

Study on the Problem of Veterinary Drug Residues under the Rural Revitalization Strategy

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Abstract: The report of the 19th National Congress of the Communist Party of China put forward the "Implementation Strategy for Rural Revitalization." The rural revitalization strategy is rich in profound significance. Under the new historical background, China is required to advance the modernization process and promote the new development of agriculture, rural areas and farmers. However, modern animal husbandry is increasingly pursuing large-scale and intensive production, and will use veterinary drugs too much to ensure the healthy growth of livestock and the steady development of animal husbandry. Unreasonable use of veterinary drugs can easily cause them to remain in animal foods. This not only affects the safety of animal foods, but also pollutes the rural environment. Failure to solve this problem will seriously hinder the common development of rural economic construction and ecological environment construction.

1. Introduction

General Secretary Xi Jinping stated in the fourth part of the report of the 19th National Congress of the Communist Party of China that "declining victory in building a well-off society in an all-round way and opening a new journey of building a socialist modernized country in an all-round way", we must make overall plans to promote economic, political, cultural, social, ecological civilization and other aspects, and firmly implement Science and education rejuvenation strategy, talent strengthening strategy, innovation-driven development strategy, rural revitalization strategy, regional coordinated development strategy, sustainable development strategy, military-civilian integration development strategy. Among them, the "two crosses" policy is proposed for how to implement the rural revitalization strategy, namely: industrial prosperity, ecological livability, rural civilization, effective governance, and prosperous life. This idea highly summarizes the interrelationship between agriculture, rural areas and farmers in China.

2. Background and Purpose of Implementing the Rural Revitalization Strategy

Throughout thousands of years of history, China has always been a big agricultural country. During the semi-colonial and semi-feudal period, the peasant population exceeded half of the country's total population, but they have been oppressed and exploited by three mountains. Later, the peasants joined the Communist Party of China and had a strong desire for revolution, a firm belief in victory, and a tenacious and tenacious struggle. The peasants became an important part of China's modern revolution and at the same time made great sacrifices for the establishment of the new China. Later, the Communist Party of China, with Mao Zedong as the main representative, based on the basic principles of Marxism-Leninism on the socialist transformation of agriculture, proceeded from the reality of rural China, contacted the peasants, and formulated a series of directions, approaches and policies suitable for the characteristics of Chinese agriculture [1] .

The party has always attached great importance to the issue of "agriculture, rural areas and farmers". The report of the 19th National Congress of the Communist Party of China put forward the "implementation strategy for rural revitalization"; it has formulated a "three-step" timetable. First, by 2020, important progress has been made in rural revitalization. The framework and policy system are basically formed. By 2018, it can be seen that in terms of production methods, more and more advanced modern equipment has gradually replaced traditional manuals; in terms of

production technology, it tends to adopt large-scale modern science and technology and transform into a modern agricultural science and technology system; On the other hand, the agricultural cooperative model has gradually replaced the previous single planting mode; in terms of sales methods, the online offline sales method has been gradually integrated by the rich Internet + participation channels. These changes, these ascension, and these innovations all show the concept of agriculture. Agriculture is no longer a thin agriculture. Agriculture is no longer limited to industries that are in rural areas. Agriculture will continue to expand and expand. . Further, it will quickly move out of the countryside through various channels and stabilize into the city; it will go abroad and become international. In other words, we must shift the vision of the agricultural industry from rural to urban, and from the national to the international.

The socialism with Chinese characteristics has entered a new era, and the main contradictions in Chinese society have also undergone three changes. The 19th National Congress of the Communist Party clearly pointed out that the main contradictions in our society have been transformed into the growing needs of the people and the development of unbalanced development. contradiction. The transformation of major social contradictions has made new definitions, new guidelines and new requirements for the development of China in the coming decades. Under the new historical conditions, we must adhere to the people-centered development thinking, and constantly promote the all-round development of people and the common prosperity of all personnel. In the new historical journey, we must adhere to the new development concept, in order to promote the continuous development of various undertakings in the countryside. Then, under the influence of agricultural modernization, the rural areas must also realize rural modernization. In order to modernize the countryside, we must first engage in rural urbanization. Rural urbanization refers to promoting the development of small towns in rural areas, gradually rectifying the complete infrastructure of rural water supply, power supply, toilets, etc.; rebuilding the gravel roads in the countryside for the new flat and smooth roads in the countryside. The development of rural small towns will become a hub connecting rural areas and cities, which will open up new prospects for the economy, politics and culture of the countryside and add new colors. Second, rural modernization requires the modernization of the rural economic system. Based on the support and efforts of the government and major enterprises, the rural economic system has been adjusted and improved in a timely manner. The rural areas of various regions have contacted their respective actual conditions, and many professional breeding/planting cooperatives have emerged, which has made the rural productive forces flourish. Then, rural modernization also needs to follow the cleanliness of rural politics. In response to this problem, the relevant state departments issued the "Guiding Opinions on Establishing the Whole Village Supervision Committee", and this new policy will be implemented in all parts of the country. The establishment of this system can fundamentally curb the unhealthy and corrupt phenomena around the peasant masses, and let the village cadres do practical things for the countryside and for the peasants. In this way, according to the "three-step" timetable for implementing the rural revitalization strategy, secondly, by 2035, rural revitalization has made decisive progress, and agricultural and rural modernization has basically been realized[2].

However, in fact, it should be clearly observed that while China is promoting the mutual development of agriculture, rural areas and peasants, the environmental problems brought about by agricultural industrialization, rural urbanization and peasant prosperity have become increasingly prominent. At present, China's rural ecological environment is still in an unfavorable situation in which urban development lags behind. The deeper meaning of the rural revitalization strategy is to achieve modernization, continuously improve the participation and benefit of the villagers in the industrial development, thoroughly solve the problem of rural industry and peasant employment, and ensure that the local people will continue to increase income and live in peace and long-term. The further goal of rural revitalization is to improve and improve the village appearance, create an ecological environment suitable for people to live in, attract more talents to return to the countryside, and inject new vitality into rural modernization. Different from people's imagination of traditional rural scenery, the rural villages are not always beautiful, birds and flowers, and they are not always lingering. Agricultural industrialization brings industrial pollution, rural urbanization brings

domestic sewage and domestic garbage, and the veterinary drug residue food chain brought by farmers' breeding industry produces zoonotic diseases. However, the veterinary drug residue problem bears the brunt, it can pollute the domestic water source and pollute the air through the feces discharged from livestock and poultry. These pollutions to the surrounding environment and rivers cannot be ignored! Farmers have less knowledge of medical knowledge and low environmental awareness. They have not dealt with the manure of livestock and poultry in time, resulting in dirty, chaotic and poor rural ecological environment. The rural ecological environment is not good, and the employment opportunities provided are few. The peasants go out to work a lot, leaving the elderly and children. [3]They generally have low acceptance of modernization and seriously affect people's normal life. Therefore, the poor ecological environment in rural areas is not conducive to the implementation of the rural revitalization strategy. To put it another way, if we only focus on modernization, we only pay attention to the increase in production, the peasant life is rich, and the ecological environment will not be improved. It will lose the "Jinshan Yinshan" and will also lose the sustainable development of the aquaculture industry. In general, the problem of veterinary drug residues largely determines the development of rural revitalization. Farmers live a modern life and demand clean water, fresh air and safe animal food in the countryside. In the presence of veterinary drug residues, people who cannot achieve rural rejuvenation can not follow the principle of natural harmony and symbiosis, and cannot follow the path of rural green development; if there is residual veterinary drug, it will be impossible to make agriculture an industry with a head start, and to make farmers an attractive profession. Let the countryside become a beautiful home for living and working. Without veterinary drug residues, ensuring food safety, and ensuring the optimization of rural ecological environment, we can achieve the "three-step" timetable for implementing the rural revitalization strategy. Third, by 2050, the rural areas will be fully revitalized, and agriculture, rural beauty, and peasant wealth will be fully realized.

3. Analysis of the Status of Veterinary Drug Residues

From the original sideline status, the animal husbandry industry has developed into a major industrial sector with an increasing proportion, and its internal division has also become a variety of industries such as pig raising, cattle raising, sheep raising, and poultry industry [2]. With the acceleration of economic construction, the output of animal husbandry has been continuously improved, and animal husbandry and planting have become the two centers of agriculture. Animal husbandry has the characteristics of livestock and poultry group structure, high adaptability and strong commodity. Secondly, the animal husbandry can adapt to weather changes, environmental changes, and economic changes to make adjustments that are conducive to development. It can be grazing in groups or in livestock. Generally speaking, the price of meat products is higher than that of ordinary vegetables and fruits, which also promotes the development of secondary industries such as transportation, processing and storage. There are many types of animal husbandry. This paper mainly discusses the problem of veterinary drug residues in the types of livestock and poultry in rural suburbs[4].

The aquaculture industry often resorts to veterinary drugs when it comes to increasing the production of animal foods. Veterinary drugs are an important material basis for the development of modern animal husbandry and play an important role in promoting animal growth, improving animal product quality and improving feed utilization. Therefore, animal breeding is inseparable from veterinary drugs. Without the development of the veterinary drug industry, there will be no breeding industry today, and the two will develop together and make progress together. According to the statistics of the Chinese Veterinary Drug Association, in 2017, 1,644 veterinary drug manufacturers nationwide completed a total production value of 52.245 billion yuan, sales of 47.111 billion yuan, total assets of 212.42 billion yuan, and asset profit margin of 7.86% [3]. Further, the demand for veterinary drugs in the livestock industry has only increased. In 2012-2017, China is not included, and the global veterinary drug industry's annual sales growth rate is 7.3%. In the same period of China, the compound annual growth rate of sales of the veterinary drug industry was 3.36%. Obviously, the growth rate of the international veterinary drug market is significantly

greater than the growth rate of veterinary drugs in China. In the global veterinary drug market, chemical drugs account for the largest share, and bio-product sales account for about 30%, similar to the situation in China. The global share of pet veterinary drugs in the veterinary drug market is quite different from that in China [4]. According to the nature of use, veterinary drugs are classified into preventive products, diagnostic products, therapeutic properties, etc. Among them, preventive products are used in the widest range, reaching about 73%. This shows that many farms often use veterinary drugs to prevent the outbreak of certain diseases in order to obtain maximum profits.

However, everything has two sides, and the same is true for veterinary drugs. It is a sharp sword. In the production practice, if the veterinary drug is used erroneously, or the veterinary drug is used arbitrarily, the animal food veterinary drug residue may exceed the standard, which seriously affects the health of the consumer; at the same time, it also limits the sale of animal products in China to foreign countries. Veterinary drug residues have become an important factor restricting the sustainable and healthy development of the aquaculture industry. Although China has formulated the "Most Residue Limits for Veterinary Drugs in Animal Foods" and "Code of Use for Feed Drug Additives", for the primary testing limits, the methods and standards for detecting veterinary drug residues in China are not uniform with foreign countries. 0, but currently it does not meet such standards in China. At present, China is mainly a high-density, multi-species, intensive farm production method, the abuse of veterinary drugs in the breeding process, so that livestock and poultry products and aquaculture products can not be exported to foreign countries, domestic poisoning incidents have occurred repeatedly. At the same time, the instrument for detecting veterinary drugs needs to improve the precision of detection, and the detection of light is not enough. It is also necessary to think about how to enhance the way of simplifying the processing of the instrument. Since many foods need to be added with volatile organic solvents when extracted, these organic solvents can remain in the air, threatening the health of the quarantine personnel. Like many researchers, their chances of suffering from related diseases are significantly higher than those of ordinary people. The author suggests that they should pay more attention to the physical and mental health of quarantine personnel and formulate relevant benefits and more frequent and comprehensive medical examinations. For quarantine personnel, it is usually not possible to directly take samples that need to be inspected, and the samples are assisted by the farmers, which will result in non-randomness of sampling. Although China has vigorously promoted large-scale and industrialized farming, many areas are still dominated by free-range, and the pass rate is not high. Residues of veterinary drugs have reduced the influence of China as a large agricultural country, and have also caused China to lose many opportunities to go abroad and build its own brand. Therefore, the issue of veterinary drug residues should be widely concerned and positive measures should be taken to strengthen management.

4. Ways to Deal with Veterinary Drug Residues

4.1 Implement and implement ideological education

First of all, the attitude of thought is extremely important, and it is also a major premise for accepting and carrying out all work. Therefore, it is necessary to pay attention to the ideological education propaganda of the farmers. Government-related organizations can invite teachers from agricultural-related colleges to give lectures to farmers to explain common diseases. For example, fever, pneumonia and other diseases are common in cattle raising. How to choose efficient, green and safe veterinary drugs Instead of using veterinary drugs that have long half-lives and are resistant to drug resistance, they are used to treat such diseases. Further, it is necessary to let the farmers understand the hazards of veterinary drug residues, and instill in the farmers the concept of not earning black money, to use the veterinary drugs reasonably to prevent diseases, to regulate the use of veterinary drugs for the treatment of diseases, and to comply with the regulations on the management of veterinary drugs. Animal products can be marketed after the period. Farmers can't just think about the favorable development of their own breeding industry, but ignore the ecological environment construction. The government can supervise law enforcement agencies to regularly

issue reports on the use of local veterinary drugs and animal food safety to the general public to strengthen public opinion. In this way, to ensure the green and high quality development of the aquaculture industry, to ensure the safety of animal-derived foods, to pay attention to public health and safety, and to ensure the safety of the ecological environment; to implement innovation, coordination, green, open, and share new development concepts; To promote the healthy development of the veterinary drug industry and aquaculture industry.

4.2 Government supervision

The relevant departments in charge of the government shall implement the three principles of “fine”, “quasi” and “resolute”.

“Fine”: Strictly control each inspection gate and set heavy detection indicators. According to the relevant regulations of “Maximum Residue Limits of Veterinary Drugs in Animal Foods”, the first part can be used for food animals, and there is no need to formulate the maximum residue limit drugs, such as folic acid; the second part is applicable to food animals, and the drug with the highest residue is required. Such as aximolin; the third part is a drug that can be used in food animals, but no veterinary drug residues can be detected, such as chlorpromazine; the fourth part is banned from veterinary drugs used in all food animals, such as chloramphenicol, Furazolidone, etc.; for such indicators, it is necessary to make the corresponding drug residue detection rate to a minimum or zero detection.

“Quasi”: Random inspections. When the sample is sampled, the number of inspections per month is not specified, and the inspection date is randomly selected. Then the relevant personnel are not allowed to notify the local farmers or the enterprise in advance, and the inspection should be carried out suddenly and “attacked” and randomly selected. In this way, the results of the random inspection can be obtained more accurately. Secondly, in strict accordance with the relevant regulations for testing, it is possible to carry out irregular black box experiments several times, so that schools with high integrity scores or institutions with qualifications can conduct two-way check-up tests, report the quality test results truthfully, and compare with the spot check results. Analysis results.

“Resolute”: Severe punishment for farmers or enterprises that do not meet the standards. It is forbidden to use illegal drugs such as antibiotics, and to share medicines for humans and animals in farms or enterprises. Carefully investigate cases related to counterfeit, inferior veterinary drugs and preparations. Strictly check the proportion of drugs contained in the feed. If a farmer or enterprise violates relevant regulations and severely punishes, and at the same time, increase the administrative punishment of quarantine personnel, it is necessary to ensure the overall cleanliness of the animal husbandry industrialization chain [5].

4.3 Enhance technology

The hazard of bacterial resistance caused by veterinary drug residues, based on the technical level, can only be prevented as much as possible, and can not eliminate bacterial resistance. Samples that need to be tested for veterinary drug residues are generally characterized by complex components, a wide variety, and low levels of substances to be tested, so pre-treatment of the samples is required prior to testing. After several years of research, the sample pretreatment technology has been continuously improved. Currently, there are widely used methods such as matrix dispersive solid phase extraction, solid phase extraction, gel permeation chromatography, supercritical fluid extraction and Qu ECh ERS [5]. These technologies have the characteristics of saving solvent, shortening processing time, high extraction efficiency, simple operation, high accuracy, low detection limit, high recovery rate, good reproducibility and high automation level, which greatly improve the efficiency of detection and analysis. At present, scientists at home and abroad are working hard to study new technologies for pretreatment of veterinary drug residues in foods, especially for extracting solvents with little or no solvent, such as applying nanomaterials or nanotechnology to the detection of food and pesticides and veterinary drug residues. Or improve the simple and rapid detection method with high throughput and high sensitivity [6]. The development of new veterinary drugs and improved detection technology can greatly accelerate the pace of

agricultural modernization, while also helping to achieve science and technology.

4.4 Strengthening the management of veterinary drugs

The production and sales of pharmaceutical products should be strictly managed. In China, there was a phenomenon of antibiotic abuse, such as frequent infusion of cold and fever, which caused the resistance of the bacteria to affect the subsequent treatment and rehabilitation. The developing countries have stricter medical management standards and value long-term development, which means that foreign countries value the sustainable development of products and the environment. This is also the reason why China and foreign countries have huge gaps in agricultural testing. keep it up. And in foreign countries, the status of veterinarians is the same as that of human medicine. Even the requirements and wages of veterinarians are higher than those of human medicine. This means that the government and various departments and agencies will strictly control all aspects of medication and implement all-round supervision. However, due to insufficient supervision, China has not yet achieved the same strict standards as foreign countries. The author recommends that when purchasing veterinary drugs, strictly record when and where to buy what medicine, record the data in detail, and the purchaser must issue a prescription certificate issued by the veterinarian. Both can only sell the medicine, otherwise the appropriate punishment will be made according to the violation. Preventing any party from committing such an incident again. Therefore, the purchaser and the seller are both punished and must not punish only one party. Both parties should be aware of the dangers of veterinary drug residues.

4.5 Focus on talent training

As a big agricultural country, agriculture occupies all aspects of people, but the demand for talents in the veterinary direction is less than the supply value. The ratio of male to female is 1:5, which is a serious imbalance. Girls often outperform some boys in experiments and practice. The author proposes the following improvements:

Appropriately extend the time of undergraduate education in animal medicine and carry out a variety of practical activities. For example, the implementation of "4 + 1" (four-year undergraduate, one-year teaching hospital practice or unit internship), "5 + 3" (five-year undergraduate, three-year master) teaching arrangements. Zhou knows that the four-year undergraduate study is far from enough, and it is not enough to make the knowledge absorption rate of learning reach 100%. Students need to master more detailed knowledge and apply textbook knowledge to practice.

Appropriately strengthen the propaganda of animal medicine, and put the status of veterinarians and the identity of human medicines in the same important position. New methods can be launched to attract more people with lofty ideals to join the ranks of veterinarians, to form a harmonious medical doctor, to be happy and to develop medicine, to develop the concept of medical therapy, to promote the development of animal husbandry in China, and to check the safety of animal-derived food in China.

A comprehensive assessment of each agricultural university can be divided into theoretical knowledge, practical operation, and comprehensive quality. The talents of Guanghai Technology are far from enough, and quality is the fundamental task, which will lead to healthy competition among universities. For universities with excellent assessments, appropriate praise and publicity can be provided to provide a typical example between agricultural universities.

The state has introduced relevant policy and welfare so that more talents can actively participate in the ranks of animal medicine, making agriculture another breakthrough for China's prosperity. In order to implement the rural revitalization strategy, we must first have an excellent team to join. Realizing rural revitalization not only solves the problem of insufficient and unbalanced power development, but also cultivates and develops more reserve troops. The above mentioned that the detection personnel are likely to be contaminated by chemicals when testing the residues of food and veterinary drugs. This is one of the reasons why talents are not to be underestimated. Regarding the safety of quarantine personnel, etc., how to improve such problems remains to be considered. .

4.6 Increase resource input

The state needs to increase capital, manpower, and technology-related inputs to develop new veterinary drugs and pharmaceutical preparations in order to develop efficient, low-toxic veterinary drugs or biological products as soon as possible. Companies with R&D types are required to consider animal food safety issues while making money. Secondly, as soon as possible, replace the high residual drug, minimize the number of drugs used, and ensure the safety of animal source food. After detecting an outbreak of infectious disease, the government can collect information on the farmers who have suffered heavy losses, provide appropriate subsidies to them, and encourage them to continue farming. At the same time, they are prevented from rushing to the hospital, and the drugs are not used correctly, triggering new diseases. In order to make sustainable use of resources, we must care for the environment. Therefore, increasing investment in environmental protection is a must. Regular monitoring and control of sewage discharge, timely adjustment of agricultural production and breeding methods, suitable for the development of animal husbandry. The state can formulate some policies and guidelines, incorporate key national ecological environment construction projects, and allocate special funds from multiple perspectives, multiple directions and multiple levels. For small-scale ecological construction projects, we can rely on the support and efforts of the masses and enterprises. The effect is remarkable and the government can reward them appropriately.

4.7 Protecting the ecological environment

The ecological environment is the place where animals and microorganisms depend for survival, and the awareness of environmental protection should be cultivated. When raising animals, always pay attention to clean the animal's urine and feces, do not pollute flowers and trees, water sources, etc. When slaughtering animals, they should deal with the animals of worthless animals. They should not be discarded to other animals to avoid eating harmful substances. The animals should be cleaned in time. The farms (households) below these scales can be divided into two categories according to the quantity and mode of operation. The first category is professional households. The farms are relatively large, and there are fixed breeding places, mainly distributed in urban and rural areas or villages. Breeding income is the main source of income; the first category is the free-range households, who will adjust the breeding scale on the market, and the breeding sites are not fixed. Most of them are built in rural homesteads, responsible fields or houses in front of houses. According to the "Environmental Protection Law", "Animal Epidemic Prevention Law" and other laws, the scale standards of these two types of farm households are not enough, and there is no need to go through the examination and approval procedures for environmental impact assessment and epidemic prevention certificates. Once environmental pollution problems occur, the environmental protection departments Administrative penalties and industry supervision in the livestock sector are faced with an embarrassing situation that cannot be relied upon. Farmers below the scale have become a blind spot for supervision. For pollution problems in the aquaculture industry below the scale, effective measures must be taken to prevent and control [7].

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