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Assessing Drought Damage

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Nebraskans see it around them every day. Browning pastures, withered cornfields and higher water bills are reminders of the ongoing drought.

Not surprisingly, most of us worry about the drought’s impact in personal terms. If you farm, what is it doing to my crops? Or my irrigation costs? If you own a business in a rural community, how much is the drought reducing producers’ off-farm purchases? Obviously, the bottom-line concern is that droughts affect our pocketbooks.

Droughts also hurt the public sector. Reduced income means lower state income and sales tax receipts. Moreover, when drought comes on top of other budget problems, as is the case at present, it’s sort of a double whammy.

Governor Johanns and state senators surely will acknowledge the state’s adverse weather in the special budget-cutting session of the Legislature, scheduled to begin later this month. But that’s not all. In addition, the governor and Nebraska’s congressional delegation continue to seek drought aid from the federal government.

Both state budget planning and federal aid programs typically require drought damage estimates. That’s as it should be. Yet, as one who has sometimes been involved in that process, I confess that it’s not easy.

To begin, any assessment of drought always represents a moving target. Tomorrow won’t be the same as today. It either will be better or worse. Inevitably, policy decisions made on the basis of a date-specific drought assessment report will be...
somewhat out of date by the time the policy is implemented.

Drought assessments should incorporate the best possible sampling procedures. (This assumes there is no way to physically evaluate every acre impacted by drought). But notwithstanding the desirability of good sampling procedures, problems still emerge.

Take pasture and rangeland, for example. No formal, scientific procedure exists for making consistent estimates of production from grazing lands. Yes, “windshield estimates” can reveal that forage is more plentiful some years than others. But determining whether a loss is 10 percent, 20 percent or some other number is mostly conjecture. Moreover, in the absence of a consistent standard, two evaluators may reach widely varying conclusions regarding the extent of loss.

In Nebraska, nearly one-half of the state’s land area – about 23 million acres – is devoted to pasture and rangeland. This grazing land supports a cattle industry that annually generates billions of dollars in gross income. A good understanding of forage losses is therefore appropriate. But those losses are very difficult to determine in a consistent, reliable way.

The federal government does make widely accepted production estimates of annual crops. This year’s Nebraska wheat crop, for example, yielded 30 bushels per acre, down from 37 bushels last year. How do we know? Skilled enumerators entered pre-selected fields and counted! Every USDA enumerator was given the same directions for carrying out this task. Moreover, essentially the same procedure will be used next year, making year-to-year comparisons meaningful.

Still, a major problem confronts those making estimates of disasters before crop estimates are available. A case in point: The first official estimate of this year’s corn and soybean crops will not be made until August 12. Attempting to assess losses prior to that date has obvious limitations.

Beyond physical losses, other considerations must be taken into account to estimate monetary losses. For one thing, higher commodity prices may offset, wholly or in part, lower production totals. Crop insurance also moderates some production losses. In other words, monetary losses are sometimes relatively less than production losses. (Admittedly, however, it doesn’t take much of a dip in cash receipts to turn a narrow profit into a loss).

Other reverberations from droughts play out over years – not months – and are even more difficult to evaluate. For example, it may take several years to replenish plant vitality in pastures and rangeland after a severe drought. And if a producer sells breeding stock during a dry spell, that’s akin to selling the factory. Some producers might be out of business permanently.

Cash rents and land prices may also be impacted. A drought, particularly if it’s extended, could reduce either or both. Whether that’s good or bad depends largely on which side you’re likely to be on in such a business deal. Other things equal, potential renters and buyers benefit from lower land-access prices. But landlords and sellers lose.

My current estimate of the drought’s cost to Nebraska agricultural producers exceeds $600 million. Am I certain about it? No, for all the reasons outlined above. But it’s my best shot, given the limitations that are inherent in making such an estimate.

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