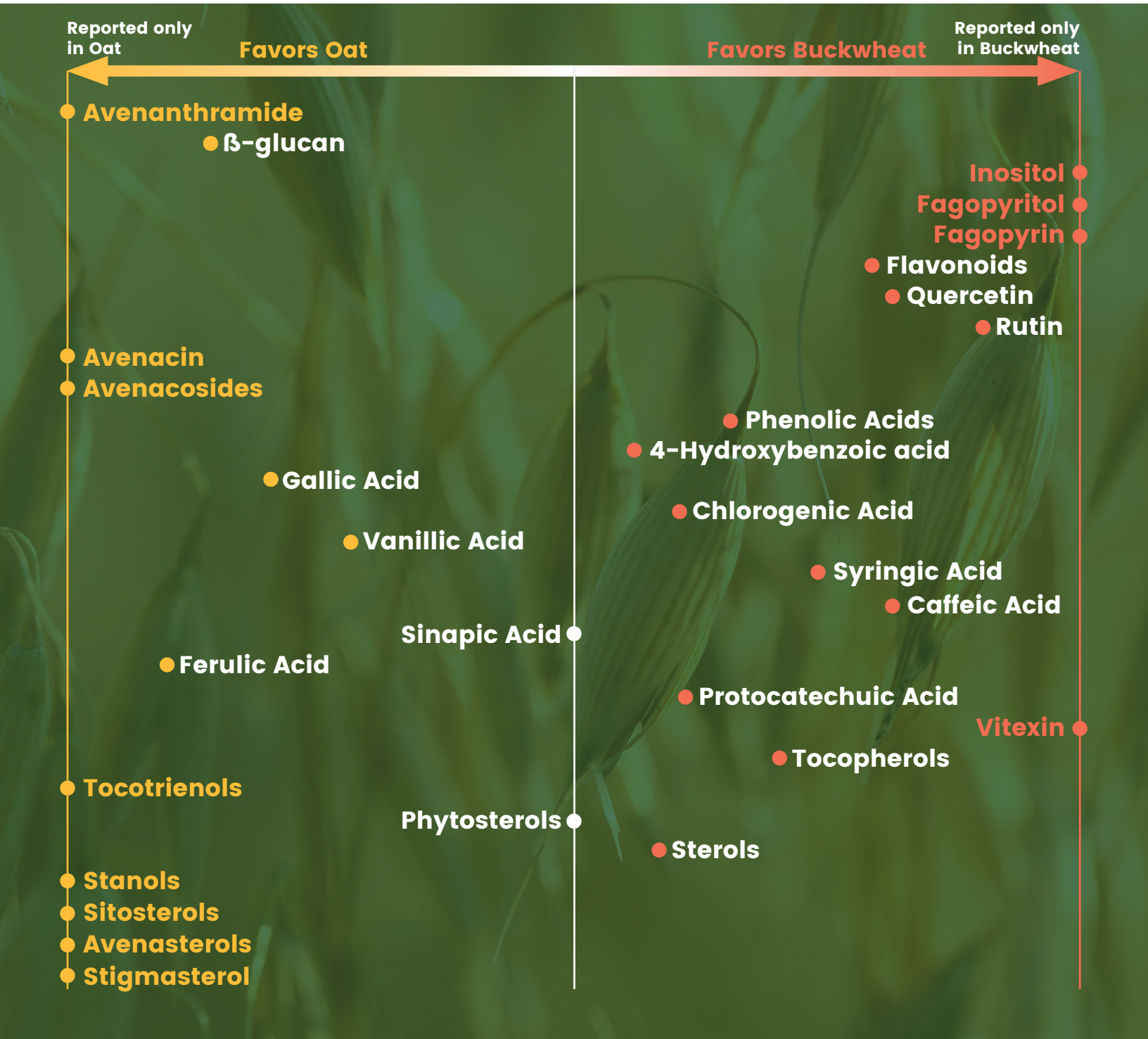
Research Spotlight

PHYTONUTRIENTS IN

OATS & BUCKWHEAT

A Systematic Review of

Phytochemicals in Oat and Buckwheat



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AIM

Better understand the nutrient and phytochemical content of two gluten free nutrient and phytoactive rich whole grains - oat and buckwheat - to provide insight into the plants' health effects as well as compare between the two plants.

METHODS

Systematic review of published studies evaluating and comparing the presence and levels of nutrients and bioactive components in oat and buckwheat to provide a comprehensive nutritional profile and connections to human health.

Studies were included in review if they 1) used samples of oat and/or buckwheat and 2) evaluated nutrient and bioactive compounds.

OUTCOMES

154

Studies

The review identified 154 high-quality studies detailing the chemical composition of oat and buckwheat.

178

Chemical Compounds

178 bioactive compounds were reported in oat and 113 were reported in buckwheat.

Compound classes included phenolic compounds, flavonoids, polyphenolics, avenanthramides, tocols, phytosterols and fatty acids, polysaccharides, and saponins.

The two plants both contained many different known phytoactives, but they deliver different compounds and differing concentrations of many compounds.

Each crop is an effective combination of essential nutrients and unique phytoactive compounds.

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