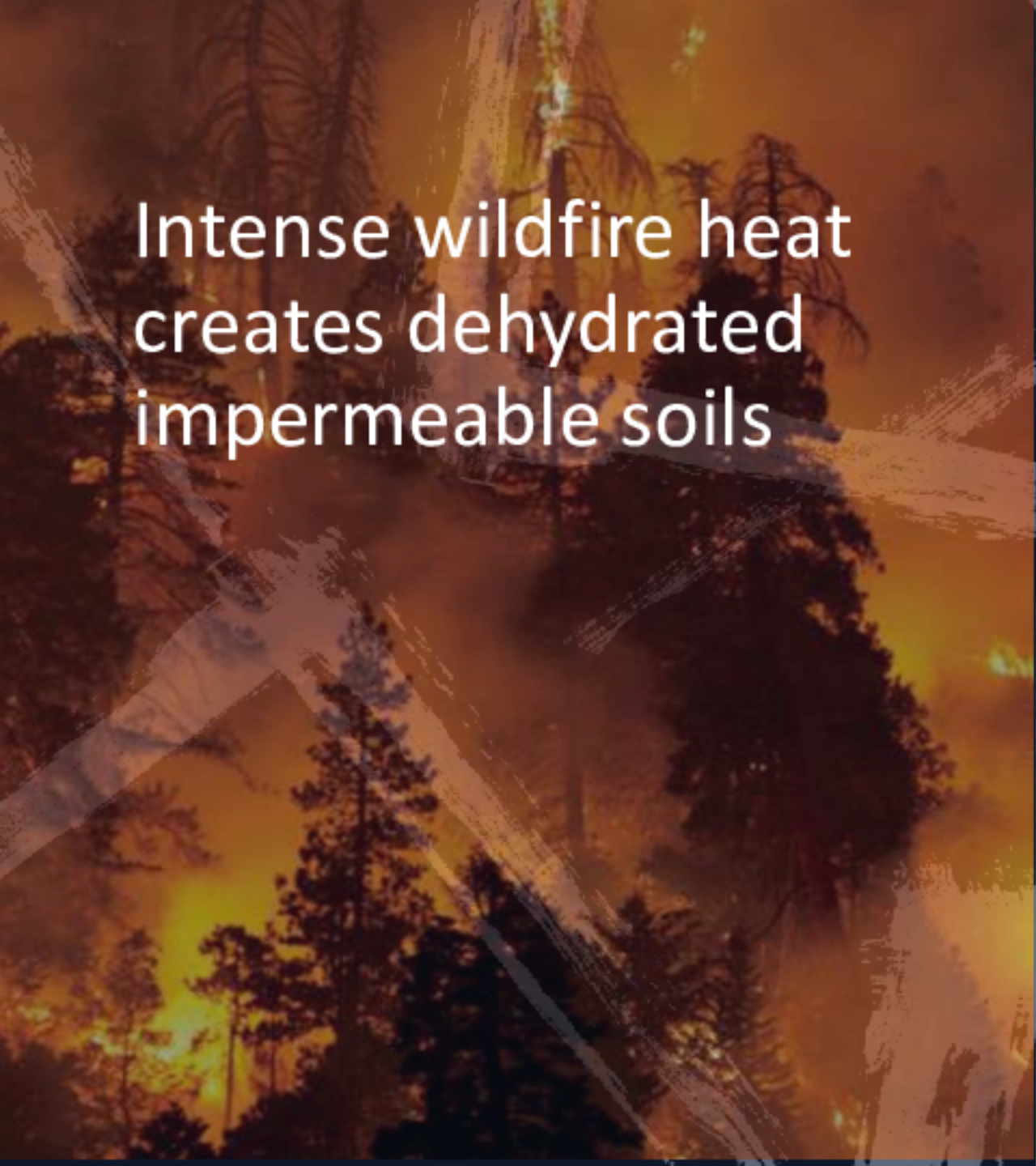




AscoGel


For mitigating flooding
and landslides after
the effects of wildfires





Intense wildfire heat
creates dehydrated
impermeable soils



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- These are water repellent (hydrophobic) soils
 - Reduced evapotranspiration due to loss of plants
 - Increased water run off and soil instability
 - Increased risk of floods and landslides



Hydrophobic soils as a result of wildfires



Plant materials that burn hot release a waxy substance that penetrates the soil while still in gas form.

It takes very high temperatures to produce this gas which coats soil particles when it cools and becomes solid.

To the naked eye, hydrophobic soils look like their non-hydrophobic counterparts.

But biologically speaking, they have now become latent disaster zones.





Latent disaster zones

- **Hydrophobic burn-scarred soils are as water repellent as concrete surfaces**
- **It takes much less rainfall to cause a flash flood in post-fire landscapes**
- **Runoff caused by rainfall on water-shedding soils can also cause the loss of fertile topsoil**
- **Types of soil and the intensity of wildfires determine how deeply hydrophobia penetrates, and how long unassisted recovery will take**



This is why landslides and floods often follow wildfires

- Paradoxically, the fastest draining soils (light, sandy soils with large pores) are the most prone to post-fire hydrophobicity because they transmit the heat more easily than heavy, dense, clay soils
- The depth of hydrophobic soils can range from one-half inch to three inches
- In some cases, the water repellent soil layer lies a few inches under the soil surface
- Hydrophobic soils can take between 1 to 6 years to recover their ability to filtrate rainfall and to fully sustain plant and soil life





Replanting damaged areas

- Natural regeneration of forests devastated by wildfires can take up to 20 years if not assisted
- Surface cover is essential for carbon sequestration
- Reduces impact of raindrops falling on bare soils
- Shelters soil surface particles from wind erosion
- Reduces speed of water flowing over the land
- Root structures protect soil from land movement





AscoGel

Holds up to 400 times its weight in water and reduces requirement for irrigation or fertigation

Unique, organic biostimulant formulation :-

- Saponins release soils from hydrophobicity
- Betaines improve plant recovery from stress
- Polysaccharides (sugars) feed soil and plant life
- Alginic acids improve plant nutrient assimilation



How to use AscoGel

- Add 2.5 lb per 100 gallons of water
- Use 250 gallons to plant 1000 trees per acre
- Pour 0.25 gallon of **AscoGel** into each hole prior to planting tree





AscoGel releases plants from arid,
saline and hydrophobic soil conditions

