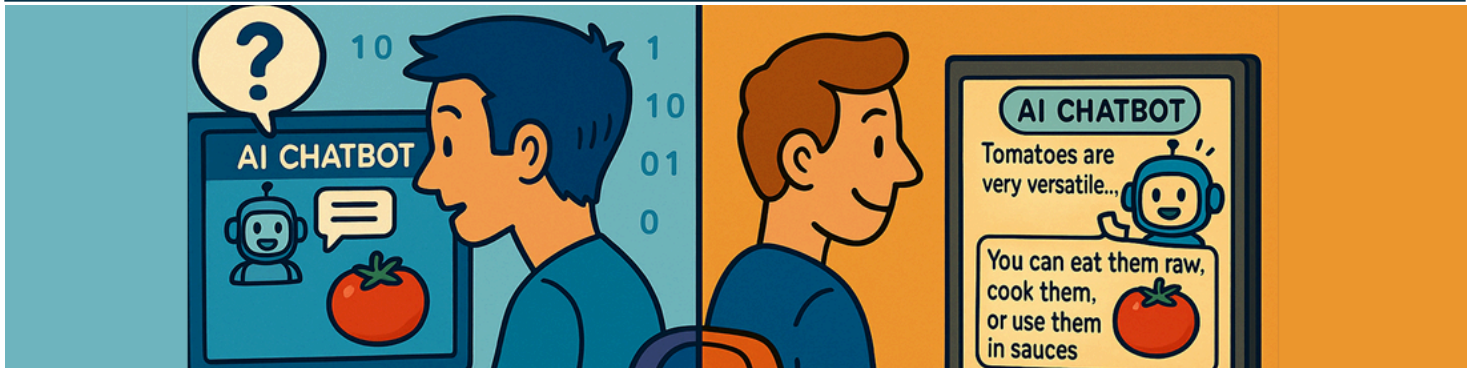


Case Study: AI Tool: for a tomato producer



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Overview

Our task here was to explore AI-driven solutions for enhancing engagement on the website of a large tomato production company, with a focus on providing value to some key industry audiences—including growers, shippers, distributors, retailers, foodservice operators, and consumers. The goal is to identify practical, lightweight AI integrations that can improve user experience, encourage deeper interaction with their content, and streamline access to information through tools like conversational assistants, personalized content generation, and smart data insights. These ideas will leverage the OpenAI API and be designed to integrate into their existing site infrastructure.

Potential Solutions

We're exploring AI integrations such as a conversational assistant to help users quickly find recipes, growing tips, and shipping resources; a menu and recipe generator tailored for foodservice operators; and a grower dashboard assistant to summarize reports or surface relevant trends. Other ideas include an "Ask a Tomato Expert" tool for consumers and a story generator that helps growers create sharable bios for marketing. All solutions aim to increase engagement by making the client's deep content library more interactive, accessible, and personalized. Note: much of this depends on data availability. We could pull from their proprietary data (in different formats, databases, PDFs, articles, online existing web content etc.). We can also pull from the Web - of course the data it would be pulling and the responses received would be more open to potential mistakes when sourcing data from the general public.

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1. Conversational Search Assistant

Audience: All (esp. consumers, retailers, foodservice)

Concept: Add a ChatGPT-powered assistant that answers natural-language questions like:

“What’s the best way to store tomatoes for foodservice?”

“What tomato varieties are best for fries?”

“Where can I find approved growers in my region?”

It turns static content into a dynamic Q&A, improving time-on-site and usability.

2. Grower/Shipper Dashboard Insights Bot

Audience: Growers, Shippers, Distributors

Concept: Private login area with an AI assistant that can summarize crop reports, generate planting/harvest reminders, or even analyze basic market trends using uploaded Excel/CSV data.

Example: “Summarize the past 3 months of shipping trends by region.” (Assuming this data is available somewhere).

3. Retail/Foodservice Recipe and Menu Generator

Audience: Retailers, Foodservice Operators

Concept: AI that helps plan seasonal recipes, promotions, or tomato-based menu items using approved content.

“Suggest a week of tomato side dishes for school cafeterias.”

“Give me 3 gluten-free tomato recipes with under 10 ingredients.”

Include printable formats and nutrition info.

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4. Grower Story Generator

Audience: Consumers, Retailers, Growers

Concept: Let growers submit their info (farm name, methods, location, photo), and an OpenAI script generates a short polished grower bio/story to be featured online or shared on social.

Encourages UGC and strengthens farmer-retailer-consumer connection.

5. "Ask a tomato Expert" Chat

Audience: Consumers

Concept: Embed a ChatGPT-style bot trained on their content to answer home cooks' and curious users' questions:

"Can I freeze mashed tomatoes?"

"Why are my tomatoes turning green?"

Could optionally escalate tough Qs to a real team member.

Tech stack

OpenAI API (ChatGPT/GPT-4-turbo)

Used for anything generative: answering questions, generating grower bios, summarizing reports, creating recipes, etc.

Frontend integration

Embedded widgets or custom UI (Vue/WordPress blocks—depending on how the site's built). You'd pipe user prompts to the API and return the response in real time.

Optional fine-tuning or RAG (retrieval-augmented generation)

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For domain-specific results (like using only their content), you'd:

Embed and vectorize their PDFs, recipes, or grower info using something like Pinecone.

Pair that with OpenAI's API so the model references accurate, internal content.

Hosting Consideration

We will use backend logic— Laravel to:

Handle API calls securely

Manage rate limits, logging, and costs

Possibly gate access (e.g., behind grower logins)

So in short: OpenAI's API will do the brainwork, while others handle the UI/UX, prompts, hosting logic, and data boundaries.