

Work Exchange on Research in Seabuckthorn Breeding, Cultivation, and Product Transformation

Seabuckthorn Engineering Technology Research Center of National Forestry and Grassland Administration

Shanxi Academy of Forestry and Grassland Sciences

Hebei Shenxing Seabuckthorn Research Institute



PART 01

A b o u t U s
ECONOMIC
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1962

Research on the Breeding and Selection of Superior Seabuckthorn Varieties

1. Conduct Introduction Trials, Enrich Seabuckthorn Germplasm Resources

We have introduced a total of 62 seabuckthorn varieties and superior clones, including Shenqiu Hong, Shengguo No. 1, Zhuangyuan Huang, the QQHE series, and the Zacyou series, to enrich the germplasm resources of our province, laying a foundation for selecting suitable sea buckthorn varieties.



2.2 Research on the Breeding and Selection of Superior Seabuckthorn Varieties

2. Conduct Research on Selective Breeding, Cultivate Superior Seabuckthorn Varieties

In the natural seabuckthorn distribution areas of Shanxi and Inner Mongolia, a total of 497 germplasm resources were collected and preserved, with high yield, large fruit size, and fewer thorns as key indicators. Through a series of trials, including selection, breeding, and regional testing, six superior seabuckthorn varieties were developed, such as "Jinji No. 1," filling the gap in high-quality seabuckthorn varieties in our province and providing strong seedling support for the development of the seabuckthorn industry.



2.2 Research on the Breeding and Selection of Superior Seabuckthorn Varieties

Superior Varieties



For Fruit Use, High Vc Content



For Fruit Use, High Total Acid



For Fruit Use, High Vc Content



For Fruit Use, Fast-growing



Dual-use for Fruit and Leaves
High Flavonoid Content



For Fruit Use,
High Soluble Sugar Content

2.2 Research on the Breeding and Selection of Superior Seabuckthorn Varieties

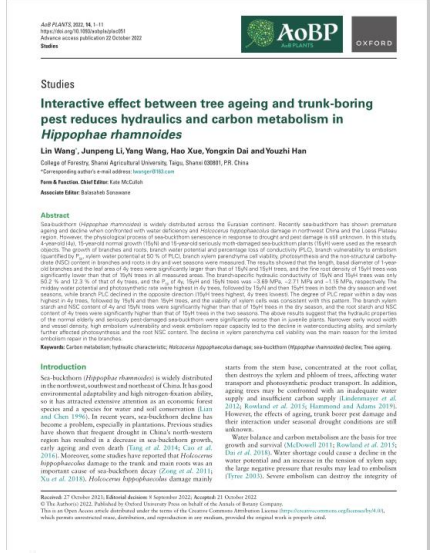
3. Carry out hybrid breeding and radiation breeding to develop new varieties.

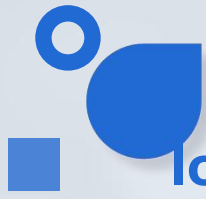
Hybridization experiments were conducted using superior varieties such as "Jinji No. 1" as the female parent and large-fruited sea buckthorn male plants as the male parent. Space-induced mutation and cobalt-60 radiation mutation breeding trials are also underway, with regional cultivation trials being carried out in the Taihang Mountains, Lüliang Mountains, and the wind-sand areas of northern Shanxi, laying a foundation for the development of new varieties.



2.8 Achievements in the Past Five Years

1. Developed six superior seabuckthorn varieties, including "Jinji No. 1," "Jinji No. 2," and "Jinji No. 3."
2. Formulated and released 13 standards, including provincial standards and International Seabuckthorn Association group standards.
3. Granted 25 invention and utility model patents.
4. Published over 40 research papers.





Hebei Shenxing Seabuckthorn Research Institute, founded in 1995 and located in Shijiazhuang, Hebei Province, is a private technology-driven enterprise specializing in the research and development of seabuckthorn series products.

26

Products with National Drug Approval Number

There are 26 approval numbers, including 1 State Category I New Drug, 1 State Category II New Drug, 2 State Category VI New Drug

8

Health supplement

We have 8 health food approvals covering softgels, tablets, and oral liquids. The raw materials include seabuckthorn fruit oil, seabuckthorn seed oil, flavone, OPC, Puree, concentrate, etc.

1

Wine

1 national patent for invention

40

Functional food

R&D reserve projects

PART 02

Scientific Research

INSTITUTE

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Research leader

Dr. Cao Deying



曹德英院长
(Cao DeYing)

The current Director of Hebei Shenxing Seabuckthorn Research Institute

Previously served as the Dean of the School of Pharmacy at Hebei Medical University, the Director of the Experimental Center of the School of Pharmacy, the Head of the Department of Pharmaceutics, where he was also a PhD advisor.

From 1982 to 2019, Dr. Cao was engaged in teaching, research, and administrative work at Hebei Medical University.

For nearly three decades, his primary focus has been on the research and development of new drug formulations, particularly sustained-release and controlled-release dosage forms. Currently, he is conducting research on cutting-edge topics such as seabuckthorn fingerprint profiling and new formulations.

Dr. Cao is a member of the Teaching Guidance Sub-committee for Pharmacy Specialties under the Higher Education Teaching Steering Committee of the Ministry of Education, also a member of the Editorial Committee for the Planned Textbooks of Pharmacy Disciplines in National Higher Medical Colleges and Universities, an expert with the Certification Center for Licensed Pharmacists under the National Medical Products Administration, and a board Member of the First Session of the Professional Committee on New Dosage Forms (Traditional Chinese Medicine) of the World Federation of Chinese Medicine Societies"



PART 03

Research Achievements

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Seabuckthorn berry oil Softgel



Product Name: Shenxing Seabuckthorn Berry Oil Softgel

Ratified Number: Guoshijianzi G20041297

Main raw materials: Seabuckthorn berry oil, Edible Gelatin

Content: Each 100g contains: Vitamin E 105mg, Carotenoids 165mg

Function: Improve immune system, protect liver from chemical injury.

Suitable for: People who have weak immune system or are suffering chemical liver injury.

Dosage: Take 3 softgels every AM and PM on empty stomach.

Specification: 0.5g/capsule

Valid period: 24 months

Storage: Keep in cool, dry and ventilated place, avoiding light



State Administration for Market Regulation

特殊食品信息查询平台

基本信息

产品名称: 神兴牌沙棘果油软胶囊 批准文号: 国食健字G20041297

有效期至: 申请人中文名称: 河北神兴沙棘研究院

每100g含: 维生素E 105mg、类胡萝卜素 165mg

食用方法及食用量: 每日2次,每次3粒,早晚空腹食用

适宜人群: 者 不适宜人群: 无

产品规格: 0.5g/粒 保质期: 24个月

注意事项: 本品不能代替药物

批准日期: 2017-04-13 批准变更日期:



国家市场监督管理总局 | 特殊食品信息查询平台 Seabuckthorn Flavone Softgel

Product Name: Shenxing Seabuckthorn Tianbao Softgel
Main raw materials: Seabuckthorn seed oil, Seabuckthorn Pomace Oil, Seabuckthorn Flavone, Crude polysaccharide of Poria cocos, Edible Gelatin
Ratified Number: Weishijianzi(2001) No.0111
Content: Each 100g contains: Seabuckthorn flavone ≥ 500 mg, Carotene ≥ 30 mg
Function: Improve immune system, Anti-radiation.
Suitable for: People who have weak immune system or are exposed to radiation.
Dosage: Take 1-3 times one day on empty stomach.
Immunoregulation: 2-4 softgels per time
Anti-radiation: 3-5 softgels per time
Specification: 0.7g/capsule
Valid period: 24 months
Storage: Keep in cool, dry and ventilated place, avoiding light

Seabuckthorn seed oil softgel



Product Name: Shenxing Seabuckthorn Ganzhifu Softgel

Ratified Number: Weishijianzi(2002) No.0392

Main raw materials: Seabuckthorn seed oil, Edible Gelatin

Content: Each 100g contains: Vitamin E 240mg, Linoleic acid 12g, Linolenic acid 10g

Function: It has auxiliary protective effect against chemical liver injury.

Suitable for: People who are suffering from chemical liver injury.

Dosage: Take 3 softgels every AM and PM on empty stomach.

Specification: 0.65g/capsule

Valid period: 24 months

Storage: Keep in cool, dry and ventilated place, avoiding light



Seabuckthorn Flavone Softgel

Function:

Improve immune system,

Anti-radiation.

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Seabuckthorn OPC Softgel

Product Name: Shenxing Seabuckthorn Andari Softgel

**Main raw materials: Seabuckthorn seed extract,
Purple perilla seed oil, Seabuckthorn Pomace Oil, Edible Gelatin**

Ratified Number: Weishijianzi(2002)No.0765

Content: Each 100g contains:

OPC 6g, Vitamin E 360g, Linolenic acid 14.8g

Function: Anti-aging

Suitable for: The middle aged and elderly.

Dosage: Take 3 softgels every AM and PM on empty stomach.

Specification: 0.6g/capsule

Valid period: 24 months

Storage: Keep in cool, dry and ventilated place, avoiding light



Seabuckthorn Shikang Tablet



Product Name: Shenxing Shikang Chewing Tablet

Main raw materials: Seabuckthorn fruit, Chrysanthemum, Mulberry leaf, natural beta-carotene, Zinc lactate

Ratified Number: Guoshijianzi G20040147

Content: Each 100g contains: General flavone 240mg, Zinc 120mg, β -carotene 26mg

Function: Improve eyesight

Suitable for: Adolescent pseudomyopia

Dosage: Take 1 tablet every AM and PM.

Specification: 1.5g/tablet

Valid period: 24 months

Storage: Keep in cool, dry and ventilated place, avoiding light

Product Name: Shenxing Seabuckthorn Xinzhian Oral Liquid

Main raw materials: Seabuckthorn, Cassia seeds, Licorice

Ratified Number: weishijianzi(2000)No.0660

Content: Each 100ml contains:

Flavonoides \geq 200mg

Function: Regulate blood lipids

Suitable for: People with high blood lipid.

Dosage: 1 piece each time; 2-3 pieces daily;

Take it after dinner and shake it evenly before taking.

Specification: 20ml/piece

Valid period: 24 months

Storage: Keep in cool, dry and ventilated place, avoiding light

Product Name: Shenxing Seabuckthorn Growth Oral Liquid

Main raw materials: Seabuckthorn fruit, Malt, Hawthorn, Low fructosan and Xylitol.

Ratified Number: weishijianzi(2002)No.0177

Content: Each 100ml contains:

Vitamine C 200mg, Zinc 4.5mg

Function: Promote children' s growth and development.

Suitable for: Children with growth and developmental issues.

Dosage: 1 piece each time; 2 pieces daily;

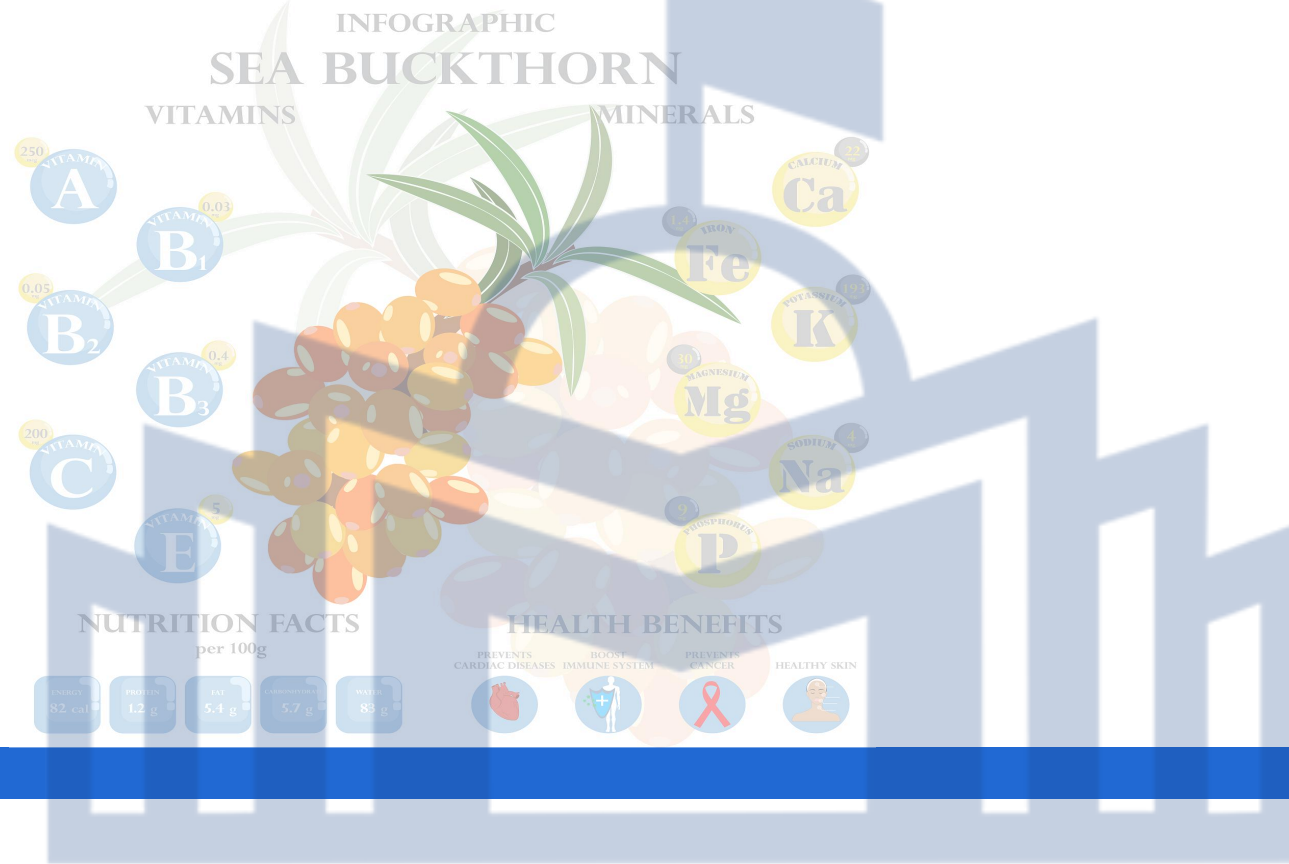
Specification: 20ml/piece

Valid period: 24 months

Storage: Keep in cool, dry and ventilated place, avoiding light

**Seabuckthorn concentrated juice
(Regulate blood lipids)**

**Seabuckthorn Clarified Juice
(Promote children' s growth and development.)**



Thank you

Hebei Shenxing Seabuckthorn Research Institute

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