

**Sandponics/IAVs Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Produce (Fruits & Vegetables and Fishes), By Application (Commercial, Residential, and Others), By Region and Competition, 2020-2030F**

Market Report | 2025-09-30 | 185 pages | TechSci Research

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**Report description:**

Market Overview

Global Sandponics/IAVs Market was valued at USD 714.27 million in 2024 and is expected to reach USD 1027.48 million by 2030 with a CAGR of 6.25% during the forecast period. The global market for Sandponics/IAVs is experiencing significant growth, driven by the rising food demand, increase in research and development activities (R&D), and rapid change in the climatic conditions. Sandponics, also known as Integrated Aqua-Vegetable systems (IAVs), is a type of hydroponic system that uses sand as a substrate for plant growth, while integrating aquaculture and hydroponics to create a closed-loop system. It is a sustainable and promising means of cultivating a variety of crops, including vegetables, fruits, and vines.

Moreover, there are other factors which are bolstering the growth of the sandponics/IAVs market such as growing water scarcity, increasing demand for locally grown produce, growing technological advancements, increasing support from government, and others. According to the recently published Global Report on Food Crisis 2022, around 205 million individuals in 45 nations will encounter acute food insecurity and require immediate assistance.

Key Market Drivers

Water-Smart Circular Farming

Sandponics (Integrated Aqua-Vegetable using sand beds) creates a water-efficient ecosystem-fish tanks feed nutrients to plant beds, and water continuously recirculates. This model responds directly to global water scarcity. UN-Water reports agriculture consumes roughly 72% of freshwater withdrawals, and about 4 billion people experience water shortages for at least one month annually. UNESCO echoes this, noting agriculture accounts for ~70% of global water use. As a food source, aquaculture contributes over 51% of global seafood production (~94 million tonnes in 2022), per FAO statistics.

Governments, particularly in arid and densely populated regions, are drawn to systems like Sandponics: they drastically reduce water use, repurpose waste resources, and deliver protein and vegetables simultaneously. Because sand is widely available and

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easy to source, these systems can be built locally, offering resilience against drought. Climate adaptation and urban food security plans now frequently spotlight such circular, low-emission models. Whether for community farms, school gardens, or municipal hubs, Sandponics aligns with public priorities-providing an efficient, sustainable, and aligned response to water stress and food access concerns.

#### Key Market Challenges

##### Regulatory Maze Across Multiple Sectors

Sandponics blur traditional categories-it's simultaneously agriculture, aquaculture, and (in effect) water recycling. But regulatory frameworks remain siloed: fish production requires aquaculture permits, produce must meet food-safety standards, irrigation and plumbing are separately governed, and environmental agencies regulate nutrient and water discharge.

Neither UN-Water nor UNESCO have yet produced integrated guidelines covering such hybrid systems, meaning each project must individually seek permits and approvals across multiple agencies. This slows procurement, particularly for public or funded pilot programs. Vendors often must supply compliance documentation for building codes, food safety (e.g., HACCP-style logs), biosecurity, plumbing, and environmental discharge on a case-by-case basis. Until standards evolve to encompass integrated systems, this regulatory complexity remains a major barrier to streamlined adoption and scalability.

#### Key Market Trends

##### Public Pilots in Urban & Arid Landscapes

Many cities and municipalities are now subsidizing Sandponics pilot sites-community gardens, school farms, or rooftop greenhouses-especially in drought-prone or food-insecure areas. FAO's SOFIA (2024) underscores aquaculture's increasing role in sustainable nutrition, while UN-Water continues to emphasize irrigation challenges.

These pilot programs showcase integrated systems that both feed communities and improve water use efficiency. Their success depends on measurable outcomes: water savings, nutrient capture, food output. Projects with built-in dashboards and audit reports are most attractive to policymakers seeking scalable, high-impact investments. As climate-aware urban planning becomes widespread, Sandponics pilots stand to gain funding and expansion opportunities across sectors.

#### Key Market Players

- [ ] Sandponics Jordan
- [ ] Sumitomo Electric Industries, Ltd.
- [ ] Kiwa
- [ ] Agritecture
- [ ] Sandponic Egypt
- [ ] MyAquaponics PTY Ltd
- [ ] AQ&SA ponics Es
- [ ] HydroGarde
- [ ] GrowUp Urban Farms
- [ ] Practical Aquaponics

#### Report Scope:

In this report, the Global Sandponics/IAVs Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

##### - [ ] Sandponics/IAVs Market, By Produce:

- o Fruits & Vegetables
- o Fishes

##### - [ ] Sandponics/IAVs Market, By Application:

- o Commercial
- o Residential
- o Others

##### - [ ] Sandponics/IAVs Market, By Region:

- o North America
- o United States

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- China
- India
- South Korea
- Japan
- Australia
- o South America
- Brazil
- Argentina
- Colombia
- o Middle East and Africa
- South Africa
- Saudi Arabia
- UAE

#### Competitive Landscape

Company Profiles: Detailed analysis of the major companies presents in the Global Sandponics/IAVs Market.

#### Available Customizations:

Global Sandponics/IAVs Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

#### Company Information

-□Detailed analysis and profiling of additional market players (up to five).

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