

Seed treatments for nematode management

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Nematicides currently available in cotton

Fumigants

Telone, K-Pam, Vapam



Nematicides currently available in cotton

Non-fumigants

Temik, Vydate



Nematicides currently available in cotton

Seed Treatments

Avicta Complete Cotton

Aeris Seed Applied-System



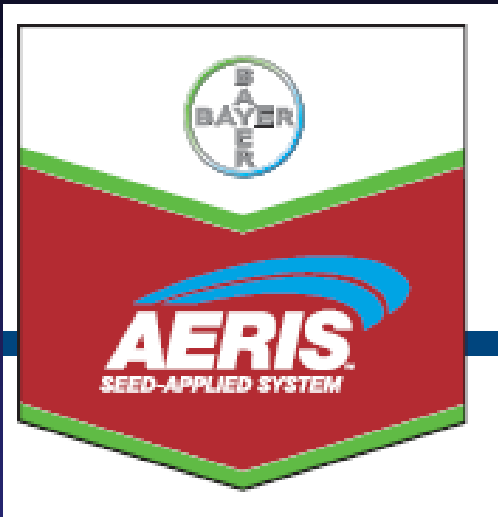
Seed treatments



Avicta Complete Pak (Cotton)

- ▶ Insecticide (Cruiser)
- ▶ Nematicide (Avicta)
- ▶ Fungicide (Dynasty CST for control of Pythium, Rhizoctonia, and Fusarium)

Seed treatments



AERIS Seed-Applied System

- ▶ Insecticide (imidacloprid or Gaucho Grande)
- ▶ Nematicide (thiodicarb)
- ▶ Optional fungicide (Trilex Advanced for control of Pythium, Rhizoctonia, Fusarium, or Thielaviopsis)

Seed Treatment Nematicides

Why would you use them to protect cotton?

How effective are they?

When should they be used?

Why would you use them to protect cotton?

- ▶ **Ease of application**
- ▶ **Timeliness**
- ▶ **Can provide multiple types of protection (insects, diseases, and nematodes)**

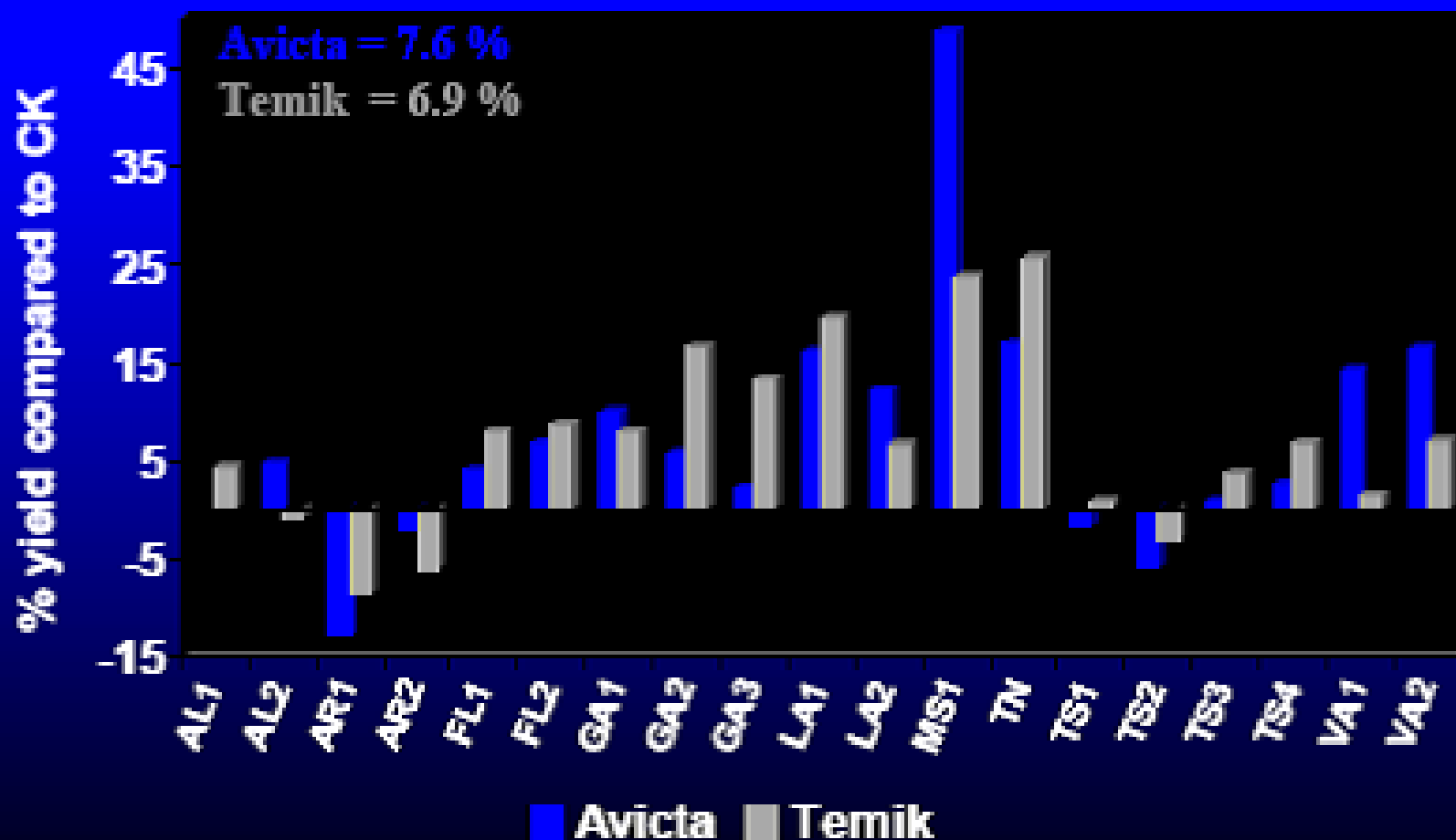
How effective are they?



Effectiveness →

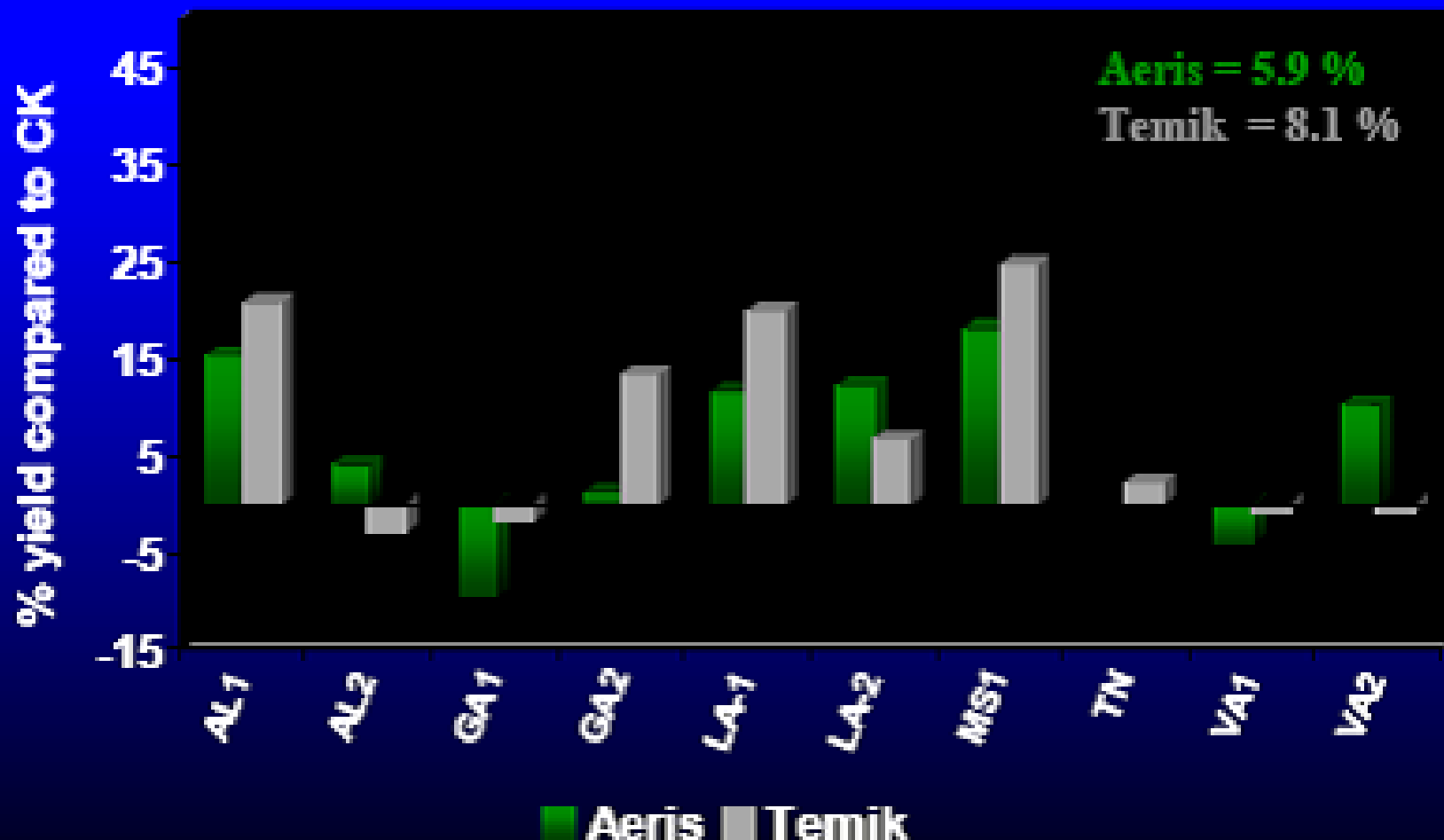
Yield response of Avicta and Temik 2006

AL, AR, FL, LA, MS, TN, TX, VA



Yield response of Aeris and Temik 2006

AL, GA, LA, MS, TN, VA



When should they be used?

- ▶ **Only for low- maybe moderate levels of nematodes**
- ▶ **Success will depend on type and levels of nematode and damage potential of soil types within a field**



Severe nematode damage





Light nematode damage



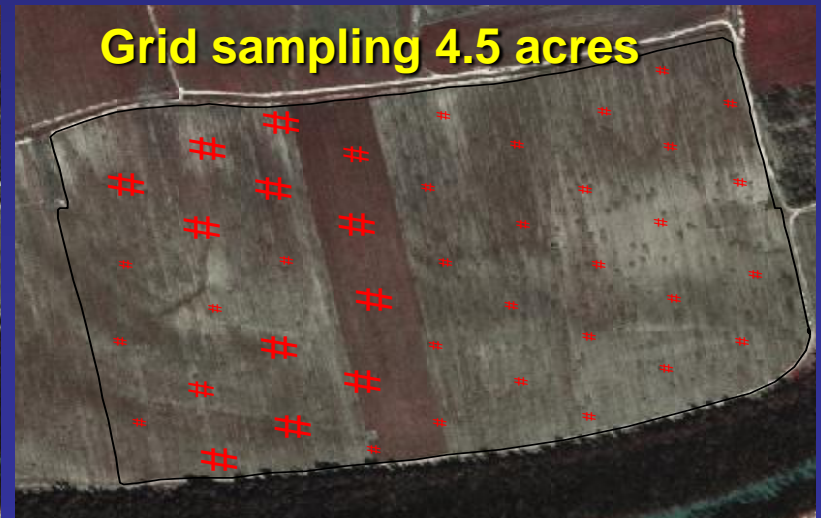
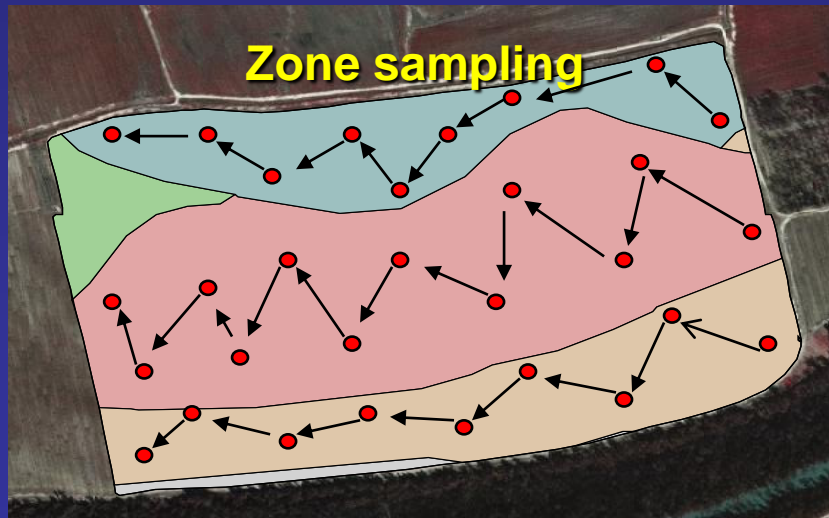
When to use seed treatment nematicides

► After crop rotation

Crop	Reniform	Root-knot
Cotton	S	S
Corn	R	S
Milo	R	R
Peanut	R	R
Soybean	S-R	S-R
Sweet potato	S	S
Sugarcane	R	S-R
Rice	R	R
Vegetables	S	S

When to use seed treatment nematicides

- ▶ In fields which have been sampled for nematodes (known levels and types)

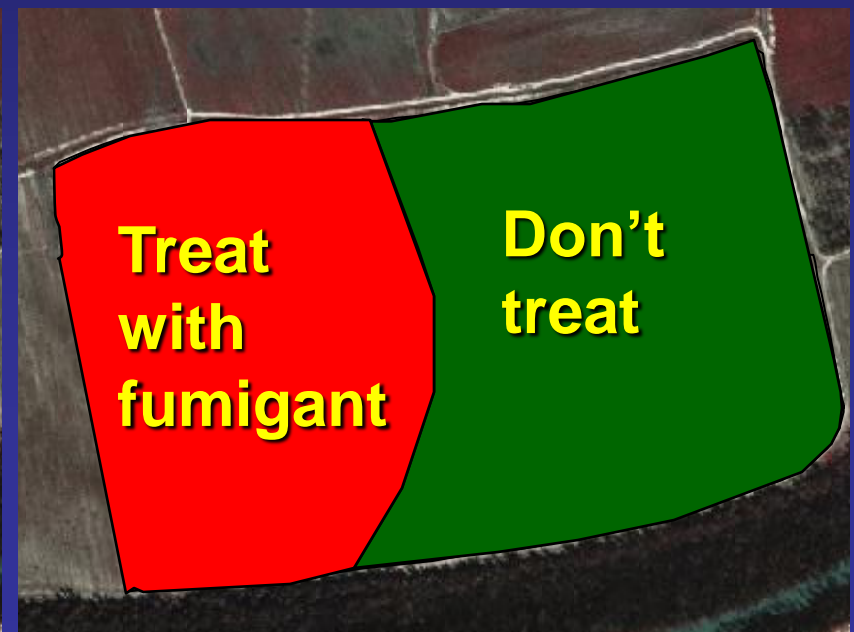
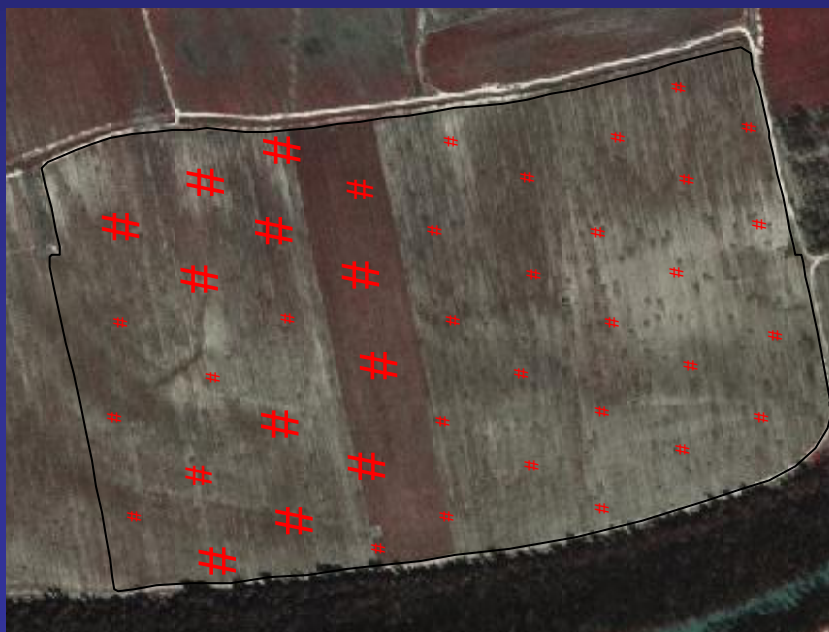


When to use seed treatment nematicides

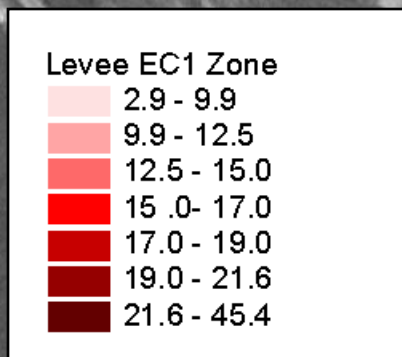
- ▶ **In fields where nematode problems have not been observed and yields are high**
- ▶ **If you plan on supplementing with some other type of nematicide**

Options to use with a seed treatment nematicide

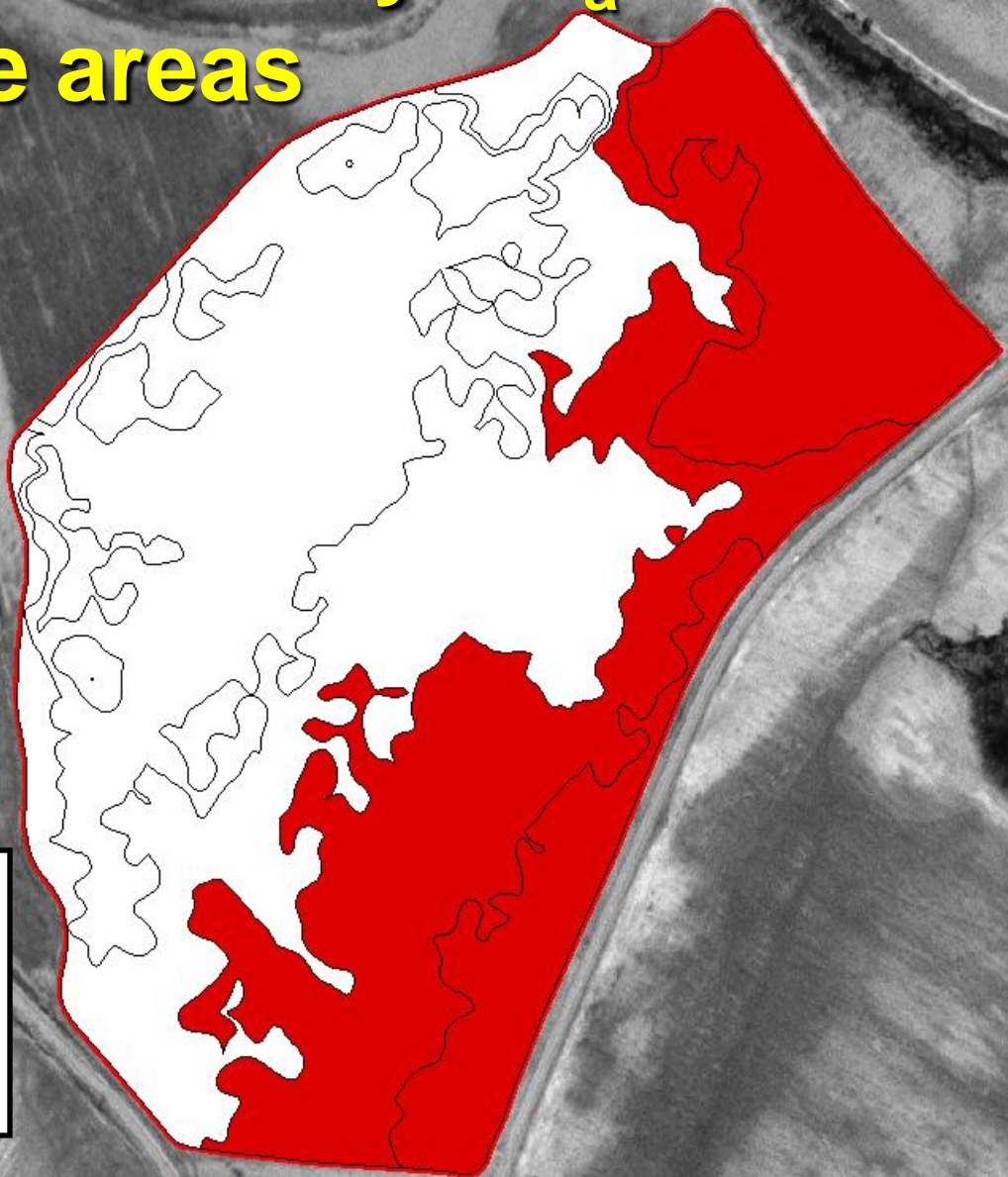
- ▶ Preplant fumigant- Treat really bad areas in a field ahead of time





Management zones by EC_a



Management zones by EC_a and response areas



Telone treatment

-  Treat 33.6 Acres
-  Do Not Treat 48.4 Acres

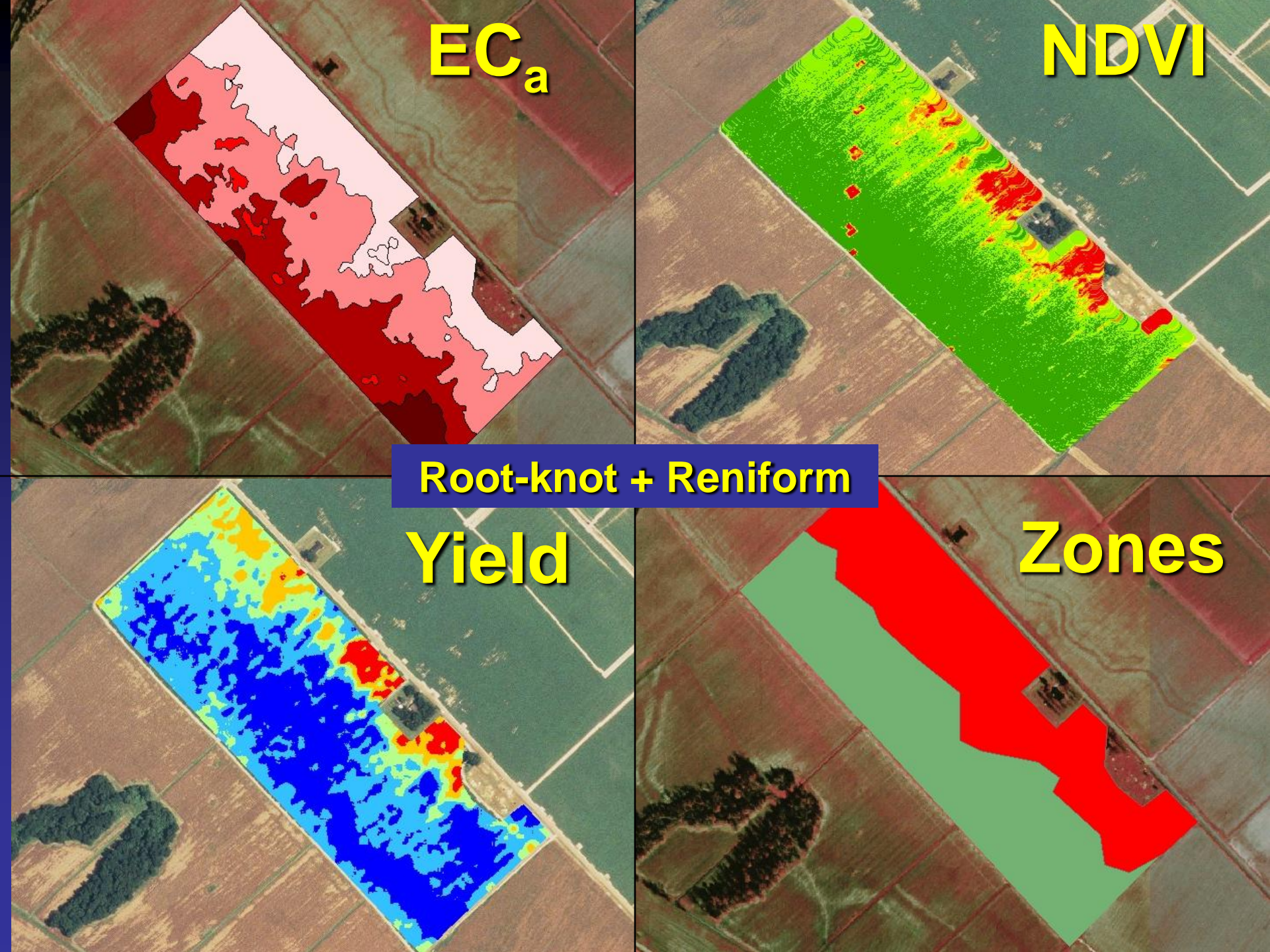
EC_a

NDVI

Root-knot + Reniform

Yield

Zones



Options to use with a seed treatment nematicide

- ▶ **Telone applied 7 days ahead of time but needs to be injected 12-14 inches beneath the row**
- ▶ **K-pam or Vapam need to be injected 21 days ahead of planting**

Options to use with a seed treatment nematicide

- ▶ **Combination with another nematicide**
 - Sidedress Temik
 - Vydate at pinhead square