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THE MINISTRY OF AGRICULTURE AND LIVESTOCK DEVELOPMENT

REVISED REGULATORY IMPACT STATEMENT (RIS)

THE CROPS (PYRETHRUM) REGULATIONS, 2026

JUNE 2026

1.0 Introduction

The Regulatory Impact Statement for the proposed Crops (Pyrethrum) Regulations 2026 was prepared in accordance with the provisions of sections 6 and 7(1) and (2) of the Statutory Instruments Act, 2013. Section 6 of the Act requires the Regulation-Making Authority to prepare a Regulatory Impact Statement for the proposed regulations, indicating the costs and benefits of the proposed regulations on the public and stakeholders. Sections 7(1) and (2) of the Act set out the contents of a regulatory impact statement for the proposed regulations as follows:

2.0 Statement of the Objectives and Reasons for the Proposed Regulations

The reform of the pyrethrum subsector in Kenya, particularly through the Crops Act, 2013 (Cap 318) and the Crops (Pyrethrum) Regulations (2026), represents a significant policy shift aimed at revitalizing a once-thriving industry. Historically, the sector operated under a state-controlled system dominated by the Pyrethrum Board of Kenya, which was characterized by institutional inefficiencies, delayed payments to farmers, and declining productivity (KIPPRA, 2023; NRI,2022). The collapse of this centralized model led to a sharp reduction in production and global market share, necessitating comprehensive reforms. The new regulatory framework is therefore justified on economic, institutional, and market-oriented grounds, as it seeks to liberalize the sector, enhance private sector participation, improve governance under the AFA, and restore competitiveness in the global pyrethrum market (AFA, 2024; KNBS, 2023).

One of the primary objectives of the new pyrethrum regulations in Kenya is to address institutional conflicts and outdated legal frameworks that previously hindered sector performance. The former Pyrethrum Act (Cap. 340) operated alongside Cap 318, creating overlaps in mandates and resulting in regulatory ambiguity and inefficiencies in governance. This dual legal framework led to weak coordination among sector institutions and slowed decision-making processes. The repeal of the Pyrethrum Act and the consolidation of regulatory authority under Cap 318 have streamlined governance by placing oversight within AFA). This harmonization reduces duplication of roles, enhances institutional coordination, and improves policy implementation, thereby creating a more coherent and efficient regulatory environment for the pyrethrum industry (Parliament of Kenya, 2025; Agriculture and Food Authority, 2024).

Another key justification for the new pyrethrum regulations in Kenya is the need to dismantle the monopolistic structure that previously governed the sector. Under the former regulatory regime, the Pyrethrum Board of Kenya (PBK) exercised exclusive control over production, processing, and marketing of pyrethrum. While intended to coordinate the industry, this monopoly resulted in significant inefficiencies, including bureaucratic delays, poor service delivery, and persistent late payments to farmers. These challenges eroded farmer confidence, reduced production levels, and contributed substantially to the sector's decline. The new regulatory framework addresses these shortcomings by promoting market liberalization, allowing private sector actors to participate in processing, marketing, and export activities. This shift is expected to enhance competition,

improve operational efficiency, attract investment, and strengthen the overall performance of the pyrethrum value chain (KIPPRA, 2023; NRI, 2022).

A critical challenge the new pyrethrum regulations in Kenya need to address is the exploitation of farmers and the chronic payment delays that were pervasive under the previous regulatory regime. Farmers often experienced prolonged payment periods after delivering produce, undermining their income stability and discouraging continued participation in pyrethrum cultivation. The new regulations introduce structured contract farming arrangements and require licensed processors to remit payments within specified timelines typically within thirty days of delivery. These provisions are designed to enhance transparency, strengthen accountability within the value chain, and restore farmer confidence in the sector. By ensuring timely and predictable income flows, the reforms seek to incentivize production and reverse the decline in farmer participation, which had been a major contributor to the industry's downturn (Agriculture and Food Authority, 2024).

Another critical challenge the proposed reforms seek to address is the decline in Kenya's pyrethrum quality assurance and global competitiveness. Previously, poor planting material, agronomic practices, and post-harvest handling led to reduced pyrethrin content and lower export value. The new regulations establish standards for commercial nurseries, harvesting, storage, transport, and processing of pyrethrum. This ensures consistent quality, enhances Kenya's reputation in international markets, and aligns the sector with global best practices (AFA, 2024).

Another important rationale for the new pyrethrum regulations in Kenya is the need to enhance value addition within the domestic economy. Historically, the country primarily exported raw pyrethrum flowers or semi-processed products, thereby capturing only a small fraction of the potential economic value embedded in the crop. This limited the sector's contribution to industrial growth and foreign exchange earnings. The new regulatory framework seeks to reverse this trend by encouraging investment in local processing capacity, particularly in pyrethrin extraction and the manufacture of finished insecticide products. By promoting downstream processing, the reforms aim to increase value retention within the country, stimulate agro-industrial development, and create additional employment opportunities along the value chain. Ultimately, this shift toward value addition is expected to strengthen Kenya's competitiveness in the global pyrethrum market while contributing to broader economic transformation (KIPPRA, 2023).

The revival of the sector in Kenya is a central objective of the new pyrethrum regulations. Over the past two decades, pyrethrum production fell drastically from its historical peak to minimal levels, while Kenya's global market share dropped to below 2% in the early 2010s. This decline was driven by institutional inefficiencies, weak market structures, and reduced farmer participation. The introduction of the new regulatory framework forms part of a broader strategy to reinvigorate the sector by addressing these structural constraints and improving the overall business environment. By promoting private sector participation, strengthening governance, and enhancing value chain coordination, the reforms aim to increase production, attract investment, and restore Kenya's competitiveness in the global pyrethrum market. Ultimately, the regulations

aim to reposition pyrethrum as a strategic export crop that can contribute to foreign exchange earnings and rural economic development (NRI, 2022).

In addition to reforms and revival of the sector, the new pyrethrum regulations will also align with modern agricultural and economic policy frameworks in Kenya, particularly those emphasizing liberalization, devolution and private sector-led growth. The previous regulatory regime was largely centralized and state-controlled, making it incompatible with the country's evolving legal framework under Cap 318 and the Constitution of Kenya 2010, which promotes decentralized governance. The involvement of county governments in extension services and farmer support, alongside increased participation of private investors in processing and marketing, reflects a deliberate shift toward a market-oriented and decentralized agricultural system. This alignment enhances policy coherence, improves service delivery at the local level, and creates an enabling environment for investment and innovation. Consequently, the reforms support the long-term sustainability and competitiveness of the pyrethrum subsector within Kenya's broader agricultural transformation agenda (KNBS, 2023).

The new pyrethrum regulations in Kenya are therefore a comprehensive regulatory response to historical institutional failures, inefficiencies in marketing and processing, and the sector's prolonged decline in production and global market share. By promoting market liberalization, safeguarding farmer incomes through timely payments and contract arrangements, enforcing quality standards, and encouraging local value addition, the reforms will create a robust framework for revitalizing the industry. If effectively implemented, these measures have the potential to reposition pyrethrum as a strategic export crop, enhance rural livelihoods, stimulate agro-industrial development, and contribute significantly to Kenya's foreign exchange earnings.

3.0 Statement on the Effect of the Proposed Regulations

The following are the effects of the proposed Crops (Pyrethrum) Regulations (2026).

3.1 Effects on the Public Sector

The proposed Regulations will affect the Public Sector in the following ways:

1. These Regulations will establish a clear and effective framework to regulate the operations of all actors in Kenya's pyrethrum industry. These include small-scale and large-scale pyrethrum growers, industry associations, processors, aggregators, commercial nursery operators, formulators, exporters and importers. This will improve regulatory efficiency and reduce duplication, enhance oversight and better coordination across the sector.
2. The Regulations will strengthen policy coherence in agriculture by integrating the pyrethrum industry into the broader agricultural framework to ensure alignment with national policies (e.g. food security, agro-industrialization, SEZs) and to more

effectively support government implementation of cross-cutting policies such as standards, research and extension services.

3. The Regulations will facilitate the development and maintenance of a real-time database of all actors, business volume trends, production capacities, product range and quality across all nodes of the value chain, etc. This will enable informed sector planning, business decision-making, and policymaking.
4. Enhanced Compliance with regulations across the value chain coupled with increased surveillance, monitoring, and inspections across all nodes of the industry, including production, processing, marketing, grading, storage, collection, transportation, and warehousing. This will guarantee that the quality of Kenyan pyrethrum is consistent with applicable national and international standards and any other relevant laws.
5. Reduced fiscal burden in the long run through adoption of private-sector-led investment (e.g., commercialising PPCK, liberalisation), thus reducing reliance on state funding, with the Government's role changing from being an operator to a facilitator/regulator.
6. These Regulations will control illegal trade practices in the pyrethrum industry. These include unlawful imports, exports, processing and manufacturing and the menace of pyrethrum brokers/middlemen who exploit growers. These illegal practices deny the Government revenue in the form of taxes and levies and erode growers and other industry actors' returns.
7. The Regulations are expected to facilitate the revival of pyrethrum, which was once a major export crop, promote the expansion of agro-processing and exports and consequently boost foreign exchange inflows while increasing government revenue from taxes and levies.
8. Imposition of levies on imports is expected to discourage the importation of pyrethrum flower and pyrethrum products, thereby, protecting and promoting the competitiveness of the local Kenya pyrethrum industry against imports including those from neighboring pyrethrum-producing countries.
9. The increase in revenue generated from the proposed fees and levies is expected to be reinvested in the pyrethrum industry to support critical research aimed at enhancing production and value addition. It will also facilitate promotion, trade, and market development for Kenyan pyrethrum, thereby improving overall returns in the industry.
10. Enhanced investment in marketing is expected to facilitate the development and penetration of new markets for Kenyan pyrethrum, thereby reducing reliance on traditional markets. This diversification will mitigate price volatility arising from market concentration risks and contribute to more stable and increased foreign exchange earnings.
11. Increased investment in value addition is expected to position Kenya as a source of value-added and end-use consumer products which attract premium prices. This will increase returns for the local pyrethrum growers, processors, formulators, and other actors across the value chain.
12. Expansion in crop acreage, processing and value addition capacity is expected to increase both formal and rural employment; and thereby improve household incomes,

supporting the broader government socio-economic goals (Vision 2030, BETA agenda).

13. Increased revenue from the proposed fees and levies will enable the Authority to undertake better its statutory, regulatory and other roles in the industry including regulation of the industry and market development for Kenya's pyrethrum and will reduce the Authority's dependency on the National Treasury for funding to perform its regulatory functions in the sector.
14. Regulation of commercial nursery operators will ensure that growers across the pyrethrum regions have increased access to recommended, high-quality planting materials, which will increase the nation's pyrethrum flower production and quality.
15. Introducing the proposed fees and levies may make Kenyan pyrethrum more expensive in the world market, which may lead to a loss of the country's market share, where it already faces intense competition from other leading global exporters. This could also further reduce the already low domestic pyrethrum products uptake.
16. Adopting and operationalizing the Regulations will require additional resources to facilitate public participation, sensitization and for the development of a framework to manage the registration and licensing processes and the proposed fees and levies.

3.2 Effects on the Private Sector

The proposed Regulations will potentially affect the private sector in the following ways:

1. The Regulations will establish liberalized and competitive market structure in the pyrethrum sector, remove monopoly structures and remove investors entry barriers into the sector allowing for multiple buyers, processors, and exporters, better price discovery and competition and thus higher incentives for farmers and investors.
2. The new regulatory framework will harmonize regulation in the sector, simplify licensing, promote greater transparency and predictability in the sector, lower and defined compliance costs and encourages entry of new firms as well as promote fair trade practices in the industry.
3. The reforms will increase investment opportunities for private processors, exporters and input suppliers for private investors and SEZ-based agro-processing thereby increasing capital inflows and modernization of the value chain.
4. Improve farmer incomes and payment systems through the enforcement of prompt and competitive payments based on pyrethrin content, thus improving farmer earnings and reducing historical issues like delayed payments and monopsony pricing.
5. The Regulations through having clearer rules and better coordination are expected to contribute to the expansion of production through increased acreage under cultivation and market access and improve access to domestic and export markets.
6. The Regulations through the envisaged public-private collaboration will support better access to technology, research, and inputs- improved seedlings (e.g. tissue culture), extension services and processing technologies.

7. The resultant enhanced value addition and product diversification and alignment with applicable international standards will promote production of high-value pyrethrum-based products allowing Kenyan pyrethrum products access into highly regulated global markets (EU, US).
8. The industry will benefit from better services provided by the Authority and supported by the increased revenue from the proposed levy and fees. These include, crop research and development, increased access to extension services and technologies, clearance of exports and imports, monitoring and inspection of industry actors, markets exploration and better regulation of the pyrethrum sub-sector.
9. The proposed levy on pyrethrum imports will discourage the importation of pyrethrum and pyrethrum products, therefore, protect the local pyrethrum industry actors from the proliferation of pyrethrum imports, including pyrethrums from neighbouring pyrethrum-producing countries.
10. Enhanced marketing initiatives will expand access to Kenya's traditional export markets and opening of alternative new pyrethrum markets to ensure the stability of pyrethrum producers prices.
11. The regulation of commercial nursery operators will improve the quality of planting materials used in the country, thus supporting increased pyrethrum production and quality, increasing returns to growers and all other industry actors.
12. Increased pyrethrum production and value-addition will create jobs and business opportunities, improving livelihoods of families especially in pyrethrum growing regions.
13. Enhanced regulation of the sector will eliminate unfair trade practices including pyrethrum flowers brokerage or middlemen in the sector, which often negatively affect the quality of Kenyan pyrethrum through poor handling and storage and flowers poaching from other processors contracted farmers.
14. The proposed fees and levies will increase the cost of doing business for all actors in the pyrethrum industry, reducing returns for pyrethrum industry enterprises.
15. Introducing these levies and fees may make Kenyan processed pyrethrum and pyrethrum products more expensive in the global and local markets, making exporters less competitive worldwide and potentially causing a loss of market.
16. Pyrethrum end products prices in the domestic market will likely increase as the levies and fees costs are transferred to the end consumers, thus reduce the already low domestic pyrethrum consumption.
17. Some provisions of these regulations may, however, be viewed as being contrary to the principles of free trade or infringing on the rights of private businesses.

3.3 Effects on Fundamental Rights and Freedoms

The proposed Regulations may affect the fundamental rights and freedoms of individuals and players in the following ways.

i. Consumer Protection

Article 46 of the Constitution provides for consumer rights, including the right to goods and services of reasonable quality and to information necessary for the protection of health, safety, and economic interests. The proposed regulations advance these rights by introducing licensing and registration requirements that ensure only authorized and compliant actors participate in the pyrethrum value chain. Furthermore, the regulations provide for inspections and audits by crop inspectors appointed by the Authority, including testing of pyrethrum flowers and products to ensure compliance with quality and safety standards. These measures contribute to consumer protection by promoting the supply of safe and high-quality products.

ii. Fair Administrative Action

Article 47 of the Constitution guarantees the right to fair administrative action, including lawful, reasonable, and procedurally fair decisions. The Regulations reinforce this right by requiring the Authority to provide reasons for rejecting applications for registration or licensing. They also incorporate procedural safeguards, such as the issuance of letters of objection or no objection, and the affording of affected parties an opportunity to be heard before adverse decisions, such as the revocation of a letter of no objection, are made. These provisions enhance transparency and accountability in administrative decision-making.

iii. Right to privacy

Article 31of the Constitution guarantees the right to privacy, including the protection of personal information. The proposed Regulations, particularly under Part II, require the licensing and registration of various stakeholders, including pyrethrum dealers, nursery operators, growers, processors, and formulators. These processes involve the collection and processing of personal data, including names, dates of birth, addresses, contact details, and KRA PINs through prescribed application forms. In addition, growers must register with specific processors. These activities constitute data processing within the meaning of the Data Protection Act, thereby imposing obligations on both the Authority and pyrethrum processors as data controllers or processors. Consequently, they are required to implement appropriate technical and organizational measures to safeguard personal data, ensure lawful processing, and limit access to authorized persons only, to mitigate risks such as unauthorized access or data misuse.

iv. Access to Information

Article 35 of the Constitution guarantees the right of access to information. The proposed Regulations (Regulations 6 and 7) require the Authority, processors and county governments to maintain registers containing details of licensed growers and other stakeholders. These registers constitute public information and may be accessed by members of the public upon request in accordance with the Access to Information Act. While this promotes transparency and

accountability, it must be balanced against the right to privacy, particularly where personal data is involved.

v. Access to Justice

Article 48 of the Constitution provides for the right of access to justice. Regulation 15 of the draft regulations establishes an appeal mechanism for persons aggrieved by decisions of the licensing authority. However, the framework presents certain limitations. The regulations do not expressly provide for further appeals from the Cabinet Secretary's decisions, and in some instances, such as the revocation of a letter of no objection under Regulation 9, the Authority's decision is deemed final. This may restrict access to administrative remedies and compel aggrieved parties to seek redress through alternative legal avenues such as judicial review under the Fair Administrative Action Act or proceedings under the Civil Procedure Act and Rules. This highlights a potential gap in the dispute resolution mechanism that may require legislative or regulatory refinement.

4.0 Statement on Regulatory & Non-Regulatory Options

This section highlights other regulatory and non-regulatory options that may be adopted to achieve the same intended objectives of the Crops (Pyrethrum) Regulations, 2026.

4.1 Option 1: Maintaining the *Status Quo*

Before considering new interventions, it is important to assess whether the problem could be resolved by changing practices within the existing regulatory framework, thereby maintaining the status quo. Examples of this are:

i. Making use of existing laws, regulations and/or guidelines;
ii. Simplifying or clarifying existing regulations;
iii. Improving compliance and enforcement of existing regulations; or
iv. Making legal remedies more accessible or cheaper.

The Pyrethrum Repeal Bill, 2024, which was assented to in February 2026, officially repealed the old Pyrethrum Act, aligning the sector with Cap 318, to eliminate regulatory duplication and streamline operations. This reform aims to boost the pyrethrum industry by simplifying licensing and strengthening oversight under AFA. The proposed Crops (Pyrethrum) Regulations, 2026 seek to operationalize Cap 318. Therefore, maintaining the status quo would leave the pyrethrum sector operating in an ineffective regulatory framework with limited capacity to revive what was once a key economic crop. It would also constrain much-needed investment in crop development, product and technology innovation, market expansion, and value addition. This would leave the industry exposed to the risk of remaining uncompetitive in the global market, thereby increasing the likelihood of further decline. The continued poor performance of this industry would be a threat

to the stability of the national economy and to the livelihoods of millions of Kenyans who depend on this critical economic crop.

4.2 Option 2: Passing the Regulations

The proposed Crops (Pyrethrum) Regulations, 2026 aim to promote, develop, and regulate the pyrethrum sub-sector by establishing a comprehensive legal framework governing all actors along the value chain. The regulations introduce clear procedures for registration and licensing of growers, commercial nursery operators, processors, aggregators, formulators, exporters and importers, while also setting standards for production, processing, quality control, and market practices. In doing so, they seek to enhance productivity, improve product quality and safety, attract investment, and promote efficiency in agribusiness services. Additionally, the regulations provide for reporting obligations and the imposition of fees and levies to support sector development, aligning with the broader objectives of Cap 318.

The adoption of these regulations is expected to revitalize the pyrethrum industry by creating a liberalized and competitive market environment, reducing unfair trade practices, and strengthening coordination among stakeholders. Revenue generated from levies is intended to support research, market expansion, technology development, and value addition, thereby enhancing the sector's sustainability and global competitiveness. However, while the regulations offer significant benefits, they may also impose compliance costs on businesses and require effective implementation to avoid stifling innovation and growth. Overall, the regulations are a critical tool for restoring the sector's economic viability and contributing to Kenya's broader industrialization agenda.

4.3 Option 3: Other Practical Options

Alternative approaches to regulation include information and education, market-based instruments, and improvements to existing policies and enforcement practices. These approaches may complement or substitute regulatory measures, depending on the context.

Alternatives to regulation include:

i. **No new intervention/do nothing**: This involves relying on existing laws, improving enforcement, or simplifying current regulations. However, as noted earlier, the absence of implementing regulations would likely perpetuate existing inefficiencies and limit sector recovery.

ii. **Information and education:** This approach focuses on empowering stakeholders such as growers, processors, and traders through access to information, training, and awareness. While it can improve decision-making and promote best practices, its effectiveness is constrained by limited access to information, uneven stakeholder capacity, and the time required to achieve behavioural change. It may also increase costs for both government and industry actors responsible for delivering such programs.

iii. **Incentive/market-based structures:** Economic tools such as subsidies, taxes, quotas, or vouchers may be used to influence behaviour. However, these mechanisms typically require well-developed and structured markets to function effectively. Given the fragmented and underdeveloped nature of the pyrethrum sector, such instruments may be difficult to implement and may require additional regulatory frameworks, increasing administrative costs.

4.4 Alternatives to regulation

i. **Self-regulation**.

Self-regulation involves industry participants developing and enforcing their own rules through mechanisms such as codes of conduct, standards, or accreditation systems. While this approach can enhance industry ownership and flexibility, it is not suitable for core regulatory functions such as licensing, compliance monitoring, and enforcement. Industry actors cannot effectively regulate themselves in areas requiring impartial oversight, such as inspections and enforcement of standards across the value chain. Consequently, self-regulation alone is insufficient to achieve the objectives of Cap 318 and the proposed regulations.

ii. **Co-regulation.**

Co-regulation represents a hybrid approach in which government and industry collaborate to develop and implement regulatory frameworks, such as codes of practice enforced by industry bodies but recognized by the state. While this model offers potential benefits, including shared responsibility and improved compliance, key functions such as licensing and registration remain statutory mandates of AFA and cannot be delegated. Therefore, co-regulation may complement but not replace formal regulation in the pyrethrum sector.

5.0 Cost-Benefit Analysis (CBA)

This section analyses the economic, environmental, and social impacts, as well as the administrative and compliance costs of adopting the proposed Regulations. It also assesses and quantifies the return on investment of the proposed Regulations, and the impact is likely to be on both the public and private sectors.

5.1 Economic Impacts of the Proposed Regulations

The economic impacts of the proposed Regulations are outlined below.

5.1.1 Economic Benefits

The anticipated **economic benefits** of the proposed Regulations are: -

i. The Regulations will establish a liberalised, competitive, and more efficient market structure in the pyrethrum sector, allowing for multiple players to invest in the industry across the different nodes of the value chain.

ii. A competitive and more efficient market structure in the pyrethrum sector will translate to better price discovery and competition and thus higher incentives for farmers and investors.

iii. Improved production, quality, and value addition of Kenyan pyrethrum will increase returns across the industry including growers and all other stakeholders.

iv. Well-funded market development to not only re-establish Kenya pyrethrum dominance in the former traditional markets but also expand to new alternative markets and with time reclaim 70% of the global pyrethrum market share Kenya previously controlled.

v. Expansion of export and foreign exchange earnings from pyrethrum exports, and therefore improved balance of trade and reduced reliance on traditional agricultural exports like tea and coffee.

vi. The new regulatory framework encourages value chain development, including extraction and pesticide manufacturing, stimulating growth of agro-processing and industrialisation.

vii. Expansion of pyrethrum-based agro-processing industries and higher pyrethrum value addition within Kenya will produce quality bio-pesticides locally to substitute the expensive pesticide imports and reduce reliance on synthetic pesticides, of which about 20 million kg is currently imported annually.

viii. A revitalized pyrethrum sector will create direct and indirect employment including youth engagement in agribusiness. This will arise from farming production expansion across the 19 producing counties and in new counties, as well as growth processing factories, distribution and export logistics and growth of SMEs linked to the value chain.

ix. A competitive market structure will promote increase in domestic and foreign direct investment and innovation in processing and product development.

x. Development of a competitive market structure will result in a stable demand for pyrethrum, reduce market volatility, and consequently enhance better farm-gate prices for growers.

xi. A competitive market will provide multiple market options for pyrethrum growers enabling them to maximize returns and avoid delays in payment for their deliveries.

xii. The Pyrethrum Pricing Formula Committee, comprising representatives from the different segments of the pyrethrum sector stakeholders, will determine the formula of pyrethrum pricing and thus ensure fair pyrethrum pricing in the industry for the benefit of pyrethrum growers.

xiii. Elimination of unfair trade practices in the sub-sector, including illegal pyrethrum imports and exports, exploitation of smallholder producers by intermediaries, and practices that compromise quality. This will also enhance government revenue by improving tax and levy collection.

xiv. Reduce post-harvest handling losses of pyrethrin content, which is a major source of inefficiency in the pyrethrum industry, significantly eroding a significant portion of returns for all value chain actors.

xv. The proposed levy on pyrethrum imports will discourage the importation of pyrethrum and pyrethrum products, therefore, protect the Kenyan pyrethrum industry actors from

the proliferation of pyrethrum imports, including pyrethrum from neighbouring pyrethrum-producing countries.

xvi. Increased revenue from proposed fees and levies will enable the Authority to undertake its role in the industry better, including regulation and market development for Kenya's pyrethrum and reduce the Authority's dependency on the National treasury for funding.

5.1.2 Economic Costs

The anticipated **economic costs** of the proposed Regulations are: -

i. The proposed Regulations require licenses, certificates of compliance, and feasibility studies before setting up processing facilities and firms must also demonstrate technical capacity, environmental safeguards and socio-economic impact. This will mean high entry costs for investors, increased costs of doing business, and may be a potential barrier to SMEs entering the sector.

ii. The Regulations will increase sector actors' administrative and transaction costs through more regulation which will mean increased bureaucracy, documentation and reporting requirements in monitoring and inspections which will mean higher costs of doing business, possible time delays in licensing and approvals and therefore reduced efficiency

iii. Increased public sector costs for the implementation of the regulations including funding of the regulator (AFA) and the inspectorate systems, monitoring and enforcement, and, extension services and compliance systems.

iv. Farmers may be required to adhere to new quality standards, traceability systems and certified seed use, which could increase production costs and necessitate additional training and inputs. There is also a risk that smallholder farmers may be crowded out where compliance costs become prohibitive.

v. Strict implementation of the proposed Regulations provisions on licensing and compliance rules may favour large, well-capitalised firms and established processors, thus reducing competition and promoting the emergence of oligopolies or monopolistic tendencies, which will result in lower farm-gate prices if buyers are few.

vi. New processing facilities must meet strict regulatory standards, including feasibility studies and infrastructure requirements which will require high capital expenditure for processors and thus slower industry expansion.

vii. The increased costs from compliance, certification, and processing costs will be passed on to growers and pyrethrum products consumers, eroding returns for growers and reducing affordability of pyrethrum products in the domestic and export markets.

5.2 Social Impacts of the Proposed Regulations

The Regulations are expected to have the following social impacts.

5.2.1 Social Benefits

i. An efficient pyrethrum sector will improve rural livelihoods for millions of families and poverty reduction in the pyrethrum growing zones. Reviving the pyrethrum sector is expected to benefit over 2 - 3 million people across the value chain.
ii. Increased production and processing create jobs in farming, aggregation and transport, processing industries, thereby reducing rural-urban migration, increasing youth participation in agriculture and strengthening rural economies.
iii. Pyrethrum is a natural pesticide, and promoting it reduces reliance on hazardous synthetic pesticides linked to health risks for farmers and consumers, resulting in lower exposure to toxic agrochemicals, improved occupational health for farmers and safer food systems.
iv. Regulations will promote strengthened farmer organisations and cooperatives through collective marketing, giving farmers stronger bargaining power, enhancing social cohesion through such groups and cooperatives and reducing exploitation by middlemen.
v. The Regulations, like other agricultural policies in Kenya, present gender and social inclusion opportunities, and inclusion of vulnerable groups will promote increased participation of persons with disabilities, women and youth, more equitable access to income opportunities and empowerment in rural communities.
vi. Diversification into crops like pyrethrum supports a resilient farming system, reducing communities' vulnerability to shocks, providing more stable household incomes and better food access.
vii. Revival of the sector is expected to reduce the use of synthetic pesticides, thus reducing environmental harm, allowing for cleaner water and soils, and healthier ecosystems that support communities.

5.2.2 Social Costs

The anticipated **social costs** of the proposed Regulations are:

i. Strict compliance requirements (certification, quality standards) may favour large-scale farmers and risk the exclusion of smallholder farmers and marginalise resource-poor households, increasing inequality and potential loss of livelihoods for vulnerable farmers.
ii. The proposed Regulations may increase pressure on farmers (compliance burden) as farmers must adopt to the new standards, traceability systems and certified inputs which will present stress and adjustment challenges to farmers and the need for training and capacity building.

iii. Implementation of the Regulations may also occasion potential conflicts and inequality in value chains if the sector is dominated by a few firms leaving farmers with limited bargaining power thus causing social tensions between farmers and buyers and perceived unfairness in pricing and contracts.
iv. Attractive pyrethrum returns from expanded markets and marketing of value-added pyrethrum products may encourage shits in farming systems, reducing area under food crops and thus increasing food insecurity among families growing pyrethrum.

5.3 Environmental Impacts of the Proposed Regulations

The proposed regulations are expected to have the following environmental impacts.

5.3.1 Environmental Benefits

The anticipated **environmental benefits** of the proposed Regulations are:

i. The Regulations promote use of pyrethrum which is a botanical, biodegradable insecticide as a safer alternative to persistent synthetic chemicals reducing reliance on harmful synthetic pesticides.
ii. Increased use of pyrethrum products will lower soil and water contamination, reduce pesticide bioaccumulation in ecosystems and improve environmental health over time.
iii. Pyrethrum use will promote environmentally sustainable farming practices and thus enhance long-term ecological resilience.
iv. Improved land utilization and management, especially in otherwise idle, underutilized, low-potential, and marginal pyrethrum-growing areas.

5.3.2 Environmental Costs

The anticipated **environmental costs** of the proposed Regulations are:

i. Environmental degradation resulting from the installation of new or additional pyrethrum processing, manufacturing and marketing facilities.
ii. Even though pyrethrum is “natural,” it is broad-spectrum and kills many insects, thus may cause loss of biodiversity, decline in beneficial insects (pollinators like bees, natural predators), causing disruption of ecosystem balance and may potentially, in the long term, affect crop pollination.
iii. The regulatory reforms aim to revive and scale up pyrethrum production nationwide and may promote pyrethrum monocultures, reducing agrobiodiversity and increasing vulnerability to pests, diseases, and climate shocks.
iv. Increased soil degradation due to the opening of new areas or expansion of land for pyrethrum production.

However, with proper and effective implementation of these regulations, these negative environmental impacts can be significantly mitigated and their impacts reduced.

5.4 Quantification of the Benefits

The pyrethrum sector in Kenya is undergoing significant transformation from a state-controlled system under the Pyrethrum Board of Kenya (PBK) to a fairly liberalised regime under the AFA and has demonstrated the potential for even better performance with full liberalisation of the sector. This section presents a comparative cost–benefit analysis (CBA) based on empirical data from AFA and other relevant sources, reports, and policy documents.

Data drawn from AFA Yearbooks (2019–2024) show production increased from 303 MT in 2019 to a high of 1,680 MT in 2023, while value increased from Kshs 68.5 million to a high of Kshs 512.4 million. The following analysis applies Benefit–Cost Ratios (BCR) to compare efficiency under both regimes.

The evolution of the Kenyan modern pyrethrum sector can be divided into three (3) phases:

A. Peak (State-Controlled Era – PBK)
Production: 17,700–18,700 MT (1990s)
Export earnings: Kshs 2.1 billion (1996)
Farmers: 200,000 growers
Global share: >70%
(Source: PPCK 2026; AFA, 2026)

B. Decline Period (Late State-Control)
Production: less than 500 MT (recent low)
Causes:

- Payment delays
- Monopoly inefficiencies
- Competition from other crops
- International market access
- Competition from synthetic pyrethroids

C. Liberalized / Reform Era (AFA Data 2019–2024)
From AFA Yearbook (official statistics):
Table: Production, value and price Trends 2019-2024

Year	Production (MT)	Value (Kshs million)	Price (Kshs/kg)
2019	303	68.5	217.7
2020	284.9	57	200

Year	Production (MT)	Value (Kshs million)	Price (Kshs/kg)
2021	505.5	106.7	213
2022	942	235.4	250
2023	1,680	512.4	305
2024	1,634	503.4	308

Source AFA Yearbook (official statistics), 2024

Using the above verifiable evidence-based Kenyan data backed by quantitative comparisons from authoritative sources such as KNBS/AFA/KIPPRA and relevant reports from the Government and other authoritative sources quoted in various sections of this report, a credible cost–benefit ratio (CBR) can be derived from the available data.

Key verified facts:
Production increased **5 time**s between 2019 → 2023)
Value increased **7.5 times** (**Kshs 68M → Kshs 512M**)
Prices increased from Kshs **200 → 300/kg**

DERIVING A REAL (EVIDENCE-BASED) CBR

A. Liberalized System

Benefits (Observed)

- Total value: **Kshs 512.4 million**

Costs (Evidence-Based Approximation- government + sector spending):

- Government revival fund: **Kshs 1.5 billion** (The funds will be channeled through PBK whose primary mandate is to revive and develop the sector)
- Spread over 5 years → annual cost ≈ **Kshs 300 million**

(Source AFA, Farmbizafrica, Accessed 2026)

Liberalized BCR (Empirical)

$$\text{Benefit Cost Ratio (BCR)} = \frac{\text{Verifiable Benefits}}{\text{Verifiable Costs}} = \frac{512.4}{300}$$

$$BCR = 1.71$$

Interpretation:

- BCR = **1.7**
- For every Kshs 1 invested → **Kshs 1.7 return**
- BCR>1 indicates **clear economic viability**
- **Note -** Sector still in early recovery phase and clearly already shows high potential of quick recovery in an enabling regulatory environment

B. THEN STATE-CONTROLLED SYSTEM (Decline Stage)

Benefits (Observed)

- Production ≈ **500 MT** (average p.a)
- Price ≈ **Kshs 200/kg** (AFA price range)
- Revenue=500,000×200=**KSh100M**

Costs (ONLY VERIFIABLE FIGURE)

Farmer debt Historical: Historical evidence indicates that inefficiencies under the state-controlled regime led to substantial farmer payment arrears of approximately Kshs 1.8 billion, contributing to the sector's collapse. (USDA, 2007, policy reports-various)

Farmer debt: **Kshs 1.8 billion unpaid**

Convert to annual burden (conservative 5-year spread):

$$\text{Annual Cost} = \frac{1.8B}{5} = 360M$$

C. BCR Calculation

$$BCR = \frac{100}{360} = 0.28$$

Interpretation

- BCR < 1 → **economically inefficient**
- Confirms sector decline under state control

D. DIRECT COMPARISON (STRICT DATA ONLY)

Table 3: State-controlled and Liberalized sector CBR comparison

System	Benefits (Kshs M)	Costs (Kshs M)	BCR
State-controlled	100	360	**0.28**
Liberalized	512.4	300	**1.71**

INCREMENTAL CBA POLICY IMPACT: Gains from reforms

- **Benefit increase:**

512.4−100=412.4M

- **Cost change:**

300−360=−60M

Costs actually **reduced**

Incremental Interpretation:

Reforms (so far) has translated to Higher benefits + lower costs which points to strong economic and welfare improvement: -

- Producer surplus improved (better prices, faster payments)
- Government burden reduced
- Market efficiency improved

The comparative CBA shows that the liberalized system is economically superior Higher BCR (1.71 vs 0.28) and thus can support greater export earnings and investment while Lowering the fiscal burden.

Similar comparison analysis can also be done on the other critical nodes of the sector value chain, including at the farm level, processing and marketing levels, which have in the past also been characterised by inefficiencies under the state-controlled system and will also show significant differences in the CBAs under the two different regimes.

The state-controlled system in general is socially stabilizing but economically inefficient and often is not necessarily supportive of the growth of a sector or industry in an economy but a liberalized pyrethrum sector demonstrates superior economic performance and long-term viability compared to the state-controlled system.

From the above discussions, it is clear that the expected economic, social, and environmental benefits of implementing the proposed Regulations heavily outweigh the associated costs.

5.5 Costs-Benefits Analysis Assumptions

The analysis of the cost and benefits of implementation of the draft Regulations is, however, based on the following assumptions: -

i. The Regulations will be implemented holistically, with all their provisions implemented.
ii. The countries and pyrethrum-producing counties' development strategies and political and policy environment will continue to prioritize and support the development of the pyrethrum value chain.
iii. The climatic conditions will remain favourable for pyrethrum production.

iv. Pyrethrum sub-sector value chain actors and all other auxiliary industry actors will respond rationally to the implementation of the proposed Regulations and voluntarily comply with them.
v. The additional revenue generated from the various fees and levies will be used to further develop the pyrethrum subsector.

5.6 Administration and Compliance Costs

The Regulatory Impact Assessment (RIA) highlighted that implementing the Crops (Pyrethrum) Regulations, 2025 will require allocating significant resources for effective administration and compliance. These resources will cover human capital and operational costs necessary for monitoring and enforcing standards across the pyrethrum value chain, including transportation, processing, manufacturing, and handling. They will also support inspections of pyrethrum factories and other industry actors, promote product development and value addition, enhance marketing and promotion of Kenyan pyrethrum, and raise awareness of the Regulations among all sector stakeholders.

Furthermore, it is anticipated that additional resources will be directed toward implementing broader national policies and strategies that support the pyrethrum industry, including agricultural, industrialization, and trade initiatives. This includes efforts to enhance pyrethrum production, manufacturing, value addition, research, and the provision of agricultural services. Resources will also be required to align the Regulations with overarching frameworks such as national pyrethrum strategies, sectoral agricultural and industrial policies, Vision 2030, County Integrated Development Plans (CIDPs), and the Government's Bottom-Up Economic Transformation Agenda (BETA), ensuring coherence and integration across all levels of policy implementation.

Overall, the effective operationalization of the Regulations will depend on adequate resourcing to ensure compliance, promote growth, and sustain competitiveness within Kenya's pyrethrum industry, while supporting national development objectives and sectoral strategic priorities.

5.7 Assessment of Return on Investment (Benefit)

The passage and operationalization of the proposed Crops (Pyrethrum) Regulations, 2025 are critical to supporting the recovery and long-term transformation of Kenya's pyrethrum sector, as well as enabling the full implementation of Cap 318. Although it may be difficult to quantify the specific impact of the regulations directly, effective industry regulation remains a foundational pillar for sector growth. The pyrethrum value chain is highly interdependent, involving growers, aggregators, processors, exporters, and other actors whose performance collectively determines the success of the industry. Weaknesses at any stage of the value chain can undermine overall productivity, quality, and market competitiveness. Similarly, Kenya's global reputation for high-quality pyrethrum depends on compliance and coordination across all actors, meaning that improved regulation can yield sector-wide benefits.

The proposed Regulations are designed to liberalize the sector, which has historically been characterized by significant state control, by creating an enabling environment for private sector participation. This is expected to attract new investment in production, processing, manufacturing, value addition, technology, and marketing. Increased private sector involvement will not only enhance efficiency but also unlock the sector's full economic potential in a growing global market. In addition, the regulations introduce fees and levies to generate revenue for the regulatory authority, enabling it to better fulfil its mandate. These resources can be reinvested in key areas such as research, extension services, market development, and the regulation of planting materials, thereby improving productivity and ensuring the availability of high-quality seedlings across pyrethrum-growing regions.

A key benefit of the regulations is the anticipated improvement in product quality and industry standards. Enhanced monitoring, inspection, and enforcement mechanisms across production, processing, and marketing stages will help reverse the recent decline in the quality of Kenyan pyrethrum. The introduction of levies on imports and raw exports is also expected to protect the domestic industry from unfair competition while promoting local value addition. This will strengthen Kenya's position in global markets, increase export earnings, and support the development of a more competitive and sustainable sub-sector. Furthermore, the revitalization of the industry is likely to generate employment opportunities both on-farm and off-farm, including in processing, manufacturing, logistics, and related support services.

Conversely, maintaining the status quo would have significant negative implications for the sector. Without the regulations, the effective implementation of Cap 318 would remain incomplete, and the industry would continue to operate without a coherent framework for licensing, registration, and oversight. This would perpetuate existing barriers to private sector investment, discourage modernisation, and allow illegal practices such as unregulated brokerage, poaching, and illicit trade to persist. These challenges would undermine farmers' incomes, reduce government revenue, and weaken the crop's overall profitability, potentially leading to reduced production and declining acreage.

In addition, the absence of effective regulation would likely lead to continued deterioration in product quality, further eroding Kenya's competitiveness in international markets. Unregulated imports could distort local prices and demand, while weak market development efforts would limit the recovery of lost export markets and the exploration of new ones. The lack of a reliable industry database would also hinder evidence-based policymaking and sector planning. Moreover, insufficient funding for regulatory and development functions would constrain the Authority's ability to deliver critical services, leaving it overly dependent on government funding.

Overall, the implementation of the proposed regulations presents a strong return on investment by addressing structural weaknesses in the sector, improving coordination across the value chain, and creating conditions for sustainable growth. The reforms are expected to contribute to broader national development objectives, including those outlined in Kenya Vision 2030, the Agriculture Sector Transformation and Growth Strategy, the Bottom-Up Economic Transformation Agenda, and county-level development plans. By strengthening regulation, enhancing investment, and promoting value addition, the regulations provide a viable pathway for the revival and long-term sustainability of the pyrethrum industry in Kenya.

6.0 Reasons Why Other Regulatory Options Are Not Appropriate

Maintaining the status quo would leave the pyrethrum sector operating in an ineffective regulatory framework with limited capacity to revive what was once a key economic crop. It would also constrain much-needed investment in crop development, product and technology innovation, market expansion, and value addition. This would leave the industry exposed to the risk of remaining uncompetitive in the global market, thereby increasing the likelihood of further decline. The continued poor performance of this industry would be a threat to the stability of the national economy and to the livelihoods of millions of Kenyans who depend on this critical economic crop

Other practical options, such as doing nothing, relying solely on information and education, or implementing incentive- and market-based approaches, are unlikely to achieve the desired outcomes. Maintaining existing laws without new interventions would leave the industry stagnant, while information and education initiatives may be slow, costly, and insufficient to ensure compliance. Market-based approaches require a well-structured, efficiently functioning sector, which the fragmented Kenyan pyrethrum subsector currently lacks. Without a robust regulatory framework, these alternative measures would be inadequate to address critical challenges like registration, licensing, quality control, and market access.

Alternative regulatory models, including self-regulation and co-regulation, are also limited in their effectiveness. Self-regulation is impractical because industry organizations do not comprehensively represent all actors and cannot objectively enforce standards on themselves. Co-regulation, while useful for collaboration between the government and industry, cannot replace AFA's statutory mandate to register and license actors. However, the Authority can leverage co-regulation to engage stakeholders in implementing and operationalizing the framework, fostering compliance and industry buy-in, while retaining ultimate responsibility for regulation and oversight.

7.0 Conclusion and Recommendation

The proposed Crops (Pyrethrum) Regulations, 2025 establish a comprehensive framework for the orderly development, governance, and regulation of Kenya's pyrethrum industry. By introducing clear procedures for registration and licensing of all actors across the value chain, the Regulations enhance traceability, strengthen compliance with quality and safety standards, and curb illegal practices. In doing so, they reinforce oversight and accountability within the sector. The development of the Regulations was informed by extensive stakeholder engagement and public participation, ensuring that the views of growers, processors, aggregators, nursery operators, industry associations, county governments, national agencies, and private sector actors were meaningfully incorporated into the final framework.

The Regulations are expected to generate significant benefits for both the private and public sectors. For industry participants, they provide a structured and predictable operating environment that supports improved quality control, value addition, market access, and competitiveness, while addressing unfair trade practices. For the public sector, the Regulations offer a coherent and enforceable legal framework that enhances monitoring, compliance, and revenue mobilization. In particular, the introduction of the pyrethrum levy is expected to provide a sustainable funding mechanism to support regulatory functions, research, and market development initiatives under the Agriculture and Food Authority. The Regulations also align with constitutional and statutory requirements, including consumer protection, fair administrative action, and data privacy, as set out in the Constitution of Kenya.

Through strengthened monitoring, evaluation, and enforcement mechanisms, the Regulations are likely to improve sector efficiency, increase production and productivity, compliance, enhance product quality, increase export earnings, and safeguard Kenya's global reputation as a producer of high-quality pyrethrum. They provide a transparent, standardized, and sustainable approach to managing the industry, positioning it for long-term growth, modernization, and resilience. In light of these anticipated benefits, it is recommended that the Cabinet Secretary proceed to gazette the draft Regulations to facilitate their formal implementation and operationalization.