

NAPT—working for you
What every CCA should know about lab proficiency (but was afraid to ask)

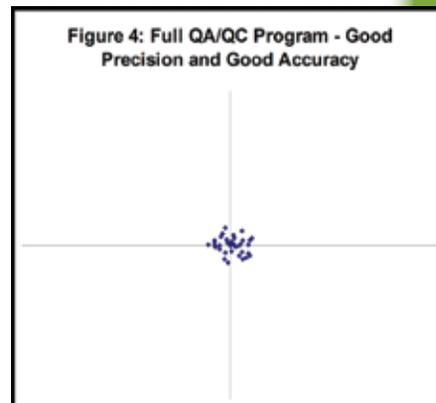
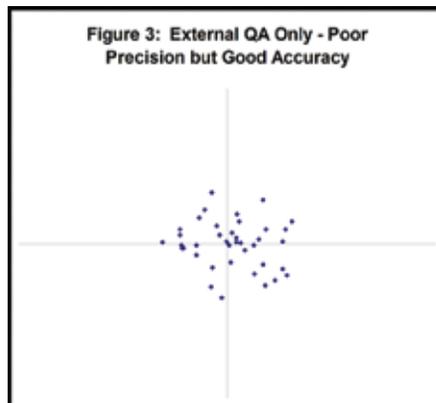
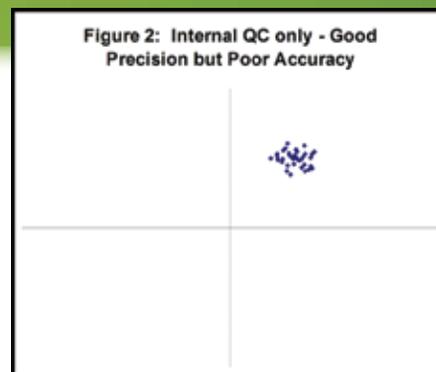
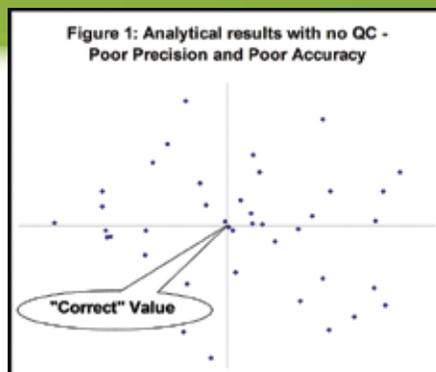
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When it comes to choosing a lab to analyze your soil or plant samples, turn-around time and price are certainly important considerations, but the quality of the analyses should be just as important. After all, the credibility of your business depends on giving good advice, and it is tough to give good advice with bad data.

But how do you know that the lab is providing “good results” that are both accurate and precise? For this, you need to ask some questions about the quality assurance and quality control programs (QA/QC) that the lab has in place.

Figure 1 shows the worst-case scenario for a lab with no quality control program. Analytical results are scattered, with no assurance that the result you receive on any particular sample is correct, or even close to correct. Fortunately, this pattern is rare among analytical labs, but it is not impossible.

Much more common is the situation shown in Fig. 2, where the lab has a good internal quality control program in place but lacks external quality assurance. The results are tightly clustered, indicating a high level of precision, but they are not centered on the “correct” value. Frequent check samples within the



lab will show consistent results, but they cannot uncover the hidden bias. This type of error can occur if there is a calibration problem with the equipment in the lab, if standards are contaminated, or if the specific test being used is inappropriate for the sample.

Figure 3 shows the opposite situation, where a lab is depending on an external quality assurance program only. The results are clustered around the “correct” value, but the spread in the values is large enough that there can be significant doubt about the accuracy of any particular result.

It should be obvious from these examples that good results from the lab depend on both internal quality control and external quality assurance programs.



NAPT Program
 North American Proficiency Testing Program

You, and your clients, are looking for the kind of results shown in Fig. 4, where the results are

tightly clustered around the “correct” value.

Ask your lab about its QA/QC program, both what it is doing internally, as well as what external programs it is enrolled in. Labs that are participating in the North American Proficiency Testing Program (NAPT) have access to the most comprehensive comparison of lab performance on the continent. Many states and provinces are using quarterly NAPT results to certify/accredit labs working in their state/province, adding a level of assurance to laboratory results. Moreover, some mandate that labs meet the requirements of the Proficiency Assessment Program (PAP), a USDA-NRCS requirement in some states to analyze soils for the development of nutrient management plans.

If you would like more information about lab QA/QC, or about the NAPT or PAP programs, check out the website at www.naptprogram.org, or contact any of the NAPT Oversight Committee members. ■