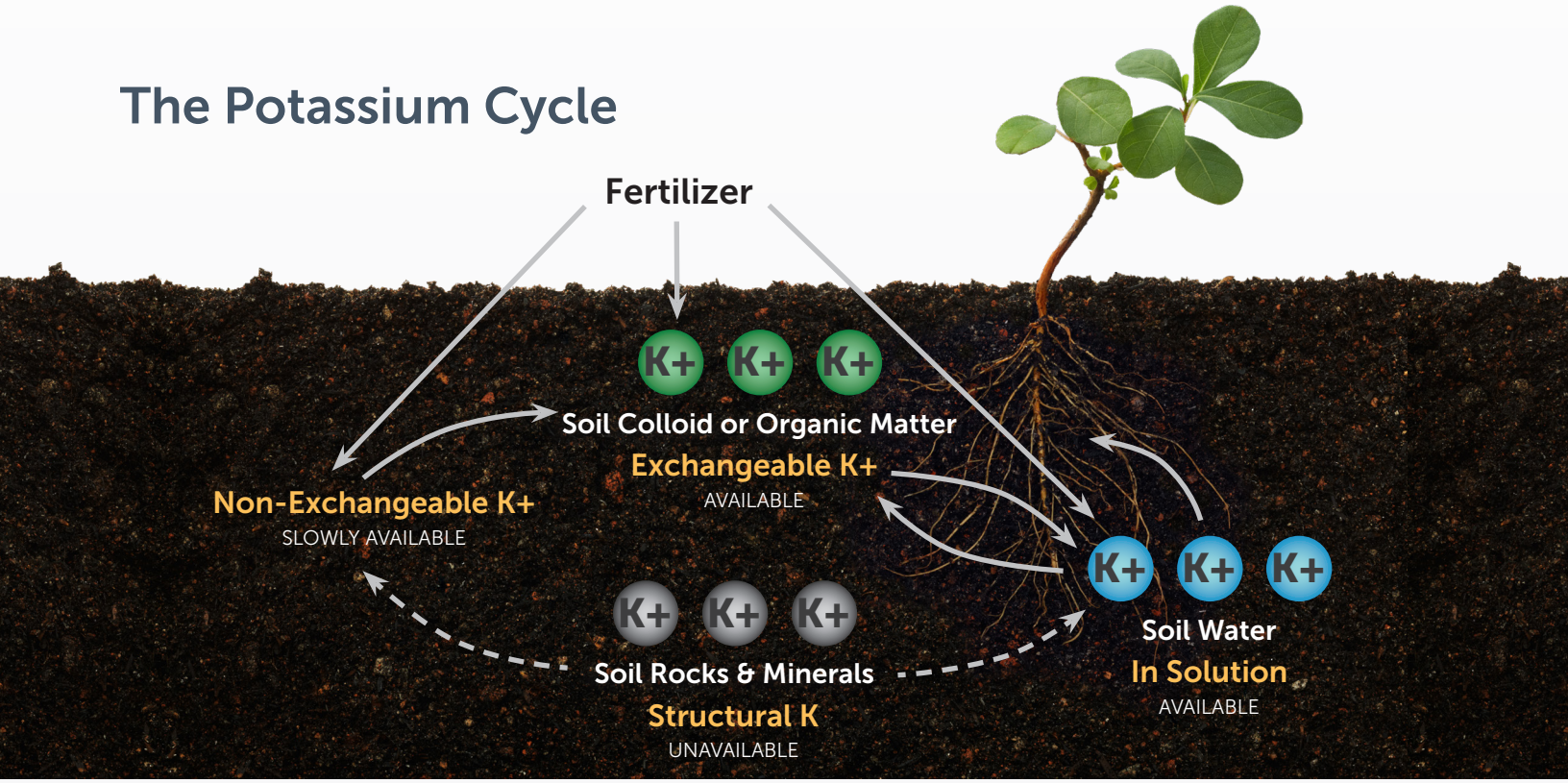
Katalyst®

Potassium that Outperforms the Competition

When commodity K_2O fertilizer is applied to the soil, it can move quickly into one of three potassium pools. Unfortunately, all too much K_2O is rapidly fixed into the non-exchangeable pool. This pool is almost completely unavailable for plant growth, which means you are wasting most of the potassium (K) fertilizer you apply. **Katalyst®** family products work in two unique ways: less of the applied K_2O is fixed in the soil, and more is available. K_2O is actually released from the *"non-exchangeable"* pool. No other K fertilizer on the market has proven research to demonstrate these two features.

The Potassium Cycle

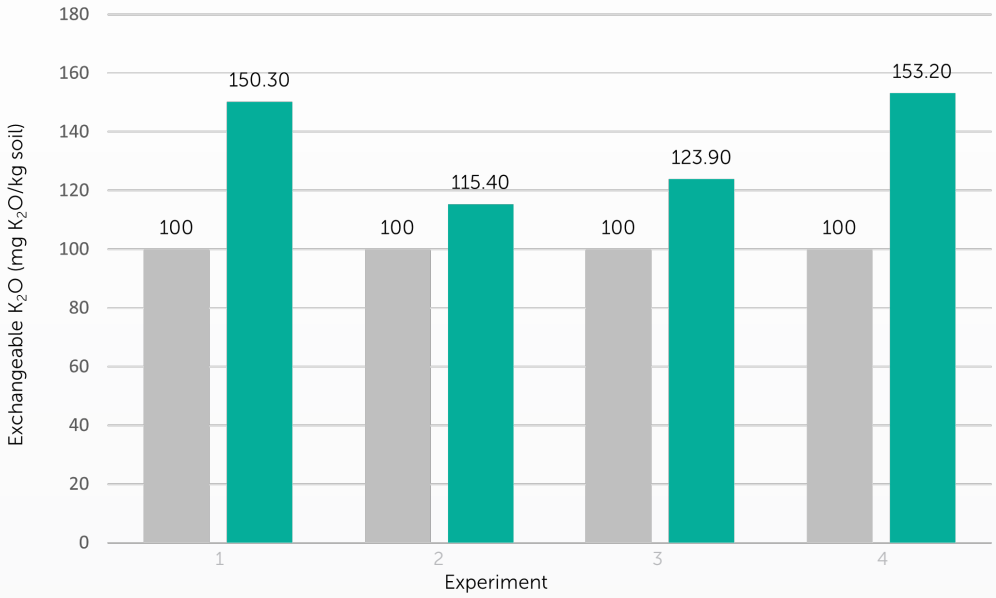


Small advantages in resource availability often result in increased rates of growth, which compound over time in a positive feedback loop of plant growth and resource acquisition. This is why the Katalyst advantage in-crop is much greater than the numbers shown in the first chart on page 2. We recommend to soil-apply Katalyst products in the field at about 1/3 the rate of commodity K fertilizer.

ACTAGRO® | P.O. BOX 309 | BIOLA, CA 93606 | 877.843.2700

actagro | Nutrien Ag Solutions®

In soil experiments without a crop, Katalyst consistently outperformed commodity K fertilizer, in terms of available K measured in soil.

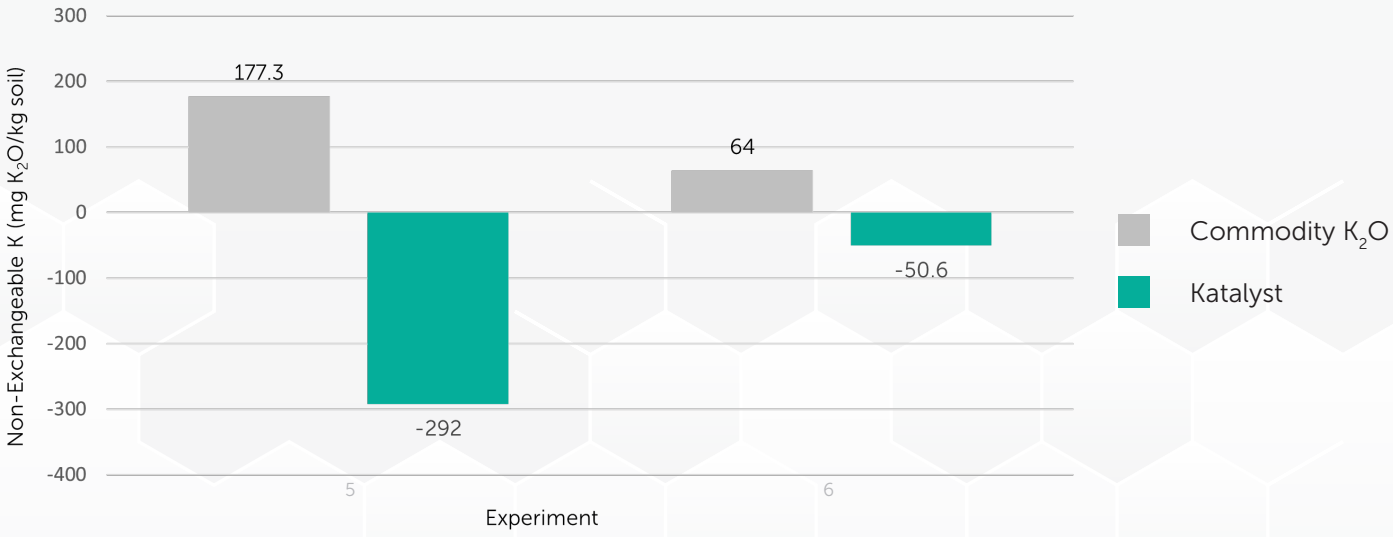


Four laboratory experiments were conducted in K-fixing soils. K_2O was applied at rates from 50 to 200 mg K_2O/kg soil with 4 replicates. Results shown are means normalized to force the commodity K_2O results to 100 units in each case. Actual means for commodity K_2O ranges ranged from 23 to 216 mg K_2O/kg soil. The results proved that K_2O supplied by **Katalyst** was superior to commodity K_2O, with the difference ranging from 15.4% to 53.2% better, across all rates and soils shown.

When commodity K fertilizer is applied to a K-fixing soil, much of the applied K is fixed and thereby unavailable for plant use. In Experiment 5 (200 mg K_2O/kg soil applied), essentially all of the K (177.3/200) of the commodity fertilizer was fixed into the non-exchangeable pool. In contrast, in the same experiment, >200 mg K_2O/kg soil was released from the non-exchangeable pool when **Katalyst** was applied. ***The negative number means that K was released from the fixed soil pool. No other fertilizer on the market has been proven to have this effect.***

Similarly, in Experiment 6, the applied K rate was much lower (50 mg K_2O/kg soil), but a similar trend was observed. **Katalyst** released K_2O from the non-exchangeable soil pool, even though the commodity K fertilizer applied was essentially all fixed. In both experiments, treatments were incubated for three days before the soil was analyzed.

Katalyst Products Release Fixed K in the Soil



www.actagro.com

ACTAGRO® | P.O. BOX 309 | BIOLA, CA 93606 | 877.843.2700

actagro | Nutrien Ag Solutions®