APACHE by ET SPRAYERS

CUSTOM APPLICATION VS. SELF-PROPELLED OWNERSHIP

What's Inside:

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>
> – Ronnie Russell, Water View, Virginia

FACTORS TO CONSIDER

What's Behind the Growing Emphasis on Self-Propelled Sprayers?

Today's modern production systems have changed the labor and machinery necessary to raise a bumper crop. Systems like no-till have parked the discs, sweeps and other tillage tools common on many farms just three decades ago in favor of sprayers and application systems that sustain crop growth and maintain soil structures.

That's upped the importance of the self-propelled sprayer on many crop operations today. While custom applications for herbicides, pesticides and fertilizer remain an often-used option, the cost of those applications has many farmers entering the sprayer market on their own, sometimes for the first time.

"The trend towards less tillage brought about by advances in farm chemicals, especially herbicides, has sharply increased the availability and interest in self-propelled crop sprayers that can be used for both pre- and post-plant treatments," according to a report from a team of Kansas State University Extension economists led by Kevin Dhuyvetter*.

And, for good reason; on crop operations of large enough size and utilizing one of a few management systems like no-till, a self-propelled sprayer can pay for itself in just a few years based on several factors, both specific to initial purchase costs and those down the road associated with the ability to spray without hiring it out. With the right maintenance and upkeep over time, the return on investment (ROI) of a self-propelled sprayer only goes higher.

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A big step in determining whether you should add a self-propelled sprayer to your operation and move away from custom application sprayers or to supplement custom applicators, involves a comprehensive audit of your operation in terms of size, crops and field operations required to raise a profitable crop. A cost analysis of any piece of machinery should account for initial cost as well as expected hours of operation and how those numbers compare to the cost of alternatives for accomplishing the same task. For a self-propelled sprayer, that means contrasting purchase price and operating costs through the life of the financed purchase or lease with the cost of custom application over that same time period.

"Some farmers may say they don't have the acres to justify owning their own sprayer, but when you think about how many acres you're having done by a custom applicator, that cost adds up quickly," says Equipment Technologies East Regional Director Chris Jones. He says he's talked to farmers who are "amazed" when they see the cost difference between custom applications and owning a self-propelled sprayer.

Determining the Cost-Effectiveness of Owning a Self-Propelled Sprayer Versus Using Custom Applications

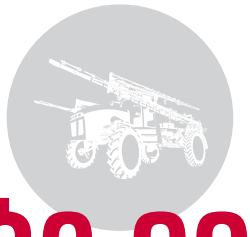
Data from the latest version of the annual Custom Rate Survey compiled by University of Nebraska show in 2016, farmers paid an average of $7.13/acre for custom application by a surface applicator. Beyond these basic per-acre application costs, the cost benefits of owning a self-propelled sprayer – like many pieces of machinery–increase with operation size.

"The majority of costs associated with machinery are overhead, including costs for depreciation, interest, insurance, housing and repair. On an annual basis, depreciation and interest are relatively constant no matter how many acres are covered," according to a report from University of Illinois Extension ag economists Dale Lattz and Gary Schnitkey**. "As acres increase, yearly depreciation and interest costs are spread over more acres for a given implement size. Therefore, costs per acre decline as acres of use increase for a given implement size."

Overall, given a fuel cost of $2.25/gallon – a major variable in calculating operating costs – Purdue University Extension ag economist Michael Langemeier estimates a $3.90/acre cost for spraying with a self-propelled machine, more than $3 less than using a custom applicator.***

$2.25/gallon
FUEL COST

+



$3.90/acre
SELF-PROPELLED COST OF SPRAYING

=

$6.16
THIS IS $3 LESS, ON AVERAGE, THAN USING A CUSTOM APPLICATOR

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Demand Growth from Precision Agriculture

Self-propelled sprayers have become more popular among farmers than just those who employ no-till or other crop management system, which increases the importance of a sprayer on your operation. Those utilizing the latest precision agriculture tools today find it more important to own and operate a sprayer that applies more accurately and efficiently as part of such a high-tech system.

"We just transitioned to GPS, auto-booms and autosteer, and that's when we upgraded to our self-propelled sprayer. With our no-till system, we're not just doing more spraying, but we're doing more precision spraying," says Water View, Virginia, Farm Manager Ronnie Russell. "When you own your own rig, you can spray anytime you want, and you can save on chemicals because of the efficiency you gain by doing it yourself. And, with autosteer and auto-booms, you do away with overlap. It's a lot safer using these machines, and you're a lot less likely to make mistakes with them."

Logistics and Other Factors With Custom Applications

Being able to do all of his own spraying means more to Russell than just savings on chemical and not having to rely on a custom applicator. Having a self-propelled machine on which he can rely to apply chemical specifically when and where he needs it helps him be a better steward of his land and the crops it sustains.

"I know so many farmers around here who have switched to self-propelled machines, even smaller farmers. They're grateful for doing it," he says. "They're more economical than having somebody else spray for you, and if you're working many acres at all, you're financially better off running your own machine. And, when you need it, you have that machine ready to go, so you can take better care of your crops."

The readiness to spray more nimbly and quickly is a huge asset for many farmers, especially those who aren't major customers for custom applicators. In some cases, there's a major yield benefit to spraying at the right time. But, outside that optimal time window, applications' efficacy may plummet. So, if you're not "at the top of the list," you may be forced to wait until a custom applicator can get to your fields. That wait time could cost you.

"You may not be the top dog on the list when it comes to custom applications; if a guy has 5,000 acres and I'm his custom applicator, I'm going to treat him better because I want to keep that business," Jones says. "So, how much are you losing in bushels because you're lower down the list?"

The ability to spray with a self-propelled sprayer versus relying on a custom applicator has other crop yield benefits. Custom application is a volume business, and the more acres an operator can cover, the more they'll be paid. That can sometimes lead to carelessness that can manifest itself in potential crop damage, something that isn't an issue when a farmer is spraying his or her own acres with a self-propelled machine.

"How much will somebody care about damaging the crop if they're just getting paid by the acre? They're running as fast as they can," Jones says. "What if they are rushing their clean-out processes between fields and a corn field is damaged when sprayed after a soybean field? The amount of care and quality of work is better if you are doing it yourself."

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Let's review:

1. Self-propelled sprayers are increasing in importance on many U.S. farms. Find out if your farm is one that could benefit from sprayer ownership versus using custom applications.

2. Cost of ownership is a major component of the growing demand for self-propelled sprayers. When compared to the cost of custom applications, ownership of a self-propelled sprayer saves farmers money.

3. Operating costs give self-propelled sprayers another leg up over custom applications. Find out the multiple ways you can save by owning a sprayer versus using a custom applicator.

4. Readiness and flexibility are major benefits of owning a self-propelled sprayer. By managing your own spraying operations, you can spray where you want at exactly the right time, maximizing your spraying ROI.

* Evaluating Self-Propelled Sprayer Ownership with the OwnSprayer Spreadsheet, https://www.agmanager.info/ksu-own-sprayer

** Schnitkey, G., Lattz, D. "Machinery Cost Estimates: Field Operations," Department of Agricultural and Consumer Economics, University of Illinois, http://www.farmdoc.illinois.edu/manage/machinery/machinery_field_operations.html

*** Langemeier, M. "Farm Machinery Costs and Custom Rates." farmdoc daily (7):161, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, September 1, 2017, http://farmdocdaily.illinois.edu/2017/09/farm-machinery-costs-and-custom-rates.html