

South Africa's crowded cannabis market: identifying new market opportunities for Ilco Farming's "green gold"

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Case summary

Learning outcomes: Following a discussion of the case, students should be able to analyse competitive dynamics: provide an in-depth critical analysis of Ilco Farming's microenvironment, using the structure–conduct–performance framework; evaluate strategic positioning: conduct a SWOT analysis of Ilco Farming's medicinal cannabis business; and develop strategic approaches: propose actionable strategies that would provide effective solutions to the problem of constrained market conditions currently faced by Ilco Farming.

Case overview/synopsis: Coenie and Ilse Venter established Ilco Farming, a cannabis farm located in the Viljoenskroon district in the Free State province in South Africa, in 2021. From the beginning, they poured their hearts and souls into their new venture, which soon paid off. A few short months after Ilco Farming began operating, despite the presence of other large competitors, Ilco Farming supplied a large share of the domestic medicinal market with flower heads. But then an unexpected challenge presented itself. In March 2023, Ilco Farming was operating at only 23% (600 m²) of its production capacity of 2600 m² and had considerable room for growth, the local market – at least the local legal market – for cannabis began to show signs of saturation. Coenie and Ilse found themselves at the proverbial crossroads, grappling with the crucial decision of how to secure their farm's future in the face of a fast-saturating local (legal) cannabis market and a thriving (illegal) black market. Coenie and Ilse refused to entertain the idea of going the black market route, as they were unwilling to risk losing their operating licence. They calculated that the farm would reach breakeven point within the next two years, with profits unlikely during this period. Should they persist with their current strategy of producing high-quality products and delivering a superior service in the hopes of growing their market share? Or should they consider other strategic options? Coenie and Ilse were sitting at their boardroom table having a cup of coffee and looking out of the window at Ilco Farming's impressive SAHPRA- and GAP-approved warehouse and tunnels. "What should we do?" they both wondered.

Complexity academic level: The case study can be used in postgraduate courses in microeconomics (PGDIP/MBA) and agricultural economics (PGDIP/MBA).

Subject code: CSS 5: International business.

Keywords: Strategy; Pricing; Process efficiency; Market orientation

Alicia Fourie and Judith Mariette Geysers wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality. – Version: 2024.04.06

Coenie and Ilse Venter established Ilco Farming, a cannabis farm located in the Viljoenskroon district in the Free State province in South Africa, in 2021. From the beginning, they poured their hearts and souls into their new venture, which soon paid off. A few short months after Ilco Farming began operating, despite the presence of other large competitors, Ilco Farming supplied a large share of the domestic medicinal market with flower heads. But then an unexpected challenge presented itself. In March 2023, Ilco Farming was operating at only 23% (600 m²) of its production capacity of 2600 m² and had considerable room for growth, the local market – at least the local *legal* market – for cannabis began to show signs of saturation.

Coenie and Ilse found themselves at the proverbial crossroads, grappling with the crucial decision of how to secure their farm's future in the face of a rapidly saturating local (legal) cannabis market and a thriving illegal market. Their decision-making process was made even more difficult by the unique regulatory environment in South Africa and their ethical dilemma of avoiding the lucrative illegal market. They refused to entertain the idea of going the illegal-market route as they were unwilling to risk losing their operating licence. They calculated that the farm would reach breakeven point within the next two years, with profits unlikely to be made during this period. Should they continue to follow their current strategy of producing high-quality products and delivering superior service in the hope of growing their market share? Or should they consider other strategic options?

Coenie and Ilse were sitting at their boardroom table having a cup of coffee and looking out the window at Ilco Farming's impressive SAHPRA-[1] and GAP-approved[2] warehouse and tunnels. "What should we do?" they both wondered.

How it all started

The Venters had been living on the family farm in the Viljoenskroon district in the Free State since 1932. Coenie Venter was a fourth-generation farmer and landowner. His grandparents had been small-scale farmers, but they provided the foundation for Coenie's dad and later Coenie to expand the family business. They mainly farmed summer grain crops, game, and cattle. Coenie and Ilse were both brought up on farms, instilling in them a deep understanding and appreciation of the agricultural lifestyle from an early age. Their upbringing gave them the resilience, strong work ethic and innovative thinking required for profitable farming. Ilse's active participation in day-to-day farm activities and Coenie's experience in running the family farm developed their skills in crop management and farm economics.

For some time, Coenie and his wife, Ilse, had been talking about the possibility of diversifying farming activities mainly with a view to achieving a more sustainable business model. The Viljoenskroon district had a reputation for having unpredictable weather and a harsh climate. For example, regular droughts during the period 2009–2017 proved to be very costly for the farm. Coenie and Ilse considered various possibilities, such as blueberries and pecans, but nothing seemed quite right. They did not have a good sense of the possibilities.

Meanwhile, Ilse experienced some health problems and sought the advice of a holistic physician in Sandton, Johannesburg. Coenie and Ilse developed a fond relationship with the

doctor and often discussed non-health-related topics during their consultation visits, including farming. One day, when Coenie was waiting for Ilse after one of her treatments, the doctor approached him and asked “You are a farmer; why are you not growing cannabis?”

The doctor’s suggestion immediately piqued their interest, and Coenie and Ilse decided to investigate the possibility of entering cannabis farming. They did extensive research on the subject and discovered that cannabis cultivation requires low humidity, which was ideal given their current location. In addition, unlike grain farming, cannabis can be produced throughout the year; it is not a seasonal crop. However, Coenie and Ilse found the prospect of learning all the ins and outs (and conquering the challenges) of cannabis farming quite daunting, especially since the cannabis industry remained quite closed due to its novelty. Many growers were hesitant to share information. Despite this, Coenie and Ilse were able to visit some cannabis farms, which gave them useful information about the workings of the industry. They also consulted with a compliance officer in Johannesburg who provided them with valuable information on industry regulatory requirements.

On their way back from their meeting with the compliance officer, Coenie asked Ilse for her opinion on the proposed venture. Ilse, tuning into her sixth sense, said she believed that they should take the plunge. Coenie also found the idea of cannabis cultivation appealing, but had some reservations, given the conservative nature of the Viljoenskroon community. However, two days later, Coenie approached his father and shared his and Ilse’s plans with him. His father was very supportive and encouraged them to pursue the venture.

Coenie and Ilse made the decision to enter the medicinal cannabis industry through self-financing despite strict licensing requirements and strong competition. This decision positioned them against established growers like Labat Africa Ltd. and Safricanna, with Labat Africa benefitting from substantial shareholder capital due to its listing on the Johannesburg Stock Exchange and the Frankfurt Stock Exchange (Chibba, 2023). Safricanna had attracted notable investors who significantly increased their share capital.

In January 2021, Coenie and Ilse started laying the foundations for cultivating cannabis legally, which would include complying with regulatory requirements from various bodies. As the establishment of a simple growing site would cost in the region of R6m, the Venter family decided to self-finance their new venture and take on most of the construction work themselves. An initial advantage was that they could establish the operation on the family farm.

On 15 June 2021, after months of hard work and having undergone a formal audit, Ilco Farming received the necessary approval from SAHPRA to start cannabis production, making it the 43th^[3] licensed cannabis producer in South Africa with cultivation space (capacity) of 2600 m². It was a joyous moment for Coenie and Ilse who had invested considerable capital, time, and energy in making their dream a reality. Ilco Farming primarily focused on selling high-quality flower heads to processors. These processors then further processed and packaged the product for distribution to pharmacies throughout South Africa. The cannabis industry experienced substantial growth with a total of 102 licenced producers by November 2023 (Hussain, 2023). Ilco Farming, established as the 43rd licenced cannabis grower since the inception of licencing in 2019, has an advantage within the fast-growing medicinal cannabis industry. With its operation focused on producing premium medicinal cannabis, Ilco Farming used quality, compliance and expertise to set itself apart.

Ilco Farming's management team was made up of five key members, each of whom contributed specific knowledge to the business. Ilse Venter was the director and authorised representative, with her husband Coenie Venter functioning as the depute authorised representative and director. Berne Swart served as the responsible pharmacist, ensuring compliance and safety in all aspects. Berne was raised in Viljoenskroon, and her background in pharmacology and experience in the pharmaceutical industry made her an invaluable asset to the team, particularly in navigating the complex regulatory landscape of medicinal cannabis. Tyler Muller, the master grower and head of cultivation, was responsible for monitoring and optimising the cultivation operations. Tyler was introduced to cannabis during his teens as a treatment for serious epileptic seizures. His medical condition improved dramatically since he started using cannabis. That sparked a deep personal interest in the plant, which also drove his passion to produce high-quality crops and explore innovative cultivation techniques. Danielle van der Berg, the quality assurance manager, verified that the product complied with the stringent standards. Her attention to detail and background in quality management helped maintain the farm's reputation for excellence. Ilco Farming's management style emphasized farmer leadership, with a focus on team and organizational growth, similar to plant care. Relationships and honesty were essential characteristics, creating a transparent and cohesive working environment critical to their success in the competitive cannabis industry. Decisions were typically made after extensive research and a comprehensive evaluation of the potential long-term financial benefits. This process involved performing a thorough cost-benefit analysis to ensure that the anticipated advantages outweighed the costs.

Background on the cannabis industry in South Africa

The most common drug in the world, variously known as marijuana, cannabis, weed, pot or dagga (among other names), was grown from the genus *Cannabis*. The different cannabis cultivars were pure or hybrid varieties of the *Cannabis* plant family, which included the species *C. sativa*, *C. ruderalis* and *C. indica*. Cultivators crossbred different strains to produce a specific plant that met their needs. The plants were developed to enhance their inherent characteristics (such as tetrahydrocannabinol [THC] content, pest resistance capacity and climate sensitivity) to make them more effective as a drug and more appealing to the market. The names of the different varieties were usually chosen by their growers and often reflected the unique attributes of the plant, such as taste, smell and appearance. It had been suggested that more than 700 strains of cannabis could be found worldwide (Gloss, 2015), with the number of strains constantly rising as cultivators continue to crossbreed to find the perfect plant.

South Africa has had a long history of cannabis production, with evidence of indigenous Khoi people who first used it for recreational, spiritual and medicinal purposes. In 1922, the South African government banned the use of dagga/cannabis, under the Dangerous Drug Act. After a century-long ban, legislation was drafted to legalise the use of cannabis in South Africa. The purpose of the new legislation was to allow the cultivation, distribution and use of cannabis for research and medicinal purposes, and for the personal use of cannabis, with restrictions on the smoking of cannabis in public places and near children.

Medicinal cannabis cultivation was controlled and monitored by SAHPRA and was regulated by the Medicines and Related Substances Act 101 of 1965. This regulatory framework allowed the cultivation of medicinal cannabis, subject to specific licensing, quality control and security requirements. The strict pharmaceutical standards of SAHPRA prescribed that the product was grown indoors or in a high-tech greenhouse. Medicinal cannabis users required reliable and

high-quality products. Although the stringent regulations imposed by SAHPRA increased compliance costs, they ensured product safety (SAHPRA, 2022). Smaller producers like Ilco Farming were under more pressure from competitors like Labrat, who used economies of scale to dominate the market (Hussain, 2023).

The Medicines and Related Substances Act distinguished between cannabidiol (CBD) and THC, which were compounds found in the cannabis plant. THC, which was responsible for giving cannabis users the characteristic sense of euphoria, was psychoactive, which meant that it triggered altered senses, heightened moods and short-term memory loss. THC was considered a Schedule 6 substance. As such, it was available only on prescription from a pharmacy or a dispenser licensee. CBD was non-psychoactive and was listed as a Schedule 4 substance although in some instances (based on the CBD content) it was classified as a Schedule 0 substance and could be purchased off the shelf at various stores (Bulose, 2023). The unlawful use of medicinal cannabis was a serious offence in South Africa and could lead to imprisonment.

It was important to note that while medicinal cannabis was regulated, the consumption of personal adult cannabis in private spaces had been decriminalised by the South African Constitutional Court. Consequently, while current legislation allowed for the regulated or controlled use of medicinal cannabis, cannabis used for recreational purposes was restricted to personal cultivation and consumption only. The issue within the South African market was a delay in promulgating legislation to legalise cannabis production for both medical and recreational use. Since 2018, there had been no new legislation to “open up the market”. If approved, this legislation would give legal cannabis growers access to the existing illegal market. This limited the current size of the cannabis market in South Africa, as it was illegal to buy cannabis for anything other than medicinal purposes. The transition from a history of criminalising cannabis use to advocating for its legal production and medicinal properties introduced a complex set of legal and social challenges (Mokwena, 2019). The restrictive nature of the current cannabis laws further compounded these issues, limiting opportunities for local farmers and producers to enter and expand within the market (Rusenga, et al., 2022).

Cannabis cultivation in South Africa was subject to various licensing, quality control and security requirements:

- *Licensing*: To grow medicinal cannabis in South Africa, individuals or organisations must obtain a SAHPRA licence. The application process included providing detailed information on the cultivation site, security measures and compliance with regulations. Licensing guarantees that only authorised parties could use cannabis for medicinal purposes. A licence usually remained valid for five years from the date of issue.
- *Security*: Security requirements were essential to prevent unauthorised access to, and divergence and theft of, medicinal cannabis. These requirements included physical security measures, such as surveillance systems, restricted access areas and transport-linked security, to protect the supply chain. These security measures were designed to maintain the integrity of the cannabis industry.
- *Quality control*: Quality control involved strict standards and processes to ensure the safety and effectiveness of cannabis products. These included the monitoring and control of factors such as plant genetics, farming practices, pest control and harvesting methods, which were designed to maintain consistent quality and to verify the composition, safety and effectiveness of cannabis products and their compliance with standards (Van Rensburg et al., 2020). Despite the lack of formal government quality

control standards at the time of writing, increasing attention was being paid to guaranteeing the quality, safety and consistency of cannabis products through stringent internal processes and compliance with global best practices.

- *Good manufacturing practice (GMP)*: Medicinal cannabis cultivation in South Africa must adhere to GMPs to ensure that the production process meets high quality standards (Cliffe Dekker Hofmeyr, 2022). Licences were only granted after the successful audit (based on GMP) of applications which confirmed the construction of fully compliant cultivation, processing, extraction or testing facilities (SAHPRA, 2022). This required significant capital expenditure (in hopes that the necessary licence would be issued) before any cultivation can start. South Africa was a member of the Pharmaceutical Inspection Co-operation Scheme (PIC/S), an international body that regulated the quality of cannabis (Van Rensburg et al., 2020). This ensured that the product was appropriate for its intended use. Many prospective cannabis farmers grossly underestimated the time, money and energy required to start their businesses and attract a viable market share.

Rigorous adherence to GMP standards during the cultivation stage of cannabis production carried an additional cost, which could make it difficult for small- and medium-scale cultivators to enter the market. However, if the applicant divided the activity into two processes, with the cultivation stage considered an agricultural activity subject to agricultural standards and the post-harvest processing stage considered a manufacturing activity subject to manufacturing standards, it was possible to realise significant cost savings. This in turn would lead to more competitive pricing in the global marketplace.

Local cannabis production had been mainly focused on raw cannabis flowers and extracts aimed at both the local and international markets. It should be noted that a significant proportion of cannabis production in the country occurred outside the legal framework. According to Interpol, South Africa was the fourth largest producer of cannabis in the world (Mashau & Nyawo, 2023), with about one-third of all illicit cannabis seizures worldwide traced back to South Africa. A 2019 study estimated that by 2023 the South African cannabis market could be worth up to \$1.7bn (Beadle, 2019). The report further estimated that the global cannabis market was worth an estimated \$103.9bn, Europe having the largest market share with an estimated value of \$38.9bn, and Africa and Oceania having the smallest market shares with estimated values of \$2.6bn and \$2.7bn, respectively. South Africa exported just over R153m worth of medications that contained cannabis or cannabinoids during 2023 (Quantec, 2024). The value of the global cannabis market was expected to grow to \$272bn by 2028 (Taylor, 2023).

However, it was difficult to determine its exact size due to the high level of illegal activity. The indirect economic benefit of the cannabis industry was significant. According to Walsh (2017), for every \$1 spent by customers in a cannabis retail store, \$3 of additional economic benefit was generated.

The fast-growing cannabis market was often referred to as the modern gold rush – although it could perhaps be better described as the “green rush”. Two main factors had prompted this rapid growth. The first was the legalisation of cannabis for medicinal and recreational use in more than 30 countries worldwide and the public’s support for this legalisation (the previous stigma associated with cannabis use had faded). The second was the growing awareness among physicians and patients of the benefits of medicinal cannabis, supported by the growing number of patients suffering from chronic disorders, the increasing prevalence of geriatric populations

across the globe, the growing number of cannabis clubs and the expanding production of edible products containing cannabis (Bridgeman & Abazia, 2017). There were many growth opportunities in the medicinal and recreational cannabis markets. However, the cannabis industry was still new, and there were risks associated with investing in it. The financing options for cannabis businesses were limited. Venture capital and crowdfunding were usually the only avenues open to cannabis entrepreneurs.

The growth of the cannabis industry was attracting big brands worldwide that were taking action to reap the rewards. This posed a threat to smaller businesses which were unable to achieve the economies of scale enjoyed by larger companies. Moreover, small businesses lacked the budgets of the large international players that were able to allocate sizeable amounts to production and marketing. As legal cannabis production was still a relatively young industry in South Africa, experienced growers and workers were hard to find.

Although only flowers and leaves were used for medicinal and recreational purposes, the cannabis market covered a wide variety of products, from cigarettes, edibles and drinks to skin care products – all of which were derived from the cannabis plant (excluding products for industrial use) (Fordjour, et al., 2023). THC was generally used in smoking items, prefills and vaporisers, among other products. CBD was normally used in oils, creams and edibles such as gummies, cookies and brownies.

The cannabis value chain comprises five key stages:

1. *Cultivation*: This refers to the growth of plants and flowers until they were ready for harvest. This stage of the production process was highly regulated (requiring a licence), as it involved “touching the plant”. Strict regulations and best practices were necessary to ensure high-quality products. Cultivators either obtained plants in the form of seedlings or clone existing female plants. Cloning ensured that only female plants were grown, but it also increased the occurrence of diseases. The seed method allowed a large variety of seeds to be used (over 1,500 different varieties), but it took longer than the cloning method, as seeds needed to germinate and sprout, whereas only two weeks were needed for cloning. The sex of the plant was only revealed during the growth phase. Once identified, all male plants were destroyed, as only female plants were used for medicinal cannabis. After the flowers were harvested and cured, extraction and manufacturing of the product took place.
2. *Extraction and manufacturing of products*: This stage of the value chain also required a licence as the product extraction and manufacturing processes involved touching the plant. Either a cultivator or a dispensary could perform the extraction and manufacturing function. During this stage, the flower was either processed and packaged or the cannabis was extracted. During the extraction process, the flowers were converted into concentrates. To manufacture other products, such as cannabis oil, ointment and tablets, additional licences must be obtained.
3. *Scientific testing*: Scientific testing of the cannabis product usually took place in a registered laboratory where the quality, safety and composition of the product were determined and reported on.
4. *Distribution and/or retail*: During this stage, medicinal cannabis could be obtained on prescription. Export agents acted as intermediaries when products were exported to other countries. Licences were needed to perform activities at this stage.

5. *Support services*: These were services provided to the industry which were not directly related to cultivation, manufacturing, testing, distribution or retail activities. Typical service categories included IT, tax, accounting, marketing, rental and technical advice.

Effective inbound logistics management, which was based on capacity and growth planning, was critical to ensure an efficient cannabis supply chain. Outbound logistics, in turn, related to product compliance, traceability and timely delivery. Failure to ensure traceability, for example, could result in penalties, reputational damage and a loss of customer trust. Furthermore, the protection of intellectual property (IP) was paramount in the cannabis industry. If a business did not protect its IP, it could lose its competitive advantage, which would negatively impact profitability.

Although the South African cannabis industry showed potential for growth, it was nevertheless facing several challenges – notably, the lack of legislation governing the recreational cannabis market, the capital-intensive nature of medicinal cannabis production and the generally limited access to capital. Despite these challenges, an increasing number of businesses and entrepreneurs were keen to capitalise on the opportunities presented by this high-potential market.

Ilco Farming approach to regulatory compliance

The cultivation and manufacturing of cannabis for medicinal purposes required strict adherence to the requirements for storage, equipment and production, as well as the development and implementation of standard operating procedures for all activities during the production process. High-quality security and safety systems were also mandatory for the establishment of a cannabis farm, as cannabis was for medicinal use and was therefore a Schedule 6 drug.

To purchase cannabis seedlings or to activate any stage of the production process, Ilco Farming first needed to comply with all SAHPRA regulations and adhere to GMP, Good Laboratory Practices and Good Agricultural and Collection Practices. Ilco Farming encountered some challenges with regulatory bodies, as regulations changed frequently due to the novelty of the industry. However, they remained committed to meeting all the regulatory requirements needed to produce high-quality medicinal cannabis, and Ilco Farming eventually received its SAHPRA licence to start producing cannabis.

Ilco Farming production strategy

With its SAHPRA licence, Ilco Farming had the option of purchasing different strains of cannabis for production, such as Durban Poison, Mango Sapphire, Strawberry Lemonade and Banana Exodus, which differed in terms of smell and taste. However, it was intended to find a cannabis strain that was well suited to the climate of the Viljoenskroon district in preference to one that, for example, produced the highest yield. Although some strains produced large flower heads, they might not acclimatise well to the local environment and ultimately rot. As a result, Ilco Farming invested in research and development to identify the ideal strain that could thrive in the unique climatic conditions of the district, while still retaining its high quality. The aim was for the farm to achieve peak production capacity, which would equate to an output of 100 kg every two weeks. To increase resilience and productivity in cannabis cultivation, genetic diversity was crucial (Fordjour et al., 2023). Applying the resource-based view theory, Ilco Farming could use their unique strain development capabilities to gain a competitive edge. By focusing on creating exclusive farm-specific strains, Ilco Farming could gain a competitive

edge over its competitors. This was consistent with the RBV principle, which stated that a business's unique capabilities could provide a sustainable competitive advantage.

Ilco Farming purchased the initial seedlings from CloneLabs, a leading and trusted supplier of micro-propagated plants to licensed growers in Africa. Micropropagation was a biotechnological technique that was used to rapidly multiply plant clones under sealed and sterile conditions. Having acquired the seedlings, Ilco Farming could then grow and register its own strains, provided that it could ensure traceability. Ilco Farming opted to specialise in THC strains of cannabis and some strains with greater traceability of THC levels, which could command higher prices. This specialisation allowed Ilco Farming to focus on producing high-quality products and establishing a reputation as a reliable and trustworthy supplier of THC strains of cannabis.

Ilco Farming had mother plants that were kept in a storage facility called the "mother room". These mother plants ensured traceability and acted as a useful backup, i.e. spares of specific strains. From the different cannabis plants that were in production, Ilco Farming could clone hundreds of seedlings at any given time. Clones took 10–14 days, in a tightly controlled environment, to develop roots, after which they were planted in designated black plant bags and moved to high tunnels[4]. With its cloning facility, Ilco Farming had the capacity to produce up to 6000 individual clones. Ideally, 2000 clones should have been produced each week. After two weeks, each batch of clones was transplanted/moved to their designated high tunnels to grow and subsequently relocated to the greenhouse where the plants flowered and were then harvested.

Although recent studies highlighted the importance of sustainable and organic practices in the cannabis industry (Van Rensburg et al., 2020), Ilco Farming once attempted to switch to an organic fertiliser in the wake of increased consumer demand for more green products, but the organic fertiliser resulted in too much volatility in the growth of the plants. The duration of the cultivation stage could range from four to eight months, depending on the growing location. However, Ilco Farming had an indoor growing room that ensured optimal growth conditions and compliance with regulations. Such a facility made it possible to fully control environmental conditions, such as light, darkness, temperature, air flow and humidity, which were crucial for the growth and development of healthy cannabis plants and allowed the plants to flower within just two weeks. Tyler, Ilco Farming's expert grower, precisely controlled the levels of nutrients and the water uptake of the plants and used advanced technology and growing techniques, such as high pressure sodium lamps, light-emitting diodes and fluorescent lights, to provide the necessary light spectrum for the growth and development of plants. In addition to manipulating light, Tyler could also manipulate darkness by mechanically surrounding the growing room with a dark block-out curtain. By carefully monitoring and adjusting the growing conditions to meet the specific needs of the plants at each stage of growth, Ilco Farming ensured that its cannabis plants flourished and produced consistently high-quality crops.

Needless to say, the different steps in the growing/production cycle were very labour intensive. The fact that workers were continuously planting, transplanting, moving plants to different tunnels and harvesting made labour one of Ilco Farming's biggest expenses. In addition, each stage of the growth process had specific requirements with respect to levels of light, water, fertiliser and other nutrients. An unexpected challenge was that the greenhouse performed better than originally anticipated. Hence, the plants were flowering more quickly in the greenhouse than expected. However, the growth momentum of the plants in the tunnels did not

match that of the plants in the greenhouse environment, leading to delays in the movement of the plants from the tunnels to the greenhouse.

Ilco Farming irrigation and harvesting processes

The irrigation system at Ilco Farming was particularly complex. The water was obtained through a water borehole [5] and the water was then filtered through sand filters and UV filters to remove bacteria from the water. The different fertilisers and nutrients were then mixed with the water in specific concentrations and dispensed to the plants per daily cycle (five times over a period of one minute). The irrigation process was regulated by an automated program. The computers running the irrigation programs were equipped with an uninterrupted power supply unit to ensure that they did not shut down during loadshedding [6] before the backup generator had an opportunity to activate. This was an important provision, given that the cost of electricity from the state-run power utility, Eskom, and the operating costs of the backup generators were very high.

The flowering stage began when the plants received less than 12 h of light a day and began in earnest when the plants were exposed to 10–12 h of complete darkness. Harvesting was determined by changes in the colour of the pistils (hairs coming from the flower calyxes) and the trichomes (the mushroom-shaped resin glands found on the flower and nearby leaves), with reddish-orange pistils and milky-to-opaque and then amber trichomes indicating higher CBD-to-THC ratios in the resin. Trichomes produced various cannabinoids, and as the flower clusters developed, the resin made them sticky. The ideal harvest time was when half of the trichomes were opaque and the pistils had not turned brown. The colour ration of the pistils also determined the TCH/CBD effects, with more white pistils producing the euphoric “high” TCH and more red pistils providing a calmer feeling of CBD.

When it came to harvesting, the cannabis plants needed to be cut into smaller branches to facilitate the drying process. Once cut, these smaller branches had to be strung upside down in a cool, dark room. Drying was necessary to prevent the growth of bacteria and fungi and to preserve the quality of cannabis. It was a manual process carried out by labourers who were trained to achieve the necessary precision. During the drying process, which lasted anywhere from 7 to 14 days, the optimal humidity level was between 40% and 50%.

Ilco Farming marketing, sales and business development strategy

An average plant at Ilco Farming yielded approximately 40 grams of flower heads, with the ideal flower head having a length of 30 and 40 mm. The dried product delivered two-thirds as flower heads and one-third as biomass. There was an off-taker agreement with a company in the Western Cape province, where oil was extracted from the biomass for use in various cosmetic products. The price of a flower head ranged from R12 for the small variety (known as popcorn buds) to R22 for the large variety, where the cost per gram was approximately R8, regardless of the size. As Ilco Farming was establishing its foothold in the market, its pricing strategy was to recoup its costs while gaining a 25% markup. Ilco Farming anticipated following this approach for two to three years, as the complete financial recovery of the farm, when its initial debt was paid off, would take longer than the one-year period that was originally anticipated.

When the flower heads were ready to be sold, Ilse sent them to a laboratory to obtain a certificate of analysis (COA), which provided an indication of the THC composition. This

process allowed Ilco Farming to ensure the quality of its products and to be transparent about THC levels, helping to build trust with its customers. Upon receipt of the COA, Ilco Farming contacted a buyer to inform them of the availability of the product, and negotiations began to establish a price for the product. Ilco Farming could only sell to certain buyers that supplied to selected registered entities, one such them supplying a major pharmacy group in South Africa.

At the crossroads

The South African cannabis market had seen tremendous growth since the first medicinal cultivation licence was issued in 2020, to now (2024) boasting more than 100 cultivation licences granted by SAHPRA. Several businesses were attempting to profit from the unrealized potential of the country in the global market with export opportunities to the EU, Israel and Australia. The most recent development was the passing of the Cannabis for Private Purposes Bill by Parliament on 27 February 2024 (Thorn, 2024). Despite the legislative change, the medicinal cannabis market continued to be tightly regulated with stringent regulations and standards. The local market also experienced a slow uptake by medical practitioners in prescribing cannabis for various medical conditions. As a result, local medicinal growers were forced to compete in the highly competitive export market. Additionally, the local market was under competitive pressure from an inflow of imported cannabis products, which threatened the viability and expansion of local farms. In view of the encroaching saturation of the local cannabis market against the backdrop of onerous regulatory requirements for the industry (inaccessible illegal market), Ilco Farming needed to pursue a different strategy to secure its future. It had three main options:

1. Export to the EU and/or Australia

One possible way for Ilco Farming to expand its market was to export to the European Union (EU). However, that would involve securing an EU GMP licence, which would cost Ilco Farming approximately R2m. Although this represented a significant investment, the EU had a large cannabis market. Therefore, an EU expansion drive could prove to be lucrative and make the Ilco Farming brand recognisable internationally. Another possible export market was Australia. The Netherlands and Australia were the only two legal export destinations provided under the Ilco Farming SAHPRA licence.

2. Diversify its product offering(s)

Ilco Farming could pursue one or more product diversification options, such as going into cannabis oil production or marketing products in small package sizes, such as pre-rolled joints for the medicinal cannabis smoking market. Given the problem of market saturation (DUE TO LEGISLATION ISSUE), focusing on more value-added products could open up new revenue streams for Ilco Farming. Although product diversification would require investment in R&D, it could give the farm useful inroads into untapped niche markets. Ilco Farming could also consider selling the unused parts of the cannabis plant to other registered cannabis farms that specialise in producing cannabis oil, creams, lotions and ointments.

3. Weather the storm and gradually increase its production capacity while cutting costs

Given the volatility and general uncertainty of the cannabis market, Ilco Farming could opt to maintain its current course, riding out the challenges over the next two to three years while gradually increasing its production capacity and keeping tight control over its costs. Here, the focus would be on cost recovery rather than the aggressive driving of profits.

Coenie and Ilse understood that the medicinal cannabis market was not just about the product, it was about the whole experience. Relationships formed the backbone of the operations at Ilco farming. Coenie and Ilse firmly believed that strong and mutually beneficial relationships were essential if the farm was to succeed, whichever expansion strategy they decided to pursue. The drive to cultivate positive connections with all relevant stakeholders in the supply chain would, they felt, encourage effective collaboration and ensure consistently high-quality products and excellent service.

The dilemma in a nutshell

Coenie and Ilse, the owners and managers of Ilco Farming, located in South Africa's Free State province, had enjoyed a successful start to their cannabis farming venture. Having met the necessary regulatory requirements to start a cannabis farm and having invested heavily in facilities and equipment, Ilco farming managed to secure – within a relatively short period – a significant share of the local medicinal cannabis market.

Then, a new challenge presented itself, which they were not anticipating: the market began to show signs of saturation. Medicinal cannabis production was highly regulated in South Africa, which was off-putting for many existing and aspiring cannabis producers (and their customers). Due to the restrictions surrounding the production and purchase of cannabis in South Africa, a thriving illegal market had been created, with many producers and their customers going “underground” to escape the onerous and/or expensive regulations. Recreational cannabis could not be legally bought and sold in the country (only cultivated and consumed privately) and was also traded on the illegal market.

The market for legal medicinal cannabis products was showing signs of saturation, with too many registered cannabis producers chasing a sluggish or shrinking market. Although financial estimates indicated that Ilco Farming could break even in two years, they risk losing their total investment without a strategic pivot. With the potential loss of their SAHPRA licence and damage to their reputation at stake, Coenie and Ilse faced exceptional challenges not encountered by many of their competitors. They calculated that profits would be unlikely, or very small, until break even has been reached. Should they continue with their current strategy of producing high-quality products and providing superior service in hopes of growing their market share? Or should they consider other strategic options? Coenie and Ilse, who were not prepared to get involved in the illegal market, found themselves at a crossroads: wondering what they should do to ensure Ilco Farming's survival and to preserve their dream.

Notes

1. SAHPRA stands for South African Health Products Regulatory Authority.
2. GAP stands for Good Agricultural Practice.
3. According to information provided by Ilco Farming.
4. A high tunnel is not a greenhouse, although there are similarities between the two. A high tunnel is a growing space made out of steel and covered in polythene plastic, which

- usually has a semi-circular shape. Both tunnels and greenhouses protect plants from the elements, but greenhouses provide heat and ventilation, using electrical ventilation systems.
5. Water boreholes (also known as water wells) are deep, narrow wells that tap into naturally occurring underground water. A high efficiency pump is installed to extract the water from the permeable rock below.
 6. Loadshedding refers to planned power outages introduced by the state-run power utility, Eskom, when the power supply is constrained and the capacity of the country's generating units is under pressure.
 7. SAHPRA stands for South African Health Products Regulatory Authority.

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Disclaimer. This case is written solely for educational purposes and is not intended to represent successful or unsuccessful managerial decision-making. The authors may have disguised names; financial and other recognisable information to protect confidentiality.

References

- Beadle, A. (2019). Key insights from the global cannabis report. Retrieved from <https://prohibitionpartners.com/2019/11/07/key-insights-from-the-global-cannabis-report/> accessed (30 March 2023).
- Bulose, S. (2023). Cannabis law and legislation in South Africa. Retrieved from <https://cms.law/en/int/expert-guides/cms-expert-guide-to-a-legal-roadmap-to-cannabis/south-africa> accessed (30 March 2023).
- Bridgeman, M. B., & Abazia, D. T. (2017). Medicinal cannabis: History, pharmacology, and implications for the acute care setting. *P&T: a Peer-Reviewed Journal for Formulary Management*, 42(3), 180-188. PMID: 28250701; PMCID: PMC5312634. 28250701.
- Chibba, S. (2023). SA's cannabis industry: a potential powerhouse. *Farmer's Weekly*. Retrieved from <https://www.farmersweekly.co.za/agri-business/agribusinesses/sas-cannabis-industry-a-potential-powerhouse/> accessed (24 July 2024).
- Cliffe Dekker Hofmeyr. (2022). Healthcare and pharmaceutical alert: Medicinal cannabis in South Africa: Licensing, quality control and access to market. Retrieved from <https://www.cliffedekkerhofmeyr.com/en/news/publications/2022/Sector/Healthcare/healthcare-and-pharmaceutical-alert-15-june-2022-medicinal-cannabis-in-south-africa-licensing-quality-control-and-access-to-market.html> accessed (29 November 2023).
- Gloss, D. (2015). An overview of products and bias in research. *Neurotherapeutics*, 12(4), 731–734. doi: 10.1007/s13311-015-0370-x.
- Fordjour, E., Manful, C. F., Sey, A. A., Javed, R., Pham, T. H., Thomas, R., & Cheema, M. (2023). Cannabis: A multifaceted plant with endless potentials. *Frontiers in Pharmacology*. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10308385/> accessed (4 June 2024).

Hussain, M. (2023). In-DEPTH Licensees for cannabis cultivation look toward export market with green eyes. Retrieved from <https://www.news24.com/news24/opinions/fridaybriefing/in-depth-licensees-for-cannabis-cultivation-look-toward-export-market-with-green-eyes-20231123#:~:text=Currently%2C%20there%20are%20102%20cannabis,grow%20cannabis%20for%20medicinal%20purposes> accessed (9 April 2024).

Mashau, P., & Nyawo, J. (2023). Rapid innovation and development in the global cannabis market, Hershey, PA: Business Science Reference, an imprint of IGI Global.

Mokwena, K. (2019). Social and public health implications of the legalisation of recreational cannabis: A literature review. *African Journal of Primary Health Care & Family Medicine*, *11*(1), 1–6. <https://dx.doi.org/10.4102/phcfm.v11i1.2136> doi: 10.4102/phcfm.v11i1.2136.

Quantec. (2024). Quantec Easy Data. Retrieved from <https://www.easydata.co.za/dataset/TRD01/> accessed (25 July 2024).

Rusenga, C., Klantschnig, G., Carrier, N. C., & Howell, S. (2022). Cannabis policy changes in Africa are welcome. But Small Producers Are the Losers.

SAHPRA. (2022). Guideline for cultivation of cannabis. Retrieved from <https://www.sahpra.org.za/document/guideline-for-cultivation-of-cannabis/> accessed (4 September 2023).

Taylor, B. D. (2023). The role of the South African government in advancing the cannabis industry to assist the ailing economy and improve unemployment. *Advances in Business Strategy and Competitive Advantage Book Series*, <https://doi.org/10.4018/978-1-6684-6346-8.ch007>

Thorn, S. (2024). New cannabis laws for South Africa – how much you can carry and what’s still illegal [online]. Retrieved from <https://businesstech.co.za/news/government/755615/new-cannabis-laws-for-south-africa-how-much-you-can-carry-and-whats-still-illegal/> accessed (4 June 2024).

Van Rensburg, R., Pillay-Fuentes Lorente, V., Blockman, M., Moodley, K., Wilmshurst, J. M., & Decloedt, E. H. (2020). Medical cannabis: What practitioners need to know. *South African Medical Journal*, *110*(3), 192-196. doi: 10.7196/SAMJ.2020.v110i3.14403.

Walsh, C. (Ed.). (2017). *Marijuana Business Factbook 2017: Exclusive Financial Data for Cannabusinesses and Major Investors*. Marijuana Business Daily.

Further reading

Gwala, R. D. S. (2023). The legalisation of cannabis in South Africa. *Advances in business strategy and competitive advantage book series*, <https://doi.org/10.4018/978-1-6684-6346-8.ch006>.

Exhibit 1

VIDEO ON ILCO FARMING <https://www.youtube.com/watch?v=I7zIWd2rtFM>