

Supplying Nitrogen & Other Key Nutrients to Organic Orchards

Moderator: Dain Craiver, Crave Organics

Panel: Mark LaPierre, Wilbur-Ellis

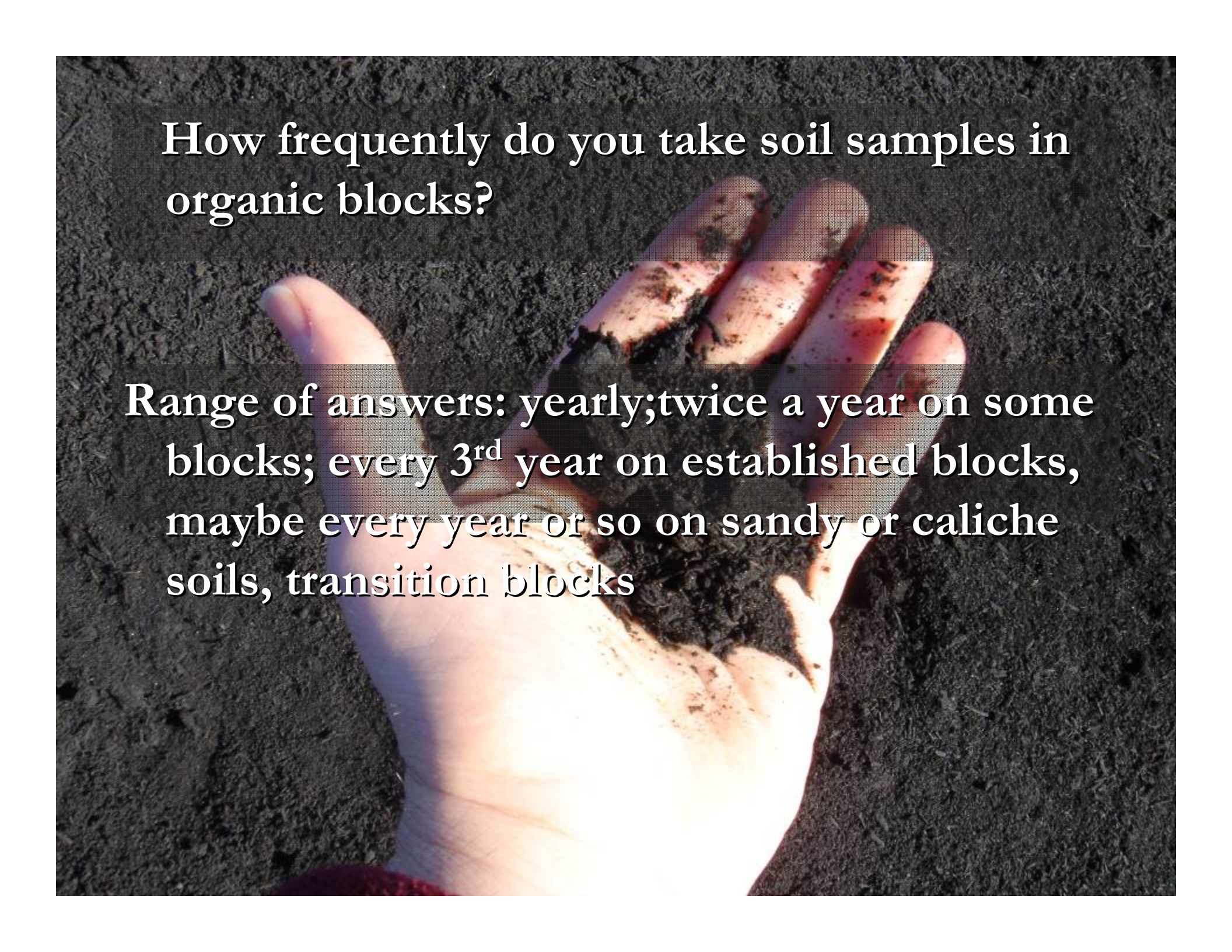
Mike Hodge, Cascade Ag Services

Mike Robinson, Double Diamond Fruit



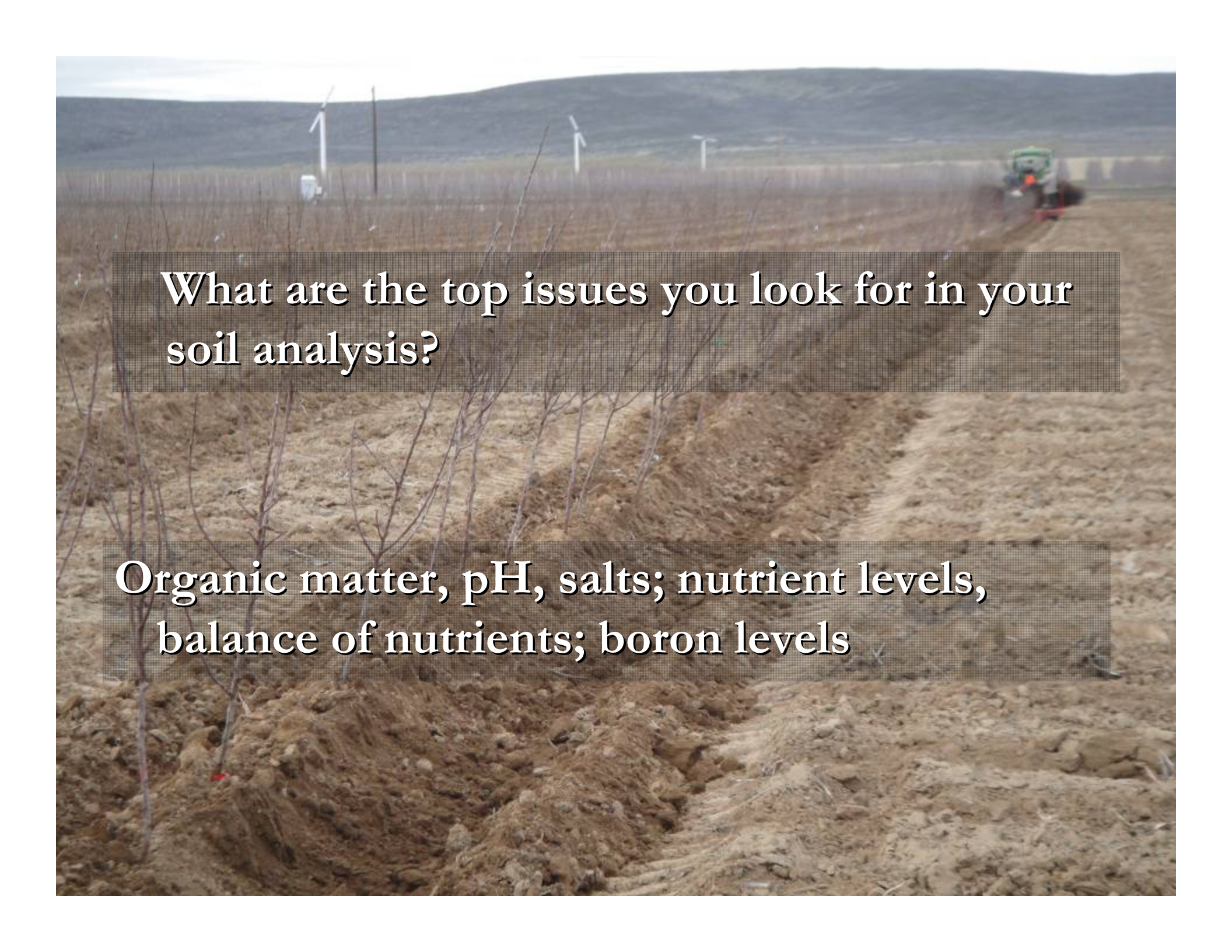
In your first years using organic fertilizers, what was your biggest learning curve experience?

Different release rates for organic sources, difference between total and available, timing of release. Often overestimated amount that would be available.

A close-up photograph of a person's hand holding a large amount of dark, rich soil. The hand is positioned in the center-right of the frame, with fingers slightly curled. The soil is piled up on the palm and fingers. The background is a vast expanse of the same dark soil, creating a textured, monochromatic backdrop. The lighting is bright, highlighting the texture of the soil and the skin of the hand.

How frequently do you take soil samples in organic blocks?

Range of answers: yearly; twice a year on some blocks; every 3rd year on established blocks, maybe every year or so on sandy or caliche soils, transition blocks

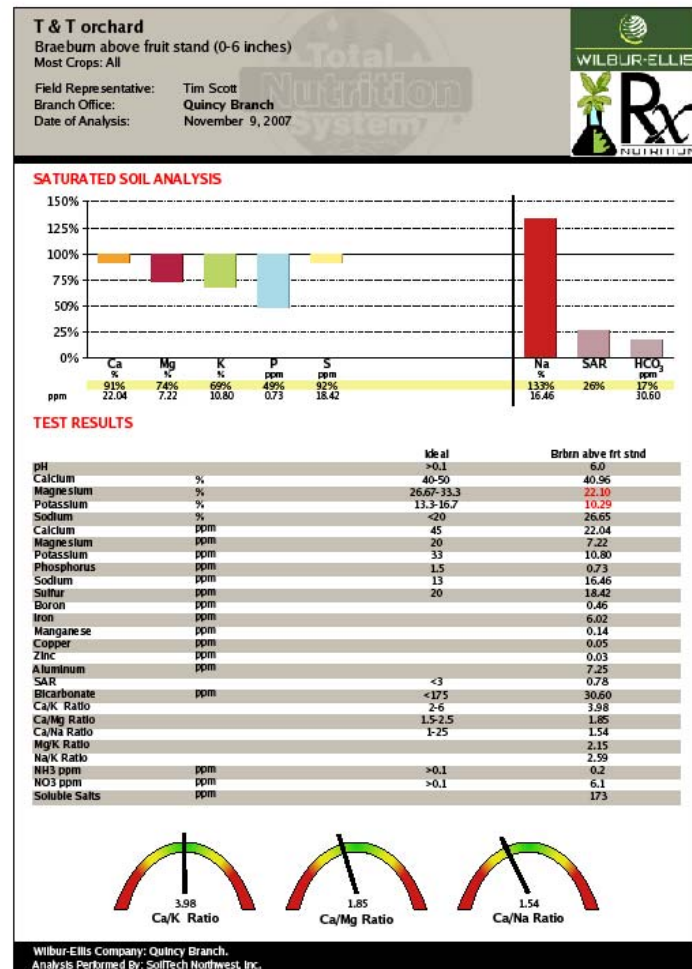


What are the top issues you look for in your soil analysis?

Organic matter, pH, salts; nutrient levels, balance of nutrients; boron levels

Do you utilize standard soil analysis and/or use any “alternative” soil analysis?


Standard; both standard (fall) and saturated paste extract (spring)





How frequently do you take leaf samples?

Annually or semi-annually in problem blocks,
otherwise biennially in established blocks;
not much, can see problems visually; prefer
soil analysis coupled with fruit analysis

A large, conical pile of dark brown, rich organic fertilizer sits in a field. In the background, a row of green trees stretches across the horizon under a clear blue sky. The ground around the pile is a mix of dirt and gravel.

What is your main form(s) of soil applied organic fertilizer Nitrogen that you apply to supply Nitrogen to the tree?

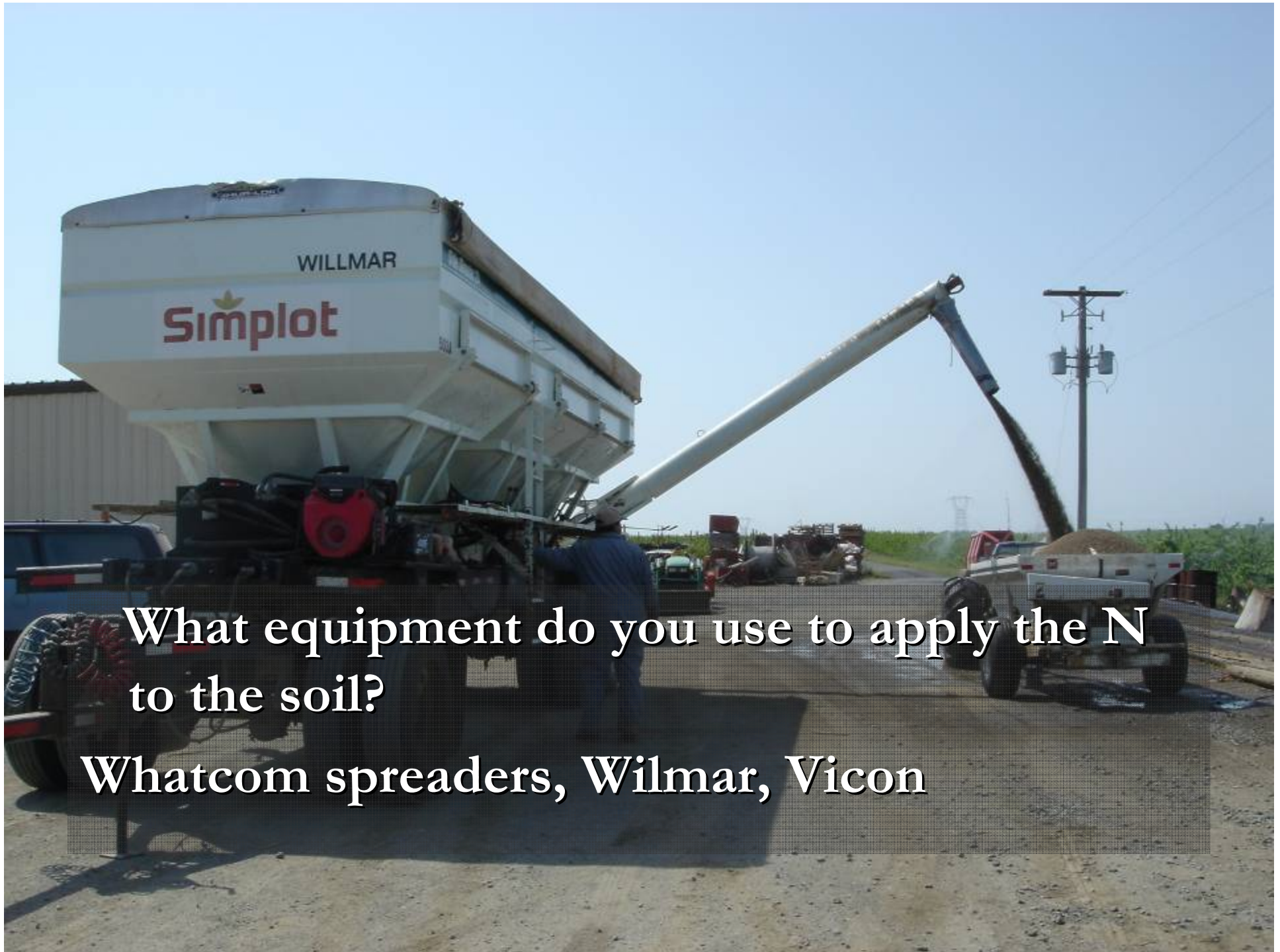
Chicken manure compost, mint compost;
chicken plus feathermeal and bloodmeal;
fish product through drip if needed

A red tractor with a trailer is parked on a gravel surface next to a large, dark brown pile of compost. The background shows a line of green trees under a blue sky with light clouds.

Amendments build up a reservoir of nutrients
that releases slowly into the soil

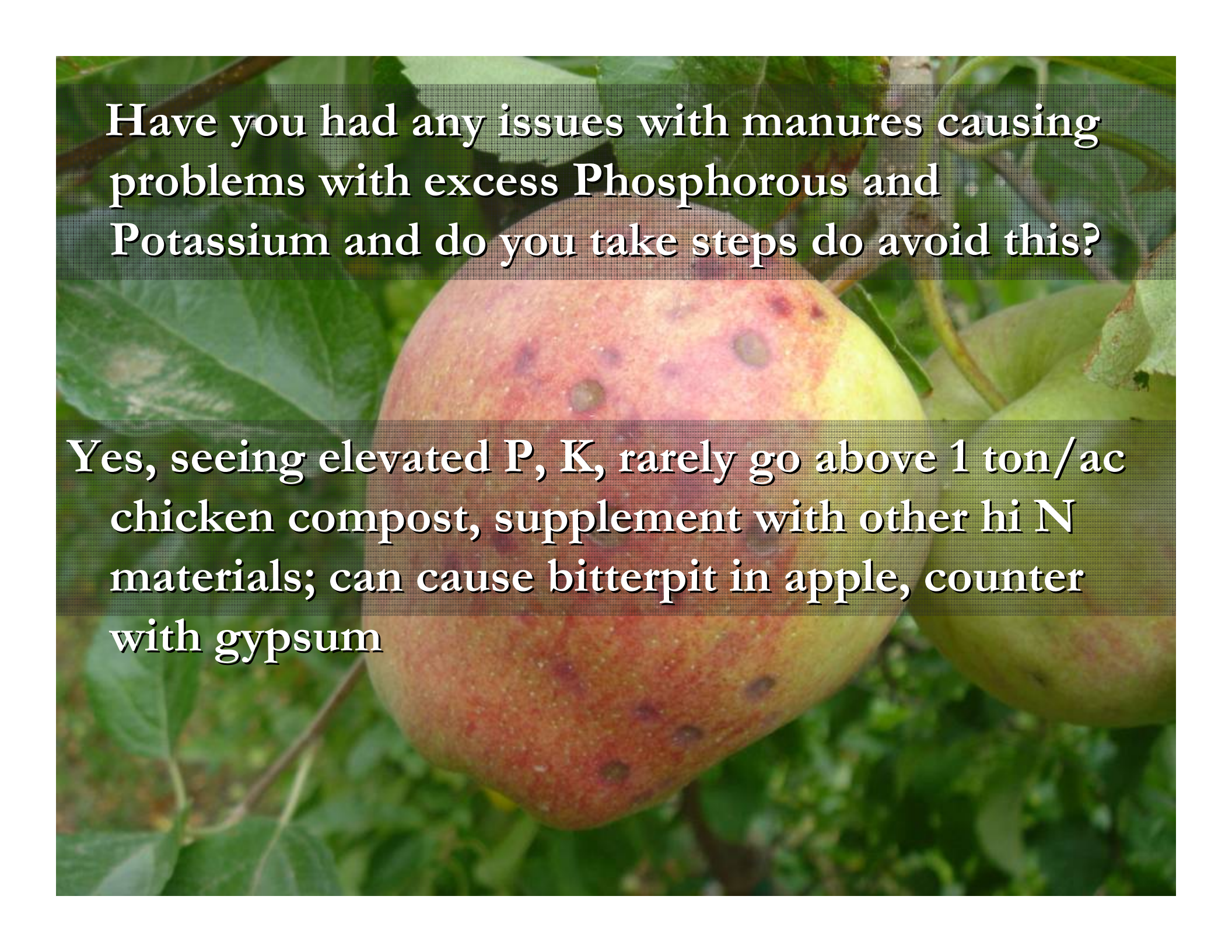
Has this been your experience?

Yes, with compost, see the accumulated
contribution over years, now backing off N
inputs; no really, backed off on compost,
saw reduced tree growth the next year



What equipment do you use to apply the N to the soil?

Whatcom spreaders, Wilmar, Vicon



Have you had any issues with manures causing problems with excess Phosphorous and Potassium and do you take steps to avoid this?

Yes, seeing elevated P, K, rarely go above 1 ton/ac chicken compost, supplement with other hi N materials; can cause bitterpit in apple, counter with gypsum



Do you apply foliar N?

If so, what product(s), how much and how many applications?

Some fish in early spring; fish or poultry peptone at pre-pink and after hand thin; no



How much total N do you apply to a typical
Gala orchard per season?

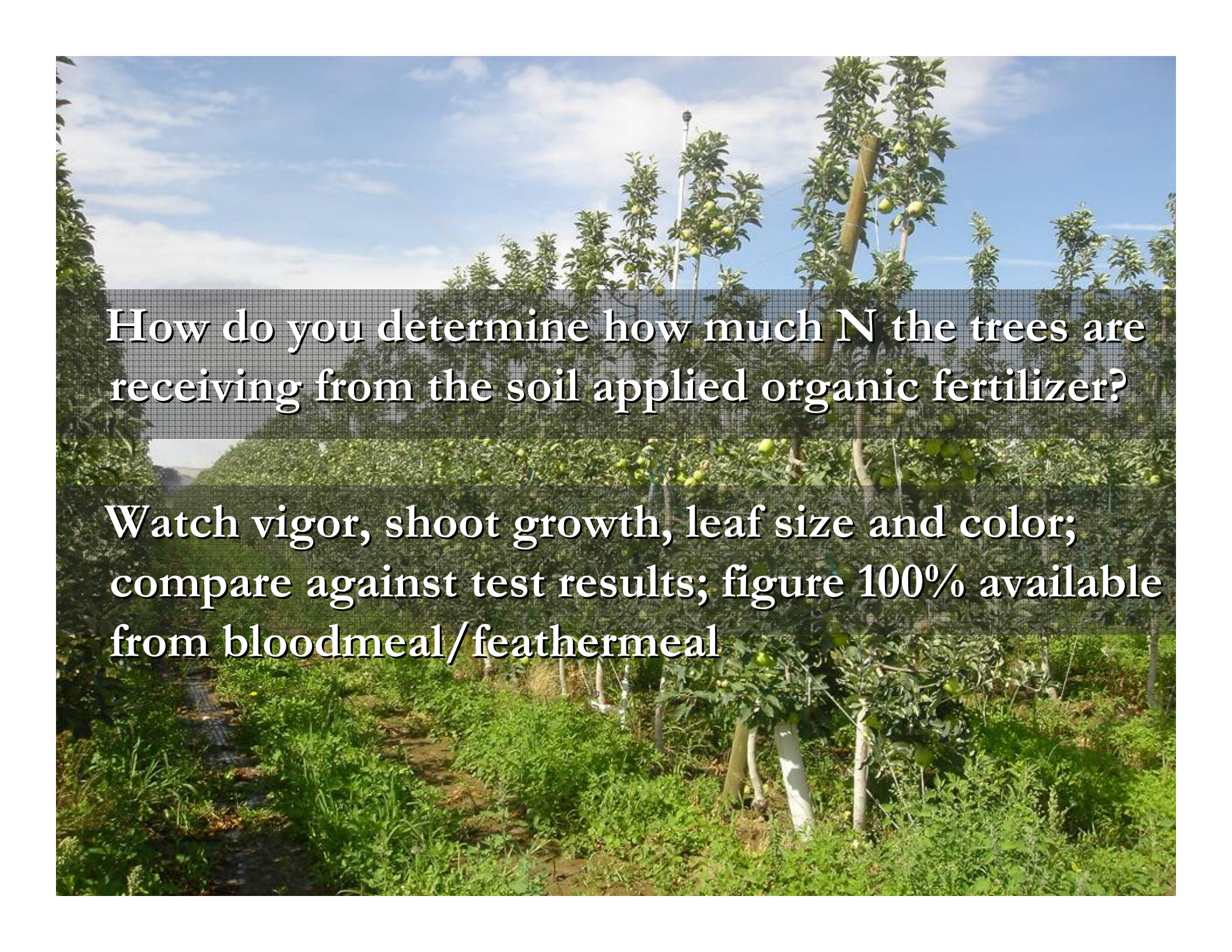
How many applications?

60-120 lb/ac total N; split fall and spring; 40-50
lb N/ac early May as feathermeal,
bloodmeal



How much total N do you apply to a typical Fuji orchard per season?
How many applications?

More variable rate; 60-80 lb/ac; 1-2 application dates



How do you determine how much N the trees are receiving from the soil applied organic fertilizer?

Watch vigor, shoot growth, leaf size and color; compare against test results; figure 100% available from bloodmeal/feathermeal



Do you utilize legume cover crops to supply Nitrogen?

If so, what kind do you grow and how much of your Nitrogen budget does it supply?

Yes and no, rodents are a big factor; supplies 20 lb N/ac; yes with mow and blow, get 20-50% of N; clover, alfalfa



THANK YOU!