

C A T A L O G 2 0 2 4 - 2 0 2 5



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# Maximizing Yield

GENETIC YIELD POTENTIAL





# Genetic Yield Potential:

The highest possible yield a plant can achieve under ideal growth conditions.

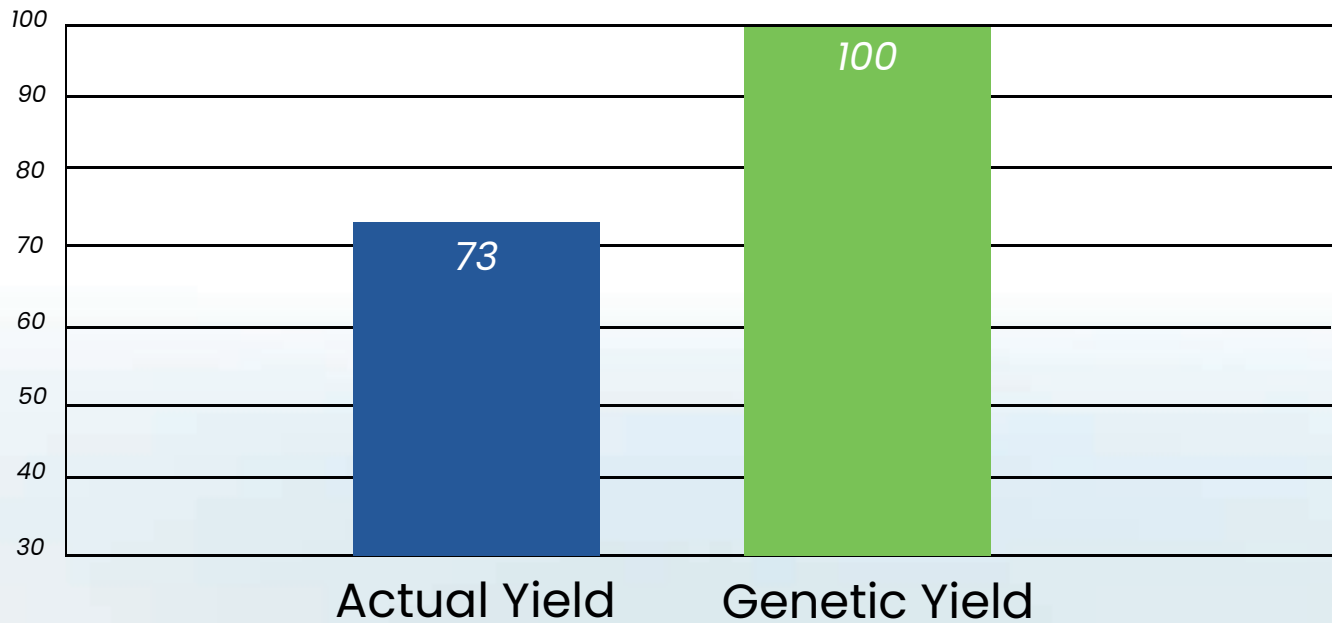
# Actual Yield:

What ultimately accumulates in the harvest bin.



# BRIDGING THE GAP

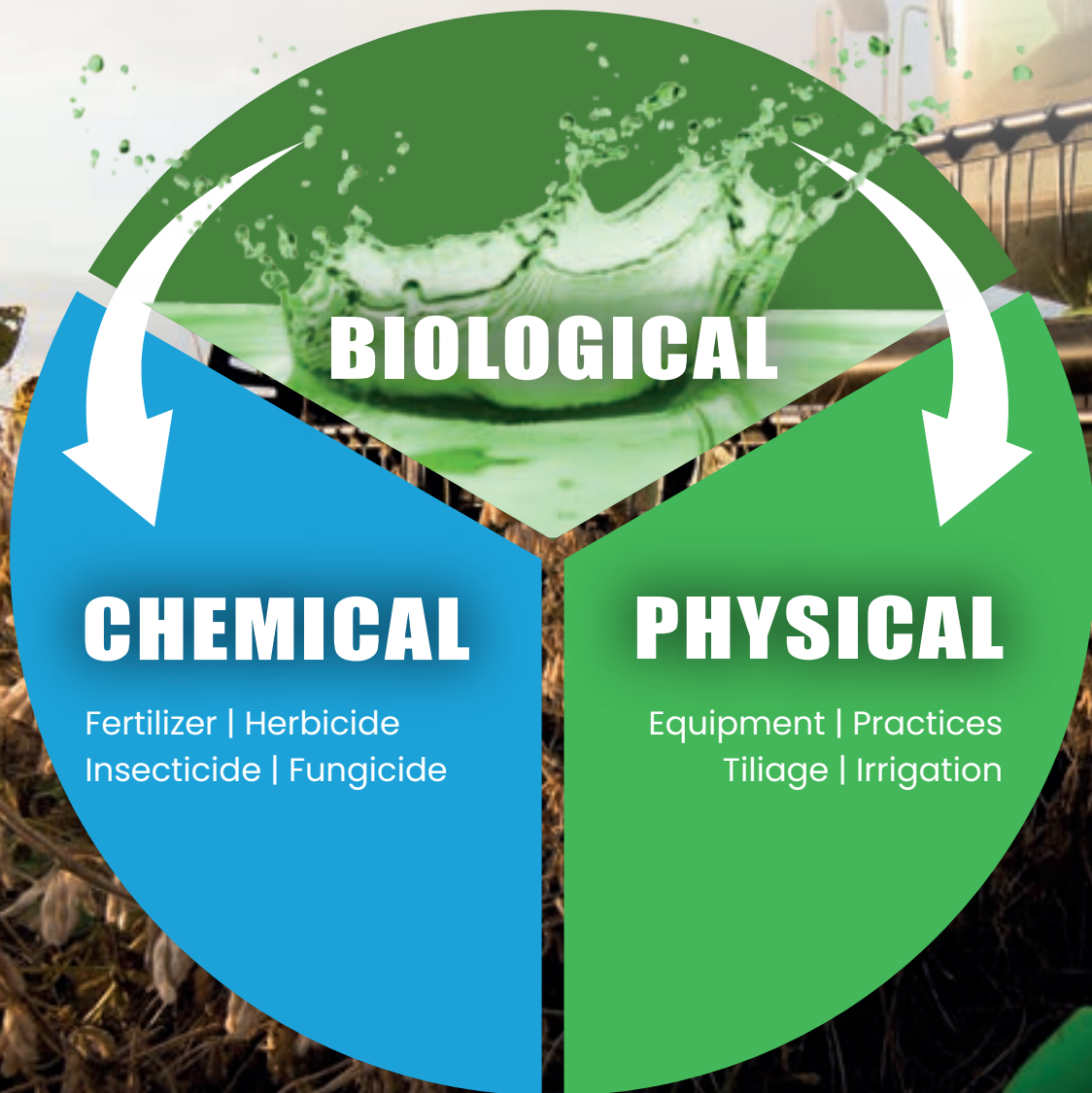
*between actual yield and a plant's genetic potential*





# Components of Crop Production

Carefully planned management practices that consider all aspects of crop production give crops the best path to succeed.



# Biological Component of Crop Production

While the physical and chemical elements of crop production are significant and have led to substantial advancements in agricultural yields, the scientific community is increasingly recognizing the importance of a third factor: the biological component. This component is essential for maximizing production efficiencies.



Mahdi Al-Kaisi, professor of soil management at Iowa State University, describes soil health as the ideal balance of the soil's biological, physical, and chemical activities.

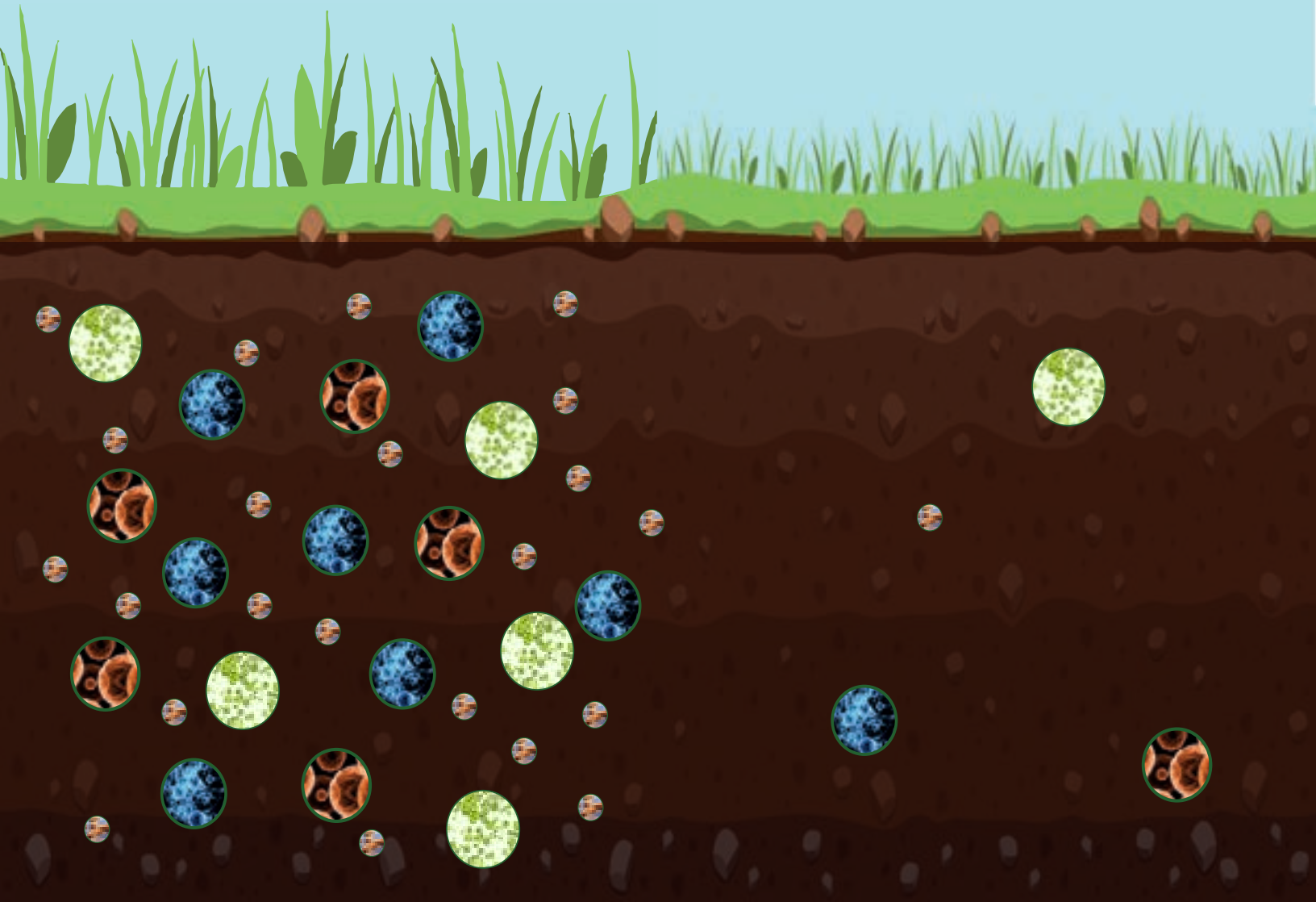


# Biologically Active Soil

VS

# Biologically Deficient Soil

It is evident that when crop management focuses solely on the physical and chemical aspects of production while neglecting the crucial biological component, our soils become biologically deficient, limiting the plant's ability to reach its full genetic yield potential.



# Microorganisms' Role

*"Soil organisms support plant health, as they decompose organic matter, cycle nutrients enhance soil structure, and control the populations of soil organisms including crop pests."*

*Elaine R. Ingham, Oregon State University*



Management decisions that **INCREASE**  
biological activity in the soil will directly  
influence the health of soil and plants.





# Benefits of Increased Microbial Activity

01

## **Nutrient Availability:**

Boosts in nutrient mineralization and availability in the soil.

02

## **Plant Uptake Efficiency:**

Enhances nutrient absorption by plants.

03

## **Soil Quality:**

Improves soil structure and moisture retention.

04

## **Root Development:**

Enhances soil root growth and development.

05

## **Hormonal Balance:**

Increases the production of natural plant growth hormones.

06

## **Plant Health & Vigor:**

Enhances overall plant health, growth, vigor, and quality.

07

## **Natural Plant Defense:**

Strengthens plant defenses against fungal diseases, soil-borne pathogens, and environmental stresses such as salt, pH imbalances, heat, drought, and waterlogged soils.

The infographic features a central white circle with the title 'Benefits of Biologically Active Soil'. Surrounding this circle are three white, fan-shaped segments, each containing a numbered blue pentagon and a text block. The background is a dense field of green corn plants.

## Benefits of Biologically Active Soil

### Fertilizer Efficiency:

Applied fertilizers become readily available before leaching, volatilization, or tie-up concerns.

01

02

### Rapid Decomposition

Residue breaks down much faster, converting into organic matter.

03

### Soil Structure Improvement

Physical characteristics of soil, such as compaction, change, and increased aeration, occur.



# DIG DEEPER

CULTIVATE MICROBES, NOT JUST CROPS

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For improved yield and greater profits, focus on the biological system of your soil and plants.

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