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A new TR was produced since the CS performed its summary of vitamins B1, C, and E for the spring 2015 meeting. The TR states that fermentation using genetically engineered organisms may be used to produce all three vitamins.<sup>44</sup>

The TR states that vitamin B1 appears to be ineffective for its use as a root growth stimulator<sup>45</sup> and lists a number of alternative materials and practices, including “encouraging the health of existing soil fungi and supplementing soils with exogenous sources of beneficial fungi that release plant nutrients and growth factors to the soil may naturally stimulate root growth in transplanted crops.”<sup>46</sup> With regard to vitamins C and E, the TR states, “No natural substances were identified as alternatives for the antioxidants vitamins C and E in organic crop production. However, the utility of external sources of these substances is uncertain due to the paucity of literature describing practical applications of these substances in agricultural settings.”<sup>47</sup> The TR also says “horticultural crops grown under lower nitrogen supply and less frequent irrigation may be preferred due to the high concentrations of vitamin C and low concentrations of nitrate.”<sup>48</sup>

## Conclusion

**Beyond Pesticides supports the sunseting of vitamins B1, C, and E in crop production. The vitamins may be produced by genetically engineered organisms and the TR finds them ineffective for the purposes for which they are used, listing alternative substances for vitamin B1 and alternative practices for all three.**

Thank you for your consideration of these comments.

Sincerely,



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Board of Directors

<sup>44</sup> Lines 348-390.

<sup>45</sup> Lines 108-111; 208.

<sup>46</sup> Lines 649-692.

<sup>47</sup> Lines 693-695.

<sup>48</sup> Lines 759-760.