

useful approach for speeding the evaluation and development of alternative crops such as amaranth.

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LETTER

Uniform or farm-specific management in on-farm research?

The editorial by Lockeretz (*AJAA* 8(2):50,93) makes a point that we have been grappling with in our on-farm research with organic farmers in Nova Scotia: "We don't learn much from an experiment where the range of applicability is unknown or, even worse, where it might not extend at all beyond the specific circumstances under which the data were collected." In our work we see clearly the conflict between farmers' and researchers' objectives in on-farm research. As Gerber has commented (*AJAA* 7(3):118-121), scientists want a statistically valid experimental design and uniformity of nontreatment variables. They strive for statistically significant differences among treatments and try to minimize the interactions among experimental factors, especially location.

Farmers, on the other hand, are most interested in experimental conditions that represent their farms, so that the results can be applied directly to their production system.

We attempted to minimize the variability among the four farms in our study by asking the farmers to plant oats two months before the experimental treatments were established. One farmer refused, arguing that this was something he does not normally do. This raises a serious question: Should we ask farmers to do something they would not normally do, for the sake of reducing variability? Reduced variability may make the results clearer and easier to interpret, but if the experiment does not represent the participating farm's current system, the farmer may not know if the results would have been the same had the usual practices been followed. Wouldn't the results of on-farm research be much more useful if farmers managed the experiment the way they manage the rest of the farm, except for the treatment variables? If

a treatment produces consistent results that are independent of nontreatment management practices and location, this is a much more useful scientific finding. On the other hand, if the results vary among farms, the various management and environmental factors can be studied to understand better just what is going on. If we are trying to learn the range of applicability of an experiment, we should conduct it under the range of conditions normally found in the region.

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