

118TH CONGRESS
1ST SESSION

H. R. 4022

To amend the Elementary and Secondary Education Act of 1965 to include indoor agricultural technology as an activity that supports well-rounded education, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 12, 2023

Mr. ESPAILLAT (for himself, Mr. BACON, and Ms. NORTON) introduced the following bill; which was referred to the Committee on Education and the Workforce

A BILL

To amend the Elementary and Secondary Education Act of 1965 to include indoor agricultural technology as an activity that supports well-rounded education, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Harvesting Knowledge
5 Act of 2023”.

1 **SEC. 2. STUDENT SUPPORT AND ACADEMIC ENRICHMENT**
2 **GRANTS.**

3 (a) PROGRAMMING AND ACTIVITIES.—Section
4 4107(a)(3)(C) of the Elementary and Secondary Edu-
5 cation Act of 1965 (20 U.S.C. 7117(a)(3)(C)) is amend-
6 ed—

7 (1) in clause (v), by striking “and” at the end;

8 (2) in clause (vi), by adding “and” after the
9 semicolon; and

10 (3) by adding at the end the following:

11 “(vii) providing hands-on learning and
12 exposure to hydroponic or aquaponic agri-
13 cultural systems by integrating experien-
14 tial, hands-on learning to enhance the stu-
15 dents’ understanding of the STEM sub-
16 jects as they relate to—

17 “(I) agriculture;

18 “(II) sustainability topics (in-
19 cluding climate change, water re-
20 source management, efficient land
21 use, biodiversity, conservation, and
22 sustainable development); and

23 “(III) biology-related topics (in-
24 cluding plant life cycles, functioning
25 of ecosystems, and adaptation);”.

1 (b) DEFINITIONS.—Section 4102 of the Elementary
2 and Secondary Education Act of 1965 (20 U.S.C. 7112)
3 is amended by adding at the end the following:

4 “(9) AEROPONIC TOWER SYSTEM.—The term
5 ‘aeroponic tower system’ means a hydroponic grow-
6 ing system in which plants are grown vertically in an
7 air-based environment where they receive regular
8 misting with water and dissolved nutrients on their
9 stems and roots during the production cycle.

10 “(10) AGRICULTURAL TECHNOLOGY AND ENGI-
11 NEERING SYSTEM.—The term ‘agricultural tech-
12 nology and engineering system’ means a system that
13 includes at least one of the following:

14 “(A) Nutrient technique film system.

15 “(B) Vine crop system.

16 “(C) Aeroponic tower system.

17 “(D) Other systems as determined by the
18 Secretary in consultation with the Secretary of
19 Agriculture.

20 “(11) AQUAPONIC AGRICULTURE SYSTEM.—The
21 term ‘aquaponic agriculture system’ means a plant
22 production system in which the waste produced from
23 farmed fish or other aquatic animals supplies nutri-
24 ents for plants grown hydroponically, which in turn
25 purifies the water.

1 “(12) HYDROPONIC AGRICULTURE SYSTEM.—

2 The term ‘hydroponic agriculture system’ means a
3 plant production system in which plants are grown
4 in a soil-less environment where nutrients are pro-
5 vided by the application of nutrient solutions.

6 “(13) NUTRIENT TECHNIQUE FILM SYSTEM.—

7 The term ‘nutrient technique film system’ means a
8 hydroponic growing system in which a shallow
9 stream of water containing dissolved nutrients is re-
10 circulated past the bare roots of plants in channels
11 during the production cycle.

12 “(14) VINE CROP SYSTEM.—The term ‘vine
13 crop system’ means a hydroponic growing system in
14 which vine crops and other tall fruiting crops (in-
15 cluding tomatoes) are grown vertically to maximize
16 the growing space using recirculating water and dis-
17 solved nutrients.”.

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