alert to the advantages of being “weatherwise.” Whether or not this growth takes place depends to a large extent on whether or not all meteorologists cooperate in developing industrial meteorology. The lack of opportunity for employment in industry has restricted the profession in the past and possibly explains the lower pay scales of some categories of meteorologists as compared with certain other professions. The overall salary comparison is quite favorable, however (1, 2).

The glamour professions of today were not always in such an enviable position. Even the medical profession went through a period of low pay and, even worse, a period of lack of public confidence. It was necessary for doctors and other professionals to justify their services before they gained their present prominence.

Meteorologists are faced with a similar problem today. “Why do you need a meteorologist in a chemical plant?” “Why do you need a meteorologist on a television station?”

If we can answer these questions with positive economic reasons, we can create a demand for meteorologists where very few are presently employed. Such an increased demand will provide not only greater and more varied opportunities for employment, but in all probability will generate higher paid jobs as well.

Selling meteorology to industry is not an easy job. There is little precedent for some of the new ideas in applied meteorology. Often the meteorologist will have to ask his prospective client to trust his judgment and try the proposed technique. There are two reasons why he is often turned down:

1. The businessman will usually ask some other meteorologist for his opinion on the proposal and this opinion is frequently negative.
2. The businessman’s opinion of meteorology is often influenced by the negative publicity given public weather forecasts.

Unfortunately, weather forecasts are sometimes wrong and these mistakes gain wide publicity in the press and on the air. Our professional image depends in part on what the public thinks of the weather forecast he receives. We should make it our business to publicize the positive aspects of public weather forecasting.

Since there are a few hundred industrial meteorologists in a profession of several thousand, advice to the business world about industrial meteorology usually comes from meteorologists not employed by industry. In my opinion, if industrial meteorology is going to grow it will do so only when non-industrial meteorologists encourage it and help to develop it.

Often a new approach in industrial meteorology meets with criticism for no other reason than that past attempts at solution of such problems have failed. If we are to succeed in the future we must solve problems that have not been solved before. As Disraeli said when a young man, “I have begun several things many times, and I have often succeeded at the last—though many had predicted that I must fail, as they have done before me.”

Industry does have weather problems and weathermen are the ones most likely to figure out the correct answers. I have seen an entire chemical plant frozen solid. I have worked in a brewery where summertime production was limited by the cooling capacity of the plant which in turn was determined by the weather. How many meteorologists were employed in the design of these plants? NONE. Many design engineers know little about the difference between surface temperature and air temperature. Air conditioning engineers are often shocked when confronted with observational data on thermal lapse rates in the lower 100 feet of the atmosphere. These things are well known to meteorologists and they are important in the design, construction, and operation of industrial plants.

The problems are there. It is up to us to demonstrate skills in solving them. As an example of the economic importance of some of these problems, a prominent Northeastern weather service is paid by one of its clients on a bonus-penalty arrangement wherein each correct forecast is worth $1200 and each error results in a $1500 penalty to the meteorological firm. Although few in number, such consulting firms are doing an excellent job.

The few hundred meteorologists employed by industry are our salesmen; they are selling meteorology to industry. Their past success offers encouragement for the future; with our help it is possible they could expand industrial meteorology to provide opportunities for a much larger part of our profession.

The young profession of meteorology, by developing new industrial skills and by emphasizing its present achievements, could become the glamour profession of coming decades. This is a dream perhaps, but as Dr. Karl Menninger once said, “Attitudes are sometimes more important than facts.”

References