Ministry of Agriculture and Rural Affairs
Ministry of Industry and Information Technology
Ministry of Ecology and Environment
National Forestry and Grassland Administration

Nong Nong Fa [2026] No. 10

Notice on Issuing the National Pesticide Industry Development Plan for the 15th Five-Year Plan Period

To the agriculture (farming and animal husbandry) departments (bureaux, committees), industry and information technology authorities, ecology and environment departments (bureaux) and forestry and grassland bureaux of all provinces, autonomous regions and municipalities directly under the Central Government; and to the agriculture bureau, industry and information technology authority, ecology and environment bureau and forestry and grassland bureau of the Xinjiang Production and Construction Corps:

Pesticides are important means of production. They are widely used in agriculture, forestry, health and other fields to control pests, and they play an important role in safeguarding food security, the quality and safety of agricultural products, and ecological and environmental security. To advance the high-quality development of the pesticide industry, the Ministry of Agriculture and Rural Affairs, together with the Ministry of Industry and Information Technology, the Ministry of Ecology and Environment and the National Forestry and Grassland Administration, has formulated the National Pesticide Industry Development Plan for the 15th Five-Year Plan Period (hereinafter referred to as the Plan). The Plan is hereby issued to you. Please implement it conscientiously in light of actual conditions.

Ministry of Agriculture and Rural Affairs
Ministry of Industry and Information Technology
Ministry of Ecology and Environment
National Forestry and Grassland Administration

19 October 2026

National Pesticide Industry Development Plan for the 15th Five-Year Plan Period

Pesticides are production materials of vital importance, playing an irreplaceable role in the control of harmful organisms in agriculture, forestry, health and other fields. The 15th Five-Year Plan period is a critical stage in the transformation and upgrading of the pesticide industry. In order to scientifically guide the high-quality development of the industry, this Plan is formulated in accordance with the Outline of the 15th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the 15th Five-Year Plan for Accelerating the Modernisation of Agriculture and Rural Areas.

I. General Requirements

Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, we will thoroughly implement the spirit of the 20th National Congress of the Communist Party of China and of the plenary sessions of the 20th Central Committee, earnestly implement the arrangements of the Fourth Plenary Session, and fully implement General Secretary Xi Jinping's important expositions and instructions on work relating to agriculture, rural areas and farmers. We will apply the new development philosophy in full, accurately and comprehensively, anchor on the goal of building an agricultural powerhouse, and take the high-quality development of the pesticide industry as the theme, intelligent production, green products and efficient application as the main directions, and the integration of technological and industrial innovation as the path. We will accelerate the optimisation and adjustment of the capacity layout, advance the iterative upgrading of the product mix, build a modern pesticide industry system centred on advanced manufacturing, consolidate the central position in the global industrial and supply chains, and provide foundational support for safeguarding national food security and for the coordinated development of technology-driven, green, quality-oriented and brand-building agriculture, continuously enhancing the international market competitiveness of the pesticide industry.

By 2030, the capacity to ensure the supply of pesticide products will be continuously strengthened, overall capacity will remain broadly stable, the variety mix will be continuously optimised, and the integration of pesticide distribution services with scientific application will be accelerated. The capacity for scientific and technological innovation in pesticides will be significantly enhanced: innovation consortia led by enterprises will be supported, new quality productive forces in pesticides supported by biotechnology and artificial intelligence will be nurtured, and the global high ground of pesticide technological innovation will be secured at a faster pace. The capacity for industry management and services will be significantly enhanced: supervision of trial institutions will be tightened, registration data requirements will be simplified, the export policy will be optimised, a capacity monitoring and early warning mechanism will be established and improved, international mutual recognition of trial data will be promoted, and China's advantageous position in global pesticide production and manufacturing will be consolidated and expanded.

II. Upgrading the Industry

(1) Coordinate regional development. In accordance with territorial spatial planning, zoning-based eco-environmental control and major national strategic arrangements, and based on locational advantages and resource endowments, coordinate the regional layout of the pesticide industry. The eastern region

should target both domestic and international markets, encourage independent innovation, and increase the research, development and commercialisation of new varieties. The central and western regions should develop technical material production and formulation processing to an appropriate extent. Pesticide enterprises should be guided to settle in compliant parks that match the industrial positioning and have carried out planning environmental impact assessment in accordance with laws and regulations, and the chemical industrial parks concerned should be equipped with centralised treatment facilities for specialised chemical production wastewater as required.

(2) Adjust and regulate capacity. Strictly implement the national pesticide industry policy. For pesticide products listed in the eliminated and restricted categories, no new production licences shall be issued and the number of new registrations shall be strictly controlled. Disorderly capacity expansion shall be strictly curbed, the threshold for entry into the industry shall be further raised, low-level duplicate investment and construction and projects that simply expand capacity shall be restricted, and "involution-style" competition within the industry shall be avoided. Priority support shall be given to projects for the research, development and extension of high-efficiency and low-risk pesticides, for the green upgrading of the industry, and for intelligent construction.

(3) Advance the technological upgrading of pesticide manufacturing. Guide pesticide manufacturing towards green, low-carbon and intelligent transformation and upgrading. Vigorously promote advanced process equipment such as micro-channel continuous flow reactors, tubular reactors and continuous extraction equipment, and implement process upgrading such as reactive distillation and continuous nitration. Carry out the extension of energy-saving and carbon-reducing technologies, the application of renewable energy and research on frontier low-carbon technologies; gradually establish a carbon footprint evaluation system for pesticide products, publish a catalogue of green and low-carbon processes, and encourage enterprises to adopt clean production technologies and equipment. Promote the "intelligent upgrading, digital transformation and network connectivity" of pesticide production and the integrated development of artificial intelligence and pesticide manufacturing.

III. Optimising and Adjusting the Product Mix

(4) Encourage the research, development and application of new products and new technologies. In response to the needs of agricultural production, public health and safe development, integrate and apply frontier scientific and technological means such as gene editing, RNA interference, biosynthesis and artificial-intelligence-assisted design to create new pesticide varieties. Accelerate the development of pesticide products suitable for plant protection unmanned aerial vehicle operations and of environmentally friendly, high-efficiency and low-risk products, as well as products for safe and healthy use in special minor crops, public health, landscaping and storage. Encourage the development of ultra-low-volume, water-based and controlled-release formulations. Advance the application of nanotechnology in pesticide products in a prudent and orderly manner. Support the development and extension of new application methods and improve the precision of pesticide use.

(5) Orderly phase out high-risk pesticide varieties. Improve the pesticide re-evaluation system, strengthen the monitoring of the safety and efficacy of registered pesticides, link such monitoring organically with the renewal of registration, and increase the elimination of and substitution for low-efficacy and high-risk pesticides. Study and formulate management measures for pesticide adjuvants and

control the use of toxic and hazardous solvent adjuvants. Strictly implement the supervision requirements for highly toxic pesticides and crack down on illegal production, operation and use.

(6) Vigorously develop biopesticides. Accelerate the development of biopesticide resources and improve the requirements for biopesticide registration. Promote the preservation of microbial pesticide strains, standardise the management of microbial pesticide strains, and improve the registration data requirements for the biopesticides concerned. Actively research, develop and extend new types of biopesticides such as RNA pesticides, peptide pesticides, plant elicitors and semiochemicals, secure the high ground of biopesticide technological innovation, and continuously increase the market share of China's biopesticides.

Box 1: Guidance on Pesticide Product Structure

Encouraged. High-efficiency biopesticides; pesticides for special minor crops; products dedicated to plant protection unmanned aerial vehicles; new high-efficiency and low-risk pesticides and resistance-management alternatives targeting major diseases, insect pests, weeds and rodent damage, including the rice stem borer and brown planthopper, wheat fusarium head blight and crown rot, viral diseases, the diamondback moth, thrips and tobacco whitefly in vegetables, Italian ryegrass, the pine wood nematode, the red imported fire ant and grassland rodent damage; and others.

Restricted. Insecticides: trichlorfon, dimethoate, chlorpyrifos, triazophos, imidacloprid, abamectin, fipronil, carbosulfan, fenvalerate, acephate, acetamiprid, thiamethoxam, bisultap, monosultap, chlorantraniliprole, pymetrozine, lambda-cyhalothrin, bifenthrin, emamectin benzoate, clothianidin, nitenpyram, dinotefuran, thiodicarb and flubendiamide, etc.

Fungicides: carbendazim, chlorothalonil, thiram, ziram, triadimenol, propiconazole, mancozeb, lime sulfur, iprodione, tricyclazole, tebuconazole, azoxystrobin, pyraclostrobin, difenoconazole, prothioconazole, quintozene, metalaxyl and thiophanate-methyl, etc.

Herbicides: glyphosate, 2,4-D, MCPA, and glufosinate-P and its salts; acetochlor, atrazine, butachlor, ametryn, dicamba, alachlor, diquat, glufosinate, clethodim, mesotrione, nicosulfuron, 2,4-D isooctyl ester, trifluralin, pendimethalin, terbuthylazine and prosulfocarb, etc.

Plant growth regulators: paclobutrazol, sodium nitrophenolate, forchlorfenuron, ethephon, gibberellic acid and daminozide, etc.

Rodenticides: sodium diphacinone, diphacinone, warfarin, coumatetralyl, bromadiolone, brodifacoum, botulinum toxin and flocoumafen, etc.

Others: pesticides prohibited for domestic use and retained for export only, and other pesticides for restricted use, etc.

IV. Regulating Pesticide Distribution in Accordance with the Law

(7) Promote the transformation and upgrading of distribution models. Encourage the development of chain operation, franchise operation and large-scale operation, and optimise the distribution of retail outlets for restricted-use pesticides. Investigate and deal with illegal acts in accordance with laws and regulations, resolutely crack down on unlicensed pesticide distribution and itinerant selling, and strengthen the supervision of in-store sales. Establish an information-sharing and joint enforcement mechanism and strengthen cross-regional coordination of pesticide supervision.

Promote the integration of distribution and application services, and support the integrated development of pesticide distributors and specialised pest control service organisations.

(8) Strengthen the management of internet pesticide distribution. Promote the establishment of a long-term mechanism for standardised internet pesticide distribution, publish a negative list for internet pesticide distribution, clarify the responsibilities and obligations of third-party internet trading platforms, consolidate the primary responsibility of internet pesticide operators, combine routine supervision with the crackdown on illegal acts, raise the level of internet pesticide distribution management, and maintain order in the internet pesticide market.

(9) Continue to carry out training and guidance for pesticide distributors. Encourage qualified research institutes and universities to carry out training for pesticide distribution personnel and improve their professional quality. Encourage pesticide distributors to put forward recommendations on pest diagnosis and on the pesticides to be used, and guide farmers to select and use pesticides scientifically and rationally.

V. Deepening the Scientific and Safe Use of Pesticides

(10) Strengthen the monitoring and management of pesticide resistance. Build a support system for monitoring pesticide use and evaluating effectiveness, systematically carry out monitoring of pesticide use in agriculture and of the collection of packaging waste, periodically analyse and assess pesticide use monitoring data, and scientifically evaluate the effects on disease and pest control, on maintaining yields and on improving quality. Vigorously promote the alternate and rotational use of pesticides by region across the country. Actively promote and apply green prevention and control measures such as biological control, ecological control and physical and chemical attraction, and delay the emergence and development of resistance.

(11) Raise the organisational and professional level of pesticide application. Encourage the development of specialised pest control service organisations, improve their facilities and equipment, vigorously extend efficient application machinery and intelligent and precise application technologies, and focus on improving the capacity for unified prevention and control in major grain-producing areas and in the source areas of major diseases and insect pests. Actively guide specialised pest control service organisations to use large-package pesticides, and promote the collection and resource utilisation of pesticide packaging waste.

(12) Strengthen the extension of and services for scientific pesticide use. Continue to carry out the campaign for precise application to improve quality and increase efficiency; relying on the “one million farmers” training campaign on scientific and safe pesticide use, extend and popularise technologies for the scientific and safe use of pesticides. In major grain-producing areas and in advantageous production areas of fruit, vegetables and tea, explore the establishment of a guidance system for safe pesticide use, guide farmers to select pesticides scientifically, apply them precisely and use them safely, and strictly observe pesticide pre-harvest intervals.

VI. Supporting and Cultivating Leading Enterprises

(13) Strengthen the position of enterprises as the mainstay of innovation. Integrate the innovation system and resources of pesticide industry-academia-research cooperation, support leading pesticide enterprises in jointly building pesticide research and development innovation consortia with

universities and research institutes, and carry out research on common technologies and key core technologies such as new pesticide targets and new molecular scaffolds. Strengthen the enterprise-led deep integration of industry, academia and research, and continue to advance the participation of enterprises in national science and technology innovation decision-making and in undertaking major national science and technology projects.

(14) Strictly approve enterprise entry. In coordination with policy requirements on work safety, environmental protection and other aspects, strictly approve the establishment of new pesticide production enterprises. Encourage enterprises to carry out mergers and reorganisations in an orderly manner and enhance the overall competitiveness of the industry. Intensify the clean-up and governance of "factory-within-a-factory" arrangements.

(15) Help pesticide enterprises to "go global". Build international cooperation and exchange platforms in the pesticide field through multiple channels, help enterprises to open up international markets, guide pesticide enterprises to build plants overseas in a prudent and orderly manner, and strive to enhance China's capacity for global resource allocation and market layout in the pesticide industry. Optimise the pesticide export policy, support the overseas registration of pesticide products, encourage enterprises to export high-value-added products, and support the creation of international pesticide brands. Advance the alignment of the pesticide registration trial management system with international practice, strengthen multilateral and bilateral cooperation, and promote the mutual recognition of trial data.

VII. Improving Pesticide Management Services

(16) Improve laws and regulations. Advance the development of the pesticide laws, regulations and policy system; improve the pesticide registration system and the pesticide reserve system for disaster relief; and strictly manage pesticide intermediary service organisations. Explore the formulation of standardised operating norms for pesticide distribution, urge pesticide distributors to fulfil their responsibility for guiding the selection and use of pesticides, and gradually establish a management system that integrates registration with production and organically combines distribution with application. Strengthen the capacity building of pesticide management and law enforcement to effectively support the establishment of a pesticide market order that is well regulated, encourages innovation and ensures sound competition.

(17) Improve the registration support system. Gradually implement the full electronic and intelligent processing of pesticide registration applications and review, and raise the level of pesticide registration informatisation. In response to new scenarios, new products, new technologies and new demands, formulate and implement differentiated evaluation technical specifications by category to meet the needs of industrial innovation and development and of agricultural production practice. Explore the reform of the pesticide registration system and adjust the registration policy for same-product pesticides. Actively promote the registration of pesticides for special minor crops.

(18) Strengthen capacity monitoring and early warning. Optimise the working mechanisms for the monitoring, early warning and regulation of pesticide capacity; carry out global demand estimation and capacity monitoring for major pesticide varieties; steadily advance the price monitoring of commonly used pesticide varieties and increase the release of pesticide market information. Strengthen the notification of project filing information for production projects of major pesticide varieties across the country and promote the orderly development of capacity.

(19) Improve the trial management system. Improve the pesticide registration trial system and optimise the regional layout of pesticide registration trial institutions. Strengthen the development of the quality system for pesticide registration trials, improve the specifications for pesticide registration trials, strengthen professional and technical training and raise the level of pesticide registration trials. Explore the establishment of electronic records for key items of registration trials and promote the traceability of trial processes and data information. Strengthen the management of pesticide trial samples and build a sample database. Strengthen the supervision and inspection of pesticide registration trial institutions and crack down on illegal and non-compliant acts.

(20) Advance the informatisation of management. Strengthen pesticide regulatory information services at the ministerial and provincial levels, and accelerate the building of a pesticide database covering the whole industry chain, including trials, registration, production, distribution and application safety risk monitoring. Integrate pesticide industry information, achieve the co-construction and sharing of data, optimise comprehensive query services, analyse the benefits and bottlenecks of each link of the pesticide industry chain, and guide and promote the transformation and upgrading of the pesticide industry. Improve the closed-loop management platform for highly toxic and high-risk pesticides and strengthen traceability management.

(21) Improve the pesticide standards system. Deepen the whole-chain coordination of pesticide standards, advance the development of national pesticide standards in an orderly manner, coordinate industry standards and group standards, and standardise enterprise standards. Intensify the formulation and revision of pesticide standards, promote the development of general test methods for undeclared ingredients added to pesticide products, and accelerate the building of a pesticide standards system that is technologically leading, well connected and coordinated, and wide in coverage. Actively participate in the formulation of international standards and promote the internationalisation of China’s pesticide standards.

(22) Enhance the supporting capacity for pesticide management. Build the National Pesticide Innovation and Application Evaluation Centre to coordinate innovation research and development, entry assessment, risk monitoring, re-evaluation and other work, and strengthen technical support for management. Carry out basic research on key technologies in the pesticide field, improve and optimise pesticide evaluation models and risk assessment technical systems, and explore new pathways for alternative testing.

Box 2: Building the National Pesticide Innovation and Application Evaluation Centre

1. Improve the scientific evaluation system. Build a technical system for pesticide risk assessment that is deeply integrated with artificial intelligence, covering health, dietary intake, environmental impact, metabolites and phytotoxicity; a system of reference substances and dedicated test materials; and a system for the development and validation of testing and detection methods and for the technical evaluation of non-testing methods, so as to fill the gaps in the evaluation, risk monitoring and re-evaluation of innovative pesticides.
2. Build an integrated command and dispatch system for pesticide risk monitoring. Upgrade and transform the pesticide management information platform, aggregate whole-chain data including basic pesticide information, production, supply and sales, quality traceability, technical review, risk monitoring and supervision, and achieve big-data analysis, platform-based presentation and integrated command and dispatch.
3. Build a national innovation and application platform. Using technologies such as biosynthesis and artificial intelligence, build a system for the discovery and evaluation of green pesticide lead compounds, create a platform for the collaborative sharing of technology, talent and equipment and for the integration of industry, academia, research and regulation, coordinate innovation research and development, entry assessment, risk monitoring, re-evaluation and other work, and strengthen technical support for management.

VIII. Strengthening Organisation and Implementation

Improve the mechanism for cross-departmental coordination and for the linkage of ministries, provinces, municipalities and counties, pool joint efforts, and ensure that all tasks are implemented. Guide pesticide production and distribution units, registration trial institutions and specialised pest control service organisations to abide by laws and regulations and to operate with integrity, and consolidate the primary responsibility of enterprises for work safety and environmental protection. Strengthen the awareness of administration in accordance with the law and crack down on illegal production, illegal operation, illegal addition and other illegal acts. Intensify the publicity of pesticide laws and regulations and of scientific knowledge, and foster a sound social atmosphere.

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Translator's note. This is an unofficial English translation prepared by Jinlong Zhang from the text issued as Nong Nong Fa [2026] No. 10. Chapter and task numbering follows the original. Active-ingredient names are given as ISO common names. Where the Chinese text and this translation differ, the Chinese text prevails.