

ABSTRAK

Kegiatan kompetisi ilmiah menjadi salah satu sarana dalam mengembangkan kreativitas dan penciptaan inovasi bagi para pelajar khususnya di dunia akademis. World Invention Intellectual Property Associations (WIIPA) bersama dengan Taiwan Invention Products Promotion Association (TIPPA) menyelenggarakan kegiatan kompetisi ilmiah Kaohsiung Invention and Design Expo (KIDE) 2023 sebagai wadah yang menampung inovasi dari seluruh dunia. Penyelenggaraan KIDE 2023 dilaksanakan pada 30 November hingga 2 Desember 2023 di Kaohsiung Exhibition Center (KEC), Taiwan.

Judul ide inovasi yang diajukan yakni "Moringa Oleifera Leaves to utilize Moringa Production from Farmers in Community Groups at the Appropriate Technology Service Post in Pakandangan Sangra Village, Sumenep, Indonesia". Inovasi ini mendapatkan perolehan berupa Bronze Medal on the Category of Personal Care Products dan Special Award from Highly Innovative and Unique Foundation (HIUF) Kingdom of Saudi Arabia.

Konsep yang diterapkan pada ide inovasi ini adalah kebijakan hilirisasi yang menekankan kegiatan ekonomi pada proses mengubah bahan mentah menjadi produk jadi dengan nilai tambah yang lebih tinggi. Potensi sumber daya alam yang dikembangkan untuk meningkatkan nilai ekonomi di sini adalah daun kelor (*moringa oleifera*) yaitu dengan mengubah tanaman ini menjadi bahan aktif deodoran alami. Penelitian ilmiah menunjukkan bahwa daun kelor mengandung sejumlah senyawa aktif seperti *saponin*, *triterpenoid*, *flavonoid*, dan *tanin*. Selain itu juga mengandung protein dengan berat molekul rendah yang memiliki aktivitas antibakteri dan antijamur yang signifikan. Senyawa-senyawa ini memiliki mekanisme kerja yang efisien dalam merusak membran sel bakteri, sehingga mampu membunuh bakteri penyebab bau badan.

Sebagai upaya dalam mencapai prinsip hilirisasi ekonomi tersebut, produk Deomoringa dikembangkan dengan memanfaatkan bubuk daun kelor hasil produksi petani Indonesia khususnya di Kabupaten Sumenep, Jawa Timur.

Kata kunci: kompetisi ilmiah, daun kelor, kebijakan hilirisasi.

ABSTRACT

Scientific competition activities become one of the means in developing creativity and innovation creation for students especially in the academic phase. The World Invention Intellectual Property Associations (WIIPA) together with the Taiwan Invention Products Promotion Association (TIPPA) are organizing the 2023 Kaohsiung Invention and Design Expo (KIDE) scientific competition as a forum for innovation from all over the world. The implementation of KIDE 2023 was held from November 30th to 2nd December 2023 at the Kaohsiung Exhibition Center (KEC), Taiwan.

The title of the proposed innovation idea is "Moringa Oliefera Leaves to utilize Moringa Production from Farmers in Community Groups at the Appropriate Technology Service Post in Pakandangan Sangra Village, Sumenep, Indonesia". This innovation received a Bronze Medal in the Category of Personal Care Products and Special Award from Highly Innovative and Unique Foundation (HIUF) Kingdom of Saudi Arabia.

The concept applied to this innovation idea is economic downstreaming which emphasizes economic activities in the process of changing raw materials into finished products with higher added value. The potential natural resource being developed to increase economic value here is Moringa oleifera leaves, namely by converting this plant into an active ingredient in natural deodorant. Scientific research shows that Moringa leaves contain a number of active compounds such as saponins, triterpenoids and tannins. In addition, it also contains low molecular weight proteins which have significant antibacterial and antifungal activity. These compounds have an efficient working mechanism in damaging bacterial cell membranes, so they are able to kill bacteria that cause body odor.

As an mechanism to achieve the principle of economic downstreaming, the Deomoringa product was developed using Moringa leaf powder produced by Indonesian farmers, especially in Sumenep Regency, East Java.

Keywords: scientific competition, moringa oleifera leaves, downstreaming policy.