



# Finely Tuned, Sustainable Production

*At least 2/3 of control loops underperform.*

Several sources, most recently “Performance Assessment of Control Loops—Case Study,” ADCHEM Conference, IFAC, 2006.

## What if...

- You could run your process closer to its constraints and optimums?
- You could maintain economical operation even at reduced rates?
- You could reliably compensate for aging assets and the retirement of experienced personnel?

It’s your responsibility to keep the plant profitable, no matter what the fertilizer market does. But variability is always working against you, and your plant’s operational sustainability faces serious long-term challenges.

Sticking with the status quo has major drawbacks, so you have a delicate balancing act to perform—and sooner, rather than later. With Emerson technology, solutions, and expertise, you can overcome these obstacles for more efficient and productive operations—and a better bottom line.

## HIGH VARIABILITY, LACKLUSTER PRODUCTION

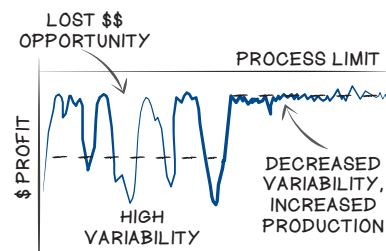
A range of factors can drain your plant’s productivity, but process variability is at the top of the list. Variability can make your operators too cautious to push constraints, whether it comes from equipment malfunctions, underperforming control loops, operator actions, or other sources. Even poorly managed inventories can deprive you of productivity. And collectively, these factors can severely depress your revenue.

## INEFFICIENT RESPONSE TO DEMAND

Staying efficient at any production rate—while restraining variability—always means keeping control loops, burners, reformers, and other assets properly adjusted and managed. At the same time, it’s crucial for operators to have confidence in automatic control—but when the control room lacks actionable information, operators use larger safety margins and more manual control. That’s a recipe for low efficiency, as well as more frequent slowdowns and shutdowns.

## DIMINISHED OPERATIONAL SUSTAINABILITY

As time takes its toll on your equipment and devices, your maintenance needs increase. Your in-house experience base suffers a similar fate as knowledge and skills leave with retiring workers, and promising recruits are often hard to find. To keep assets up to date, you need long-term access to parts, expert advice, and service—which many vendors can’t provide. It’s equally challenging to get management approval for important upgrades. As a result, your plant is less productive than it could be.



*Tame variability and increase production with Emerson’s technology and process expertise.*

## AGRICHEMICALS BUSINESS BRIEF

With Emerson, you'll have the ability to maximize efficiency or total production, as the situation demands. And with smooth long-term operations, you'll be able to reach those goals far into the future.

### EXPLOIT THE FULL POTENTIAL OF YOUR OPERATIONS AND ASSETS

With the multivariable control and embedded advanced process control (APC) available for our DeltaV™ digital automation system, you can maintain ideal operation at any production level. Using DeltaV PredictPro, EnTech Toolkit, or our control performance consulting service, you'll be able to reveal and fix the root causes of process variability and push your constraints for high production. And you'll be able to keep your process running at its best using Emerson devices featuring automatic calibration, self-testing, drift resistance, and detailed diagnostic data. Finally, you'll get firm control of liquid or dry inventories with the digital management and tracking capabilities of our Syncade™ operations management solution.

### OPTIMIZE YOUR PROCESS, YOUR CONTROL, AND THE FLOW OF DATA

Improve plant efficiency to new levels. With Emerson consultants, you'll be able to optimize your control loops and pinpoint where you can most effectively save energy. Using DeltaV InSight, you can take advantage of adaptive learning capabilities to get quick responses to process changes, as well as efficiency and safety over a wide range of production rates. At the same time, you'll improve control room operations—and overall efficiency—when you use DeltaV Analyze to get complete, actionable information directly to operators.

### RUN WELL ALL THE TIME

Get longevity and reliability from your staff and assets. Working with our training services, you'll keep your staff's skills up to date while quickly bringing new hires to competency. With our local support capabilities, including on-site asset management, you'll be able to keep your process running even when your native skill-set shrinks. And instead of chasing equipment problems, you'll have the ability to fix things before they break by using our AMS™ Suite predictive maintenance technologies to pinpoint developing issues.

If it's finally time for a big upgrade, you'll be able to migrate to new technology with minimal disruption using Emerson experts—whether you need to justify your upgrades to management, plan your migration, or execute the final transition.

*“By tapping into device diagnostic information, we are able to predict with reasonable accuracy how long an instrument or valve will continue to perform satisfactorily before repairs or replacement will be necessary.”*

**Joel Holmes**  
Site Tactical Reliability Engineer  
Monsanto

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