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## Cotton as calamitous commodity: the politics of agricultural failure in Natal and Zululand, 1844–1933

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### Résumé

Cet article suit les efforts des colons blancs qui ont tenté d'imposer le coton en tant que culture d'exportation dans le Natal et le Zululand. Vanté comme un produit capable de transformer les terres et la vie dans la région dans les années 1850, 1860, puis à nouveau dans les années 1910 et 1920, le coton n'est jamais parvenu à obtenir autre chose qu'un statut marginal dans l'économie agricole de la région. Son histoire est un récit d'amnésie historique : bien que la confiance dans les perspectives du coton de la région ait chuté après chaque spectaculaire échec, il était systématiquement ressuscité une fois les échecs passés expliqués, ou une fois les souvenirs s'y rapportant estompés. Il y a deux questions cruciales au centre de cette histoire épisodique. Tout d'abord, j'examine la logistique de l'expansion planifiée, et les raisons de l'effondrement répété des programmes de culture du coton. Deuxièmement, je démêle les effets secondaires de ces efforts difficiles et décevants et soutiens que, malgré les échecs à répétition, le coton a facilité d'importants changements structurels au niveau du paysage agricole, politique et économique de la région.

### Abstract

This article follows the efforts of white settlers to impose cotton as an export crop in Natal and Zululand. Touted as a commodity capable of remaking land and life in the region in the 1850s, the 1860s, and again in the 1910s and 1920s, cotton never achieved more than marginal status in the region's agricultural economy. Its story is one of historical amnesia: although faith in the region's cotton prospects dipped following each spectacular failure, it was routinely resurrected once previous failures had been accounted for, or memories of them had faded.

Two crucial issues are at the centre of this episodic history. First, I explore the logistics of planned expansion, and the reasons for the repeated collapse of cotton-growing schemes. Second, I unravel the side effects of these difficult and disappointing efforts and argue that, despite repeated failure, cotton facilitated important structural changes to the region's agricultural, political and economic landscape.

**Keywords:** cotton; agricultural failure; KwaZulu-Natal; South Africa

### Introduction

This is a story of agricultural failure. It is premised on the notion that studies of failure can reveal as much about the intersections of nature, power and politics as stories of success. Agricultural achievements – stories about the transformation of the desert into arable land, the clearing of forests, the eradication of pests – have been the focus of a great deal of scholarly work (Beinart et al. 1986; Beinart and Coates 1995; van Sittert 2000). But agricultural failures have rarely engaged such critical scrutiny. Yet across Africa, agricultural failures far outnumbered colonial ventures that achieved sustained production

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and export (Crush 1996). Colonial administrators hatched all manner of schemes designed to encourage the continent's farmers to produce commodity crops (Gemery and Hogendorn 1979; Mason 1994; Witt 2005). Almost all ended in failure as a result of some combination of unsound planning, a misreading of the landscape, poor implementation and African resistance. These failures deserve more prominence within the region's history, for they are emblematic of the realities of colonial rule in Africa.

This paper traces the failure of cotton in the region known today as KwaZulu-Natal. Generally one place, one crop micro-histories detail the benefits associated with the transformation of a particular landscape as newcomers implemented their designs upon a territory. But the story of cotton in southeastern Africa fascinates for other reasons. Cotton has never achieved significant status in the region: at its zenith it accounted for just over 4% of Natal and Zululand's exports (Leverton 1963). Yet hundreds of settlers and scientists, many of them basically unfamiliar with this African environment, made determined and successive attempts to overcome the multiple obstacles to production that hampered cotton cultivation in this part of the world. This paper analyses their efforts and seeks to explain their failure. It explores the enthusiasm that underpinned successive efforts to introduce cotton, the logistics of planned expansion and the reasons for its repeated collapse. It is, in Isaacman's (1997) terms, a study of historical amnesia; although faith in the region's cotton prospects dipped following each spectacular failure, it was routinely resurrected once previous failures had been accounted for or memories of them had faded.

Cotton's role in advancing colonial interests has been investigated in a number of African contexts. Isaacman and Roberts' (1995) superb edited volume *Cotton, Colonialism and Social History in Sub-Saharan Africa* offers a compelling vision of how cotton fit within European aspirations across a wide range of British, French, Portuguese and German colonies. Each chapter is squarely focused on the social and economic dimensions of production; most are explicitly committed to reasserting the agency of African peasants in shaping agricultural outcomes. Histories of cotton production efforts in Cote d'Ivoire (Bassett 2001), Chad (Sturzinger 1983), Sudan (Lado 1987) and Mali (Roberts 1996) have similarly stressed the importance of peasant agency, labour resistance and the differentiated impact of forced cotton schemes.

But this research has remained relatively silent on how local growing conditions impacted outcomes. These continental case studies have privileged issues of peasant resistance and international markets over discussion of environmental change and growing regimes.<sup>1</sup> In this paper the biophysical environment is treated not simply as a stage upon which colonial ventures play out, but rather as a major factor shaping cotton histories. The pages that follow demonstrate a fundamental concern for understanding the role of local growing conditions in sustaining cycles of failure.

Two questions surround this discontinuous history of cotton in Natal and Zululand. First, how can we account for this persistent cycle of failure: what factors sustained faith in cotton and what explains its repeated collapse? My primary argument is that cotton failed because colonists lacked the appropriate technology to overcome natural constraints to production. Settlers and scientists could not remake the land in whatever fashion they wished. They attempted to overcome obstacles to production through settlement schemes, an increased reliance on African labour and new experimental methods, but were unable to conquer the ecological incompatibilities between theoretical ambition and practical cultivation. This paper stresses the limitations of colonial agriculture when confronted with unfamiliar growing conditions.

Second, following Ferguson (1994), this paper aims to unravel the instrumental effects of the repeated failures of cotton production in Natal and Zululand. Inspired by Foucault's

genealogy of the prison, Ferguson moves beyond simply chronicling the repeated disappointments of rural development in Lesotho to shift the focus onto what was achieved. He highlights the side effects that were major outcomes of development schemes that purportedly failed. In his view, “planned interventions may produce unintended outcomes that end up, all the same, incorporated into anonymous constellations of control . . . that turn out in the end to have a kind of political intelligibility” (Ferguson 1994, 20). Instead of dwelling on the failures themselves, Ferguson reverses the question to ask whose interests were served by these disappointments.

This paper similarly turns the question of agricultural failure on its head, to ask what was achieved through these cotton failures, and what these outcomes reveal about the underlying motives of agricultural change in southern Africa. I concentrate on the effects of these cotton failures – increased settler presence, stronger delineation between settler and African space, expanded state control into rural areas – and argue that, despite its repeated failure, cotton facilitated important structural changes to the region’s agricultural, political and economic landscape.

### Joseph Byrne and cotton colonialism, 1844–1852

The British annexation of Natal was an ambivalent affair. British interest was first piqued when the Voortrekkers wrested much of the territory north of Pondoland and south of the Thukela River away from the Zulu king, Dingane. The British seized Port Natal in 1838 but withdrew just over a year later. Steady lobbying by prospective merchants and concerned officials prompted the British to retake control and officially annex the territory in May 1844. This ambivalent annexation left the European population of Natal, numbering fewer than 3000 settlers, scrambling for resources that would solidify their economic position. With no extractable minerals or timber, and with initial estimates of coal deposits having been proven exaggerated, officials were left with only agriculture as a potential export industry. But despite extravagant reports of the land’s potential, early settler production stuttered. Most Europeans found trading for hides, skins and ivory with Africans north of the Thukela River more profitable. Those who did manage to cultivate focused on subsistence crops such as maize, potatoes and papaya. African *imizi* (homesteads) accounted for most of the early agricultural production in the colony, supplying potatoes, maize and beans to newly arrived settlers.

This stagnating settler production had severe consequences for the colony’s finances. Natal remained in the red after annexation. Export values rarely exceeded £15,000 per year, while imports increased from just under £42,000 in 1846 to over £111,000 by 1850. With zero revenues from export agriculture, customs and taxes made up more than 74% of colonial revenues.<sup>2</sup>

The political situation was also unstable: 100,000 Africans surrounded the colony’s 3000 European settlers. Most white settlers were afraid of an African attack or fearful that the British would turn the colony into an African reserve. Writing from the Colonial Office to Cape Governor Sir Peregrine Maitland, Earl Grey made it clear he was open to any suggestion about how to increase European numbers: “If you are prepared to suggest any mode in which an emigration to Natal of persons of a small capital could be successfully promoted without expense to the British territory, I shall be glad to give the subject my best attention.”<sup>3</sup>

Officials within Natal longed for a reliable export crop that could stimulate economic growth and boost settler numbers. For this they turned to cotton, which was mobilized as an agent of colonial development to advance the twin goals of commodity supply and European penetration.

British cotton fever was at an all-time high in the nineteenth century. The first half of the century witnessed an unprecedented rise in the demand for cotton goods. Cotton manufactures were Britain's single most valuable export, making up more than 40% of total exports. Raw cotton, in turn, became Britain's most important import. Increasingly heavy dependence on American suppliers, who accounted for less than 1% of total imports at the turn of the century but over 75% by 1850, was a cause of strategic concern (Farnie and Jeremy 2004). Securing a cheap, reliable and diversified supply became a matter of national importance.

This dependence on American supply prompted an empire-wide search for alternative sources of raw cotton. Cultivation was re-energized in the West Indies, and attempted anew in Australia and India. Africa especially was imagined as an ideal site for cotton supply. Cotton fever soon spread to Natal, generating much enthusiasm about the prospects of turning it into a cotton colony.<sup>4</sup>

Joseph Charles Byrne emerged as the man best positioned to capitalize on this vision. Byrne possessed a larger-than-life presence, created by both his imposing frame and his keen sense of charm and style. He had travelled extensively throughout the British Empire, and was committed to finding his fortune by facilitating the emigration of English urbanites to far-off colonies. Having previously had a hand in marketing settlement schemes to Australia and America, Byrne was an experienced promoter by the time he set his sights on Natal in 1847.

Byrne recognized Natal's economic and political frailties and proposed a cotton emigration scheme as a solution to these twin crises. Byrne relied on his oratorical skills to overcome his lack of capital and reputation, in order to convince officials, investors and potential emigrants of the reliability of his propositions. After creating some initial momentum for a large-scale emigration plan to Natal through feverish communications with the Colonial Office in early 1847, Byrne set about canvassing investors to secure the capital needed to implement a large-scale emigration project primarily based on cotton. After a number of false starts, Byrne finally cobbled together a patchwork of investors made up mostly of ship-owners based in London and Liverpool who recognized the profit potential of increased sea traffic embedded in Byrne's vision. By 1848 he had accumulated capital worth more than £40,000 in money, shipping and goods.<sup>5</sup>

Byrne then set about selling his vision of large-scale emigration through numerous public talks and a manifesto entitled *The Emigrants' Guide to the Port of Natal*. He delivered more than 50 lectures on the subject of emigration between July and December 1848. All drew well into the hundreds, with one meeting at the London Stock Exchange topping out at over 900 attendees. Byrne's embrace of cotton as a means of furthering colonial goals resonated with prospective emigrants. His ships began filling up faster than he could accommodate applicants for passage.

With his financial backing secured, and deluged with requests from potential emigrants, he approached the Colonial Office to negotiate the specifics of his cotton-emigration scheme. Byrne, as the promoter, agreed to a deposit of at least £1000 with the Colonial Land and Emigration Board towards the purchase of crown land in Natal. Subject to approval by the emigration commissioners, he was free to recruit and select suitable emigrants for passage, provided he charge them no more than £10 for the voyage. He agreed to secure their safe passage, and to survey and allot 20 acres of suitable agricultural land for each settler upon arrival. Once the Natal government had certified that the emigrants had been landed safely and were in possession of their land, Byrne would be entitled to reimbursement of his deposit at the rate of £10 per approved adult.

Byrne's expected profit lay in the land. With the price of crown land set at four shillings per acre, Byrne would be allocated 5000 acres for each £1000 deposited, which would then be reimbursed to him at £10 per settler.<sup>6</sup> One hundred emigrants would be enough to get his entire deposit back, and to satisfy his responsibilities he had only to part (at minimum) with 2000 acres (at 20 acres per emigrant), leaving him with a profit of 3000 acres of land. Each settler paid his or her own steerage fee, so Byrne was in a position to recoup 30 acres per settler (assuming no land allocations for dependent children) for facilitating their recruitment and transport, as well as the survey and allotment of land. Byrne recognized that 20 acres would be insufficient for farmers to survive and they would clamour for adjoining land, which he would then sell at an inflated price. The more emigrants he recruited, the greater the inflationary pressure on land values, and the greater

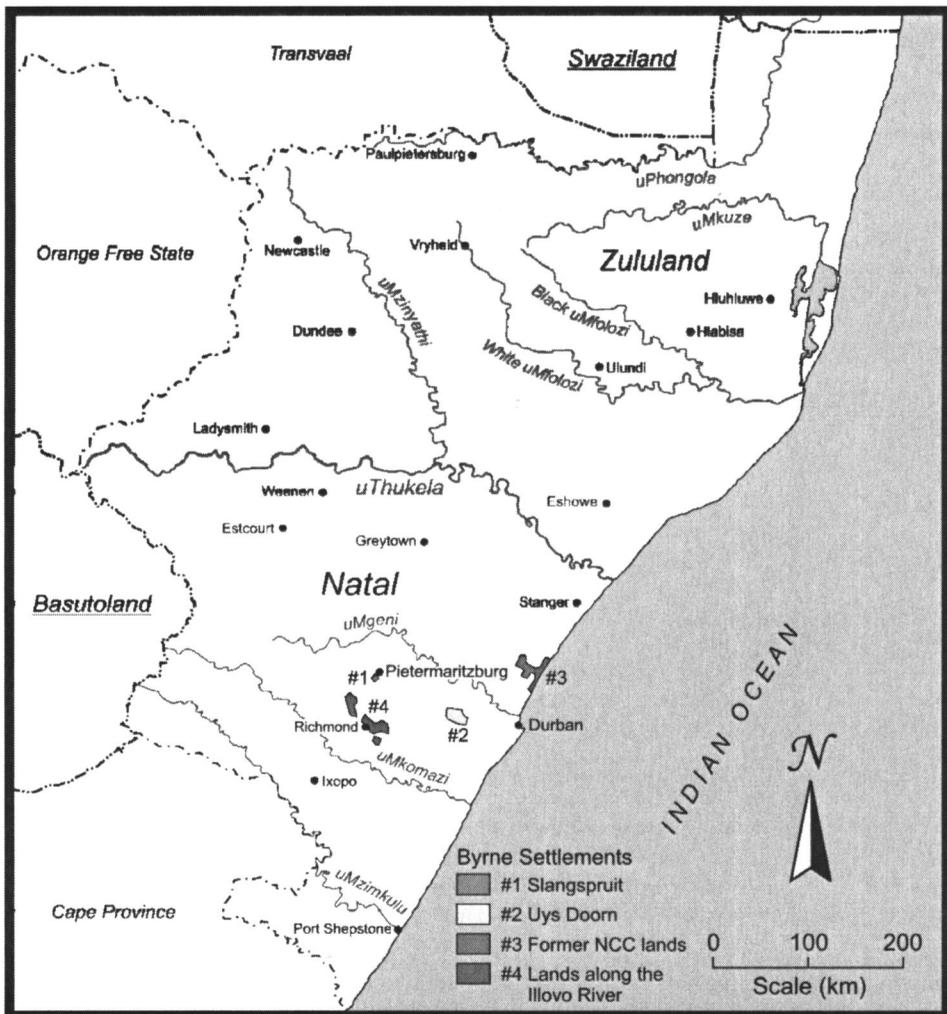


Figure 1. Location of Byrne settlements within the Colony of Natal. Source: Adapted from: A.J. Christopher (1969). The British settlement of Natal 1848–1851: a geographical appraisal, *Journal for Geography* 3(5): 485–499.

his potential profits. This prospective windfall motivated Byrne to import over 2700 settlers into the colony in just 18 months.

The first shiploads of Byrne emigrants arrived in May and June 1849; complaints began piling up soon after. Emigrants were left spectacularly unprepared for their arrival. The ostensible prime cotton lands that Byrne had so eloquently promised were neither surveyed nor allocated. New arrivals were left scrambling for shelter on Durban's beaches. The time it took to get them to their new lands varied from weeks to months.

This initial wave of arrivals was settled on two sets of plots near the route connecting Pietermaritzburg and Durban. The first was along the Bushman's River at Slangspruit (see Figure 1(a)). Settlers there complained about the lack of timber, the clayish and shallow soils, and the absence of direct access to water.<sup>7</sup> Just over half of these plots were abandoned within two years (Christopher 1969, 494). The second plot, known as Uys Doorn (Figure 1(b)), was even less appealing. It was entirely without water and covered in scrubby, dense undergrowth and stone. The low, sprawling branches of the acacia trees were everywhere, blanketing the land with clumps of prickly thorns (Barter 1851). Byrne's agent in Natal recognized that settlers would never be able to clear the lands properly, let alone cultivate cotton, but as Byrne has finalized the purchases in London he had no choice but to offer these lands to newcomers. Those who endeavoured to stay were overwhelmed by the poor quality of the land. One settler described her family's property as "chiefly large stones, and unfit for cultivation", while another on a nearby farm referred to his plot as "bare rock and iron crag" (Hattersley 1950, 210–211). They both abandoned the land soon after.

The next wave of 200 Byrne emigrants were settled on plots along the Mhloti River on land that belonged to the recently-defunct Natal Cotton Company (Figure 1(c)). They too were completely unprepared for the dense, low-lying tangle of acacia trees that blanketed their plots. It took most settlers over a year to get even a few acres of their land ready for the plough. These lands were further characterized by steep inclines, heavy winds and shallow soils, which hampered efforts to plant cotton. One emigrant summed up this gulf between the representation Byrne had crafted prior to departure and the reality his settlers encountered on the ground: "what Mr. Byrne in England called 'good land' is a dense forest of such a character as to be quite beyond the means of the ordinary English emigrant to clear" (Clark 1972, 90). Most settlers ended up cultivating some disappointing crops of maize and potatoes before abandoning their land and relocating to larger towns.

The final group of approximately 1000 settlers who arrived between May and July 1850 were settled on plots along the Illovo River in the south of the colony (Figure 1(d)). Located at an elevation of over 1100 metres, this region, known as the Mist Belt, is characterized by extreme weather ranging from desiccating hot winds from the Drakensberg Mountains to cold, enveloping mists in the spring and summer, and frequent frost in the winter, caused by rapid cooling as air descends into the area's deep valleys. The region receives between 800 and 1280 mm of rainfall per year, with the main source of precipitation being heavy, intense thunderstorms during the late afternoons.

The Byrne settlers soon realized that local conditions were poorly suited to the cultivation of cotton. One settler who arrived on the *Minerva* laughed at her brother-in-law's suggestion that cotton cultivation would be profitable, scoffing that "[he] forgets that we are half way up to the mountains of perpetual snow, Drakensberg" (Gordon 1970). Her letters home during the growing seasons of 1850 to 1853 chronicled the regular incidence of thunderstorms and hailstorms. Both she and her husband were convinced that these climatic conditions were too volatile for cotton to succeed.

Byrne's cotton scheme failed because of the gulf between his exuberantly crafted representations of Natal's cotton potential and the realities his settlers encountered on the

ground. Byrne's cotton scheme focused on inland areas at elevations in excess of 1000 m, with frequent frosts and violent storms. Modern-day estimates reveal average temperatures of between 18.3°C and 20.7°C during the October–March growing season at Byrne's sites along the Illovo River (Gordon 1970, 42). This meant that some 1500 to 1950 heat units were available for crops on this land, well below cotton's minimum threshold of 2100.<sup>8</sup> Byrne settlers allocated plots closer to Pietermaritzburg faced similar constraints, with average temperatures of 19.6°C translating into a value of 1742 heat units. Byrne chose plots that were too high, too far inland and too cold for cotton to succeed. These unsuitable lands offered insufficient heat for cotton's morphological development.

Joseph Byrne's vision for cotton colonialism ended up as he did: in ruin. No Byrne settlers succeeded in cultivating the crop for export. This disappointment led most new arrivals to focus on producing agricultural crops for the Durban and Pietermaritzburg markets and trading with Africans north of the Thukela River. Many would eventually find their fortune in the burgeoning sugar industry. Still, the representation of Natal as a cotton colony was crucial to attracting white colonists under the Byrne scheme. From small beginnings, settler numbers doubled in less than two years, primarily as a result of Byrne's efforts and the anticipation of successful cotton cultivation. This surge of cotton emigrants founded villages, improved the harbour and reinforced the population of major towns. Byrne settlers also became an important political force in Natal, leading the charge for replacing executive rule with responsible government. All told, more than 60,000 acres of land was divided into settlement for new arrivals, furthering the process of land expropriation. Although none of Byrne's boatloads of emigrants succeeded in producing cotton for export, many of their descendents remained there for generations to follow, buttressing Natal's position as a white outpost colony.

### **Theophilus Shepstone's plan for African cultivation, 1859–1863<sup>9</sup>**

Enthusiasm for cotton in Natal re-emerged less than 10 years after the Byrne scheme debacle. But the vision for cotton in the early 1860s focused on African cultivation. Farmers who had tried and failed with cotton under the Byrne scheme maligned cotton's demanding growing regime, suggesting that European farmers lacked the constitution for this intensive labour. The only way cotton could succeed in Natal, they argued, was as an African enterprise: "Blacks grow it in America; blacks grow it in India, and blacks must grow it wherever it is grown, as no white man could work at it under a broiling hot sun; nor could he compete with the black man in point of cheapness of labour."<sup>10</sup>

These arguments in favour of African cotton cultivation inspired Theophilus Shepstone, the architect of Natal's Native administration policy, to use this commodity crop as a means of furthering his own vision for native–settler relations. Shepstone grew up in the Cape and was fluent in both isiXhosa and isiZulu by the time he finished his schooling there. His early professional career was spent working as an interpreter for missionaries, before deciding to apply his linguistic skills in the service of the British administration. He rose quickly through the ranks and was promoted to the post of Diplomatic Agent to the Native Tribes in Natal in 1845.

At around the same time, over 100,000 African refugees swept into Natal as a result of social and economic upheaval further north. Shepstone convened a Native Commission in 1847 to deal with this crisis, positioning himself as its most influential member. Shepstone delineated a system of centralized control in which Africans would be spatially segregated from settlers within vast tracts of land known as locations. He reaffirmed tribal hierarchies as a means of maintaining law and order by appointing his own magistrates as "supreme

chiefs” who wielded absolute power over their subjects. Shepstone believed that the influence of centralized European control would have a civilizing effect and help to stamp out barbaric African customs such as polygamy and witchcraft.

Shepstone understood that he needed broader justification to convince his superiors of the virtues of his location system: he would need to sell his plan as financially viable in order to achieve this vision of spatial segregation. Shepstone argued that his proposed enclosures would generate significant wealth by expanding African agricultural production in the colony; his goal was to “induce [Africans] to raise from the soil some exportable and permanently marketable product”.<sup>11</sup> He envisaged that:

The native Locations will become centres of industry and improvement, the whole of the native population in the district and gradually those beyond it, will become consumers of imported articles and producers of articles for export, and after a time with a judicious system of taxation will defray the expenses of their own establishments and furnish an excess to the treasury of the district.<sup>12</sup>

Shepstone zeroed in on cotton as the central component of his plan to bolster African tax revenue through the cultivation of export crops. He viewed cotton as the most suitable choice because it could be grown successfully throughout all of Natal’s locations, it could be planted once and then yield returns for many years, its market value did not fluctuate so it would always fetch a good price, and its growing regime mirrored that of maize, the primary carbohydrate staple for most of the colony’s African farmers.<sup>13</sup>

Shepstone revised the colonial tax structure to ensure that African producers were sufficiently motivated to adopt cotton cultivation. He focused on the native hut tax – initiated in 1849 as a means of augmenting colonial revenues – recommending that cotton be accepted as an alternative form of payment. As further incentive, those who refused to pay cotton would be penalized and charged a hut tax of 10 shillings instead of the usual seven shillings. Shepstone predicted that every acre of location land was capable of producing just less than 100 pounds of seed cotton. Assuming even an exaggerated low price of one penny per pound, a single acre planted under cotton would yield enough to easily cover the hut tax.

The strongest opposition to Shepstone’s plan for cotton cultivation came from Natal’s second Lieutenant Governor, Benjamin Pine, who arrived in the colony in 1850. Pine was more concerned with the plight of Natal’s coastal farmers and large landowners than he was with the colony’s African population. He objected to Shepstone’s location system for creating mammoth reserves that threatened to undermine the expansion of settler agriculture. Pine appointed a Commission of Inquiry into Native Administration in 1852, which was dominated by land-owning colonists hand-picked by the Lieutenant Governor. Not surprisingly, this commission served as a direct rebuke to the previous commission of 1847 that had articulated Shepstone’s vision of spatial segregation, concluding that Natal’s locations were far too large and threatened to undercut much-needed African labour, having “dried up the source whereby an abundant and continuous supply of Kaffir (sic) labour for wages might have been procured”.<sup>14</sup> Pine and his supporters argued that the locations be carved up into smaller plots interspersed among areas of dense settler agriculture, where Africans could be more easily accessed by settler agriculturalists in search of labourers.

Cotton emerged as the hinge upon which these competing visions for African–settler relations within the colony turned. For Shepstone, cotton was a means of anchoring Africans within his location system, justifying his overarching vision of spatial segregation. Lieutenant Governor Pine opposed cotton cultivation because it undermined his commitment to securing a readily available supply of African labour for the colony’s landowners. The struggle over cotton became a struggle over how economic surplus should best be extracted from the colonized population.

Pine eventually lost his battle with Shepstone and departed Natal a few years later. Final approval for the cotton scheme arrived with his replacement, the new Lieutenant Governor, James Scott. Scott shared Shepstone's enthusiasm for encouraging cotton cultivation in the locations and allocated £5000 to this venture soon after he arrived in 1858: "any scheme pointing at such great advantages as would result from this colony becoming, through the instrumentality of its numerous natives, a cotton-growing company ... merits every exertion".<sup>15</sup> Shepstone put these funds to immediate use: he appointed two superintendents in charge of cotton cultivation that would be responsible for encouraging cultivation in the southern parts of the colony, where Shepstone believed environmental conditions were best suited to its development. In all other districts resident magistrates were charged with implementing Shepstone's vision. The plan was for Shepstone to ship them cottonseed directly; they would then be responsible for convincing the Africans residing in their district of its merits ...

The first growing season of 1858/59 was a minor success. All seven magisterial districts reported some cotton planted. By June 1859 over 100 acres was under cotton throughout Natal, cultivated exclusively by Africans. More than 6500 lbs of cotton were picked within Natal's locations in this first year.<sup>16</sup> Although only six bales reached buyers in Britain, these were received enthusiastically by the Cotton Supply Association, who lauded the cotton's potential, declaring it ideally suited for British mills.<sup>17</sup>

But this success was short-lived. Output collapsed over the next two growing seasons, with magistrates and superintendents reporting a sharp drop-off in African cultivation beginning in the summer of 1861. Africans shifted their efforts away from cotton towards traditional foodstuffs en masse; within 12 months, cotton had been completely abandoned. Officials were stunned and strove to explain the sudden downturn to Shepstone. All focused their blame on African growers. Resident magistrates pointed to deficiencies in the African work ethic, arguing that Africans were too sluggish and too slow for cotton's demanding growing regime. During the planting stage, one alleged, they were unwilling to dig deep enough into the soil, which prevented the crop's deep roots from extending more than a few inches, limiting germination.<sup>18</sup> Another was pessimistic about African willingness to adopt any crop that did not satisfy the grower's immediate needs: "[H]unger alone will rouse the native to labour – that though he loves tobacco and sweet potato he is, generally, too lazy to cultivate them – it is no longer a matter of surprise that the prospect of merely gain should fail to induce him to cultivate the cotton plant."<sup>19</sup> Shepstone concurred with these assessments by his men on the ground. He also reserved his greatest criticism for the African grower:

With reference to the cultivation of cotton by the natives, I have come to the conclusion that as long as they remain in their present savage state they will never, generally, steadily continue the cultivation of any article which they do not themselves use, or which will not bring them a decidedly higher money value than they are able to obtain by their own customary article of cultivation. They are easily discouraged by failure, and are deficient in the perseverance which is necessary to prosecute an enterprise which does not accord with their natural habit and customs.<sup>20</sup>

This refrain, demeaning Africans as lazy and inept, reduced the explanation of cotton's failure to cultural deficiencies. It exaggerated the degree to which Africans were temperamentally resistant to growing cotton, and ignored other factors – especially environmental – that help explain the abrupt failure of Shepstone's plan for African cotton cultivation.

The severe decline in African cotton production in the summer of 1861 coincided with a prolonged drought that began that November. The lack of rain stunted the crop, hampering germination rates. Official reports confirm that cotton throughout southern

Natal suffered heavily from the extreme dry weather – in one district all the cotton planted without direct water access had shrivelled up and died.<sup>21</sup> Further south, the situation was equally grim: the cotton superintendent there listed dozens upon dozens of growers whose crops were destroyed by the absence of rain.<sup>22</sup>

Historical ecological research reveals the cyclical incidence of drought in southern Natal during the latter half of the nineteenth century. A dramatic deficiency in rainfall ensued every six or seven years, on average. Data from the Pietermaritzburg rainfall monitoring station reveal that dry conditions prevailed during the entirety of Shepstone's cotton venture: 1859–1861 were the three driest consecutive years in Natal between 1850 and 1890 (Tripp 1888). The most severe drought conditions occurred in 1861/62: this coincided with the third planting of Shepstone's cotton scheme, and the most dramatic drop-off in planting rates recorded by both magistrates and superintendents.<sup>23</sup>

Despite its short-lived success, cotton succeeded in entrenching the spatial divide between African and settler agriculture. With his beloved location system under attack, Shepstone searched for some means of cementing African peasant production that would insulate the locations against those who campaigned to cut their size. These locations persisted as the template for the delineation of space between Natal's African and settler populations for the next 100 years.

### **The Zululand cotton boom, 1910–1933<sup>24</sup>**

Enthusiasm for cotton waned following the successive failures of the Byrne and Shepstone schemes. White farmers and officials increasingly turned their focus to sugar in the late nineteenth century, which emerged as the most profitable cash crop along Natal's coastal strip. Colonists further inland focused on mixed farming, including maize and cattle rearing, while African farmers almost universally abandoned cotton and other export crops to focus on subsistence production, especially maize and sorghum.

Between 1890 and 1908 drought, locusts and cattle disease struck in quick succession, crippling agricultural production throughout southern Africa. Drought hit Natal in the early 1890s. Locusts followed, with swarms devastating stands of maize and sugar cane and reducing yields by as much as 80% between 1894 and 1896 (Ballard 1983). The ensuing food shortages were further exacerbated by the spread of rinderpest, an infectious viral disease known as cattle plague (Ballard 1986). The cumulative effects of these events handicapped the population's ability to feed itself. In 1901, 2.5 million lbs of agricultural produce had to be imported into Natal to sustain the local population.

With agricultural production reeling following these successive calamities, settlers within Natal embraced the security offered by the formation of the Union of South Africa in 1910. Agricultural production emerged transformed: the 1910s and 1920s were crucial decades for state intervention in white agriculture, especially in the provision of capital and credit, the dissemination of improved methods and techniques, and the subsidization of inputs (Jeeves and Crush 1997).

Cotton emerged as a central component of this new national vision of agriculture, signalled by the establishment of the Tobacco and Cotton Division within the Department of Agriculture. The head of this new division, William Scherffius, had been pried away from his position as the head of the Kentucky experiment station and charged with expanding South African cotton cultivation, which was stagnating at a lowly 30 bales when he arrived in 1909. He initiated his tenure with a comprehensive set of experiments designed to appraise cotton's compatibility with the South African climate. He maligned the lack of precision that characterized previous cultivation efforts, arguing that farmers

possessed only “a limited knowledge of the best methods of procedure in the production of quality and quantity” (Scherffius and du Oosthuizen 1924, 27). His goal was to overcome this deficiency by establishing experiments into all elements of cotton cultivation. His primary goal was to maximize yields for farmers and his evaluation criteria reflected this: he tested for plant size, number of bolls, pounds of lint per acre and total estimated value. The results of these tests were made swiftly and widely available to planters throughout the Union via a range of agricultural publications.

Scherffius’ experiments isolated the two climatic variables that were primarily responsible for successful cotton cultivation: high heat exposure and low incidence of wind and frost. To maximize returns, Scherffius recommended focusing cultivation in the northern parts of the country where temperatures were milder and heavy winds less pronounced. He was particularly enthused by the possibilities in Zululand. He estimated that over 80% of the region – approximately 350,000 acres – was ideally suited to cotton (Scherffius 1922, 394). Zululand did not suffer from the frost and flash storms that hindered planting further south in Natal. Rainfall levels were low (between 18 and 20 inches annually), but they were evenly distributed, Scherffius believed that such conditions were ideal for cotton, and predicted a profit of over £8 for every acre put under cotton in Zululand.

Scherffius further advanced his argument in favour of cotton by positioning it as an alternative to Zululand’s primary agricultural crop, sugar. Acreage under sugar had jumped from 2000 acres in 1908 to over 10,000 acres in 1917, making it the region’s most important agricultural commodity (Jeeves 1992). But around this time concerns began to surface regarding Zululand’s dependence on sugar production. Global overproduction alongside increased competition from producers in southern Mozambique caused prices offered to Zululand growers to slump from £46 per ton in 1920 to £29 per ton in 1921. As a result, South African sugar production dipped from 190,000 tons in 1919 to 142,000 in 1920, the first decline in more than a decade.<sup>25</sup>

Scherffius seized upon sugar’s declining fortunes and celebrated cotton as its replacement. He argued that Zululand’s dependence on sugar – a crop that was barely cultivated elsewhere in the Union – was creating schisms with producers in the other provinces. He positioned cotton as the great unifier, a crop that could align the plight of Zululand producers with their compatriots across the Union. He further tapped into the swelling resentment directed towards the dynastic sugar barons who captured most of the profits from sugar, championing cotton as the people’s choice, a commodity in the service of the nation’s poor, white underclass.

Scherffius’ optimism about the possibilities for Zululand’s cotton production was infectious. Broadsheets began to carry editorials praising the region’s climate as “singularly suitable to cotton growing”.<sup>26</sup> Acreage under cotton surged from only 100 acres in 1917 to 250 acres in 1918 to 4000 acres in 1919, and then more than doubled every growing season between 1919 and 1924.<sup>27</sup> Yields spiked from just over 800,000 lbs in 1922 to 4 million lbs in 1923, up to 6 million lbs in 1924 and then 8.5 millions lbs in 1925.<sup>28</sup> Growers in Natal and Zululand put more than 30,000 acres under cotton during the 1924/25 growing season, accounting for just under half of total Union production.<sup>29</sup>

But everything changed in 1925. Production levels dipped sharply throughout Zululand. Outputs were temporarily sustained by expanding acreage in 1926 and 1927, but yields plummeted, falling by more than half in almost every part of the province.<sup>30</sup> Zululand cotton output collapsed from its zenith of 11.6 million lbs in 1926 to less than 100,000 lbs by 1932.<sup>31</sup> By the following year Zululand cotton production was reduced to a trickle.

Scherffius and his army of cotton experts scrambled to account for this dramatic decline. The most common explanations for cotton's collapse included labour shortages, inadequate transport and unfavourable international markets. Certainly each contributed to the debacle; each was an evident, proximate cause of decline. But emphasizing the potency of these factors allowed officials and farmers to avoid the fundamental cause of their difficulties: erratic precipitation (that produced floods and drought), and the corresponding spikes in insect damage.

The 1924–27 growing seasons were beset by challenging growing conditions. The planting season of 1924 started off well: rains arrived early and fell steadily during the next two months, facilitating planting and germination. But expectations were doused soon after. On 10 March, storms brought six inches of rain to parts of Zululand. A relentless, heavy downpour continued for the next 10 days, setting precipitation records across the region. All of Zululand was reduced to “one big mud puddle”.<sup>32</sup>

The timing of the rains was particularly disastrous for the cotton crop. The early rains had encouraged early planting, so that many of the cotton bolls had matured by the time the heavy rains arrived. Most were washed away or ruined by the excessive moisture, leaving barely any cotton that was fit to harvest. The *Zululand Times* summed up the extent of the devastation: “At Nkwaleni, at Ntambanana, on the Hluhluwe and up in the remote parts of Mkuze . . . men of our race have watched their lands, sodden with water, gradually give up the bright promise of the early season and vanish in a sea of mud.”<sup>33</sup> Initial assessments of the damage estimated losses of around 30–40%.<sup>34</sup> Once the territory had dried out, it became clear that the damage had been severely underestimated: heavy rains had destroyed almost 90% of Zululand's cotton crop.<sup>35</sup>

Hopes remained high for the 1925/26 season in spite of this setback. The losses of 1924/25 were dismissed as an anomalous variability in rains that would never be repeated. Early in the 1925/26 growing season there was a prevailing sense that the worst had passed: “the weather has up to present been so favourable that even the most pessimistic of our agriculturalists brightened up and began to think that better days were ahead”.<sup>36</sup> As in 1924, rains were plentiful through the planting season of 1925. But they ended abruptly in the new year. A heatwave began in late December 1925 and persisted through most of January and February. Little rain fell during these first two months of 1926, which are typically the wettest: fewer than four inches were recorded in most parts of the province.<sup>37</sup> When rains finally arrived in mid-March, most of Zululand received fewer than three inches, which was insufficient for the parched crops to recover.

The drought devastated output. The absence of rain hindered germination, leaving a meagre, thin stand. Those plants that did manage to sprout matured fairly well through December, revealing plenty of buds; however, the lack of good rains in January caused most to drop before they developed bolls. Of the bolls that appeared, many failed to open properly. One cotton farmer observed:

Judging from my own farm the worst effect of the drought was the bad germination of the seed, leaving a poor stand of plant. Once established the plants have come on fairly well and you see now quite presentable cotton fields as the plants are concerned but the yield is poor.<sup>38</sup>

Yield and quality suffered severely. Most growers were unable to find suitable buyers for their poor, wilted crop. The lucky ones who did manage to sell at least some of their crop did so at rock-bottom prices of between 0.5 d. and 3.75 d. per lb.<sup>39</sup>

These dry conditions continued through the 1926/27 growing season. Rains were unseasonably light through the late winter months. A heavy douse finally arrived in late October, reviving hopes that the crop would compensate for the past two seasons of

disappointment. But once again insufficient rains hampered the crop's early development, with very little precipitation through the critical germination period of December and January. A grower at Mtubatuba reflected the heightened concerns felt by cotton growers across Zululand: "hot dry winds are the order of the day, and the crops and grass are scorched, despair has taken the place of anxiety. The spruits are dry and this in the middle of the wet season."<sup>40</sup> Further north at Hluhluwe, cotton prospects were equally grim: "the terrible drought still continues here, and though the rain which fell at the end of December has improved the veld from its state a month ago, the outlook for crops . . . is very black indeed".<sup>41</sup>

When the rains finally arrived they caused more harm than good. Short, violent bouts of rain doused Zululand in late March, just as the cotton crop was at full boll. Many areas received over 10 inches of rain in less than a week, washing much of the crop away. Other stands were so soiled and wet that virtually no cotton was salvageable.

Agricultural officials were at a loss to explain the successive calamities that befell Zululand growers in the 1924/25, 1925/26 and 1926/27 growing seasons. They dismissed these years as temporary, fleeting and aberrant. The disasters were regarded as a series of flukes: "It is not the cotton, but the drought, which is responsible for this [immediate] setback," argued one commentator<sup>42</sup>; another insisted "only in exceptional years will the crop be a complete failure".<sup>43</sup>

However, longer-term studies confirm that the erratic precipitation that characterized these years is in fact the norm for Zululand. Researchers at the Climatological Research Group at the University of the Witwatersrand have emphasized the cyclical nature of Zululand's precipitation variability and identified an 18–20-year oscillation pattern. Southeastern Africa is greatly affected by these periodicities, which can account for as much as 20 to 30% of the variance in summer rainfall (Preston-Whyte and Tyson 1988). The 1924/25 growing season has been identified as the final year of a wet period that lasted from 1916/17; 1925/26 marked the beginning of a dry period that lasted until 1932/33. This remains one of the driest periods on record in twentieth-century South Africa.

The precipitation regime of southeastern Africa is also closely correlated with El Niño Southern Oscillation (ENSO) events. High phase (cold) events typically produce heavy rainfall in this part of the continent as the Intertropical Convergence Zone (ITCZ) – the convergence of the South and North tropical circulations – shifts north and east towards the equator, producing wet conditions over much of southern Africa. During low-phase (warm) events, when the ITCZ shifts south and west, spring and summer rainfall is typically sparse.

Other studies have charted a linear relationship between ENSO events and rainfall variability in southeastern Africa (Repelewski and Halpert 1989). This trend has been tracked historically and has been found to hold 80% of the time between 1875 and 1983: 12 of the 15 high phase SO years during this period had above-average rainfall, while 17 out of 22 low phase SO years were periods of below-average rainfalls (Lindesay and Vogel 1990; Mason 2001). The 1924/25 period (the worst flood season) has been identified as a cold episode event, and 1925/26 (the worst drought season) as a warm episode event.

Historical studies of the Zululand environment confirm the persistence of this pattern of uneven precipitation over the past 200 years. Dendrochronological evidence supports the theory that rainfall alternated between periods of heavy and light rainfall within an 18–20-year cycle (Hall 1976). Documentary records further corroborate this variability: alternating heavy rainfall and prolonged periods of drought have been recorded in northern Natal and Zululand since climatological record-keeping began in the mid-nineteenth century (Tripp 1888; Nelville 1909). As one leading expert who visited Zululand

soon after the collapse astutely observed: “these seasons have been described as abnormal, but if one studies the crop results from year to year and in different districts, it is an open question whether those so-called abnormal years are not normal ones” (Himbury 1929, 14).

The political repercussions of the Zululand cotton boom outlasted the short-lived boost in production. Experiments supervised by William Scherffius identified much of Zululand as ideal for cotton production because of its high temperatures and low storm frequency, legitimating a deepening of administrative control into some of the most remote and least governable peripheries of the Union. Enthusiasm for cotton precipitated the relocation of hundreds of white settlers with little capital or experience into parts of Zululand that had previously been considered uninhabitable for whites. To accommodate this influx, Zulu farmers were forcibly removed and denied access to thousands of acres of land. This land expropriation removed families from their means of production, forcing many to become wage labourers on the very lands that had previously been theirs. Labour-coercive policies, in the form of legislation permitting the recruitment of child labourers and the provision of harsher penalties for desertion, accelerated state penetration into northern Zululand’s African reserves (Lincoln 1995). Cotton also precipitated the construction of Zululand’s first railway connecting scattered settlements with the cotton gin at Empangeni, and an increasingly cosmopolitan labour force employed by the larger cotton ventures which recruited from as far away as the eastern Cape, Basutoland and Mozambique. Cotton played a key role in entrenching this vision of state-sponsored rural capitalism (Keegan 1987, 112).

As historian William Beinart (1984) has noted with respect to early South African conservation programmes: “technical interventions were not themselves socially neutral”. The rational act of agricultural expansion masked the political act of dispossession, depoliticizing the issue of land and its distribution (Ferguson 1994). Enthusiasm for cotton occluded the reality that expansion into Zululand was fundamentally about consolidating white settler production and control. Cotton served as the legitimating factor for an intensification of administrative control into Zululand.

### **Conclusion: the politics of agricultural failure**

Touted as a commodity crop capable of remaking land and life in southern Africa in the 1850s, the 1860s, and again in the 1910s and 1920s, cotton never became the elixir of transformation that its proponents envisaged it to be in Natal and Zululand. In the century-long trajectory of endeavours to establish cotton as a major export crop, disappointment succeeded enthusiasm as regularly as reports of large prospective cotton yields were swept aside by harrowing tales of crop failure and despair.

This series of agricultural failures was rooted in the environment and in human interactions with it. Joseph Byrne’s cotton emigration scheme focused on inland areas with high elevations, frequent frosts and violent storms; he selected plots that were too high and too cold for cotton to succeed. Theophilus Shepstone’s venture coincided with a period of drought that convinced African growers to abandon cotton in favour of subsistence production. The Zululand cotton boom was stymied by erratic precipitation in the form of successive floods and droughts. Cotton failed in large part because colonists lacked the appropriate technology to overcome ecological constraints to production.

Despite its repeated failure, cotton facilitated important structural changes to the region’s political and economic landscape. First, cotton was an agent of imperial power. From small beginnings, settler numbers doubled in less than two years, primarily as a

result of Byrne's efforts and the anticipation of success that he cultivated regarding the prospects of successful cotton cultivation. Although none of Byrne's boatloads of emigrants succeeded in producing cotton for export, most settled in the colony and many of their descendents remained there for generations to follow, solidifying Natal's position as a white outpost colony.

Shepstone's scheme to encourage cotton as an African crop in the 1860s produced a second important political outcome. Cotton emerged as the hinge upon which competing visions for African-settler relations within the colony turned: segregation, supported by Theophilus Shepstone, and integration into the wage economy, favoured by the majority of European settlers. With his favoured location system under attack, Shepstone searched for some means of solidifying African peasant production that would insulate the locations from those who campaigned to cut their size. Despite its failure, cotton succeeded in cementing the spatial divide between African and settler agriculture, and entrenching the vision of spatial segregation that would dominate throughout Natal for the next 100 years.

Finally, cotton expanded the influence of the newly consolidated white South African state during the Zululand cotton boom. William Scherffius' new class of cotton experts used their elevated status to advance the political aims of the Union. Cotton was favoured because it fit well within the state's ideological priorities: it allowed for an expansion of state power into Zululand and empowered white settler agriculture. The science of cotton cultivation became inextricably interwoven within the exercise of state power.

One outstanding issue is that of intentionality, a question which Ferguson considers in the conclusion to his original study: were these side effects of agricultural failure intentional or not? Critics have argued that Ferguson's study of development failures in Lesotho was contradictory in its assessment of intentionality (Bending and Rosendo 2006, 230), while others remain frustrated by the conspiratorial undertones that shade Ferguson's conclusions (Brigg 2002, 426). This longitudinal analysis of cotton's repeated failure in Natal and Zululand reminds us of Ferguson's original formulation: the political effects of failure can be both intentional (as in the case of the Byrne and Shepstone schemes) and incidental (as in the case of the Zululand cotton boom). As Ferguson notes, intentions themselves are only a small part of the transformative outcomes created by agricultural failures. In order to fully understand what is achieved through agricultural failure, we need an analytical focus on the "anonymous set of interrelations that only ends up having a kind of retrospective coherence" (Ferguson 1994, 275).

This study has focused on how repeated cotton failures produced important structural changes that consistently reinforced the ideals of the white settler state. Cotton may have failed agriculturally, but colonists succeeded in boosting settler numbers, cementing the divide between settler and African agricultural space, and expanding state control into rural areas. Cotton was an agricultural failure, but a political success.

## Notes

1. Exceptions include E.C. Mandala (1990). *Work and Control in a Peasant Economy: A History of the Lower Tchiri Valley in Malawi, 1859–1960* (Madison: University of Wisconsin Press); J. Monson (1995). Rice and Cotton, Ritual and Resistance: Cash Cropping in Southern Tanganyika in the 1930s. In: A. Isaacman and R. Roberts, eds. *Cotton, Colonialism and Social History in Sub-Saharan Africa* (Portsmouth: Heinemann), 268–284; and A. Isaacman (1996). *Cotton is the Mother of Poverty: Peasants, Work and Rural Struggle in Colonial Mozambique, 1938–1961* (Portsmouth: Heinemann).
2. Pietermaritzburg Archival Repository (hereafter PAR), *Natal Blue Books*, 1854.

3. PAR, British Parliamentary Papers (hereafter BPP) Vol. 908, Correspondence ... on the Establishment of the Settlement of Natal 1848, Earl Grey to Maitland 1848, 108–110, n.d. In: R. Ablett (1984). *The Byrne Emigration Scheme to Natal, 1849–51*. BA thesis, University of Natal, p. 21.
4. This interest in Africa's cotton-growing potential stemmed largely from Thomas Bazley, Chairman of the Manchester Chamber of Commerce, who was convinced that the soils and climate of west and southern Africa were ideal for cotton. Bazley predicted that Africa would emerge as Britain's primary supplier of raw cotton. See B.M. Ratcliffe (1982). Cotton Imperialism in West Africa in the mid-19<sup>th</sup> Century, *African Economic History* 11: 87–113.
5. Killie Campbell Africana Library (hereafter KC), Robertson, H.M. n.d. The 1849 settlers in Natal Part II: The Byrne Scheme and its Smaller Rivals, *South African Journal of Economics* 416–442.
6. Twenty acres per settler was the basic allotment, plus an additional five for every child. Settlers also had the option of purchasing more land from Byrne prior to departure or upon arrival. The full details of the final agreement agreed to between Byrne and the Colonial Land and Emigration Board are in PAR, Accessions 1577 Byrne Immigration Scheme, Correspondence on the Establishment of the Settlement of Natal and the Recent Rebellion of the Boers (London, 1859), 92–3.
7. Heat units are the most common value used to estimate the accumulated effect of temperature. Heat unit values are obtained by subtracting the base temperature (the temperature under which the crop will not grow – in cotton's case, the base temperature is 10°C) from the mean temperature and multiplying this figure by the number of days in a given month.
8. *Natal Witness*, 29 January 1858.
9. PAR, Colonial Secretary's Office (hereafter CSO) 179/5, Report of the Location Commission, 1847. From H. Slater (1980). *The Changing Pattern of Economic Relationships in Rural Natal, 1938–1914*. In: S. Marks and A. Atmore, eds. *Economy and Society in Pre-Industrial South Africa* (London: Longmann), 148–170.
10. PAR, Secretary for Native Affairs (hereafter SNA) 1/1/6 no. 116, T. Shepstone, Memorandum on the Feasibility of Inducing the Native Population of Natal to Grow Cotton and the Manner in which it is Proposed this Should be Accomplished, 11 May 1856.
11. PAR, Selected Documents Presented to the Legislative Council (hereafter LC) 4/1/1/–4/1/1/3 C52 no. 1, Native Reserve Fund, 1858.
12. PAR, Report on Land Settlement 1852, 4. From E.H. Brookes and C. de Webb (1965). *A History of Natal* (Pietermaritzburg: University of Natal Press).
13. PAR, British Parliamentary Papers (hereafter BPP), Vol. 127, X Report on The Past and Present State of Her Majesty's Colonial Possessions 1857, p. 195.
14. PAR, LC 4/1/1/1–4/1/1/3 C90 no. 18 1860, Circular from T. Shepstone, Native Reserve Fund, 12 July 1860.
15. PAR, SNA 1/1/11 Ref: 51 G.R. Haywood, Cotton Supply Association to T. Shepstone, 3 May 1861.
16. PAR, SNA 1/3/7 no. 121, H.F. Fynn, Magistrate of the Umkhomanzi to SNA, 30 August 1858.
17. PAR, SNA 1/3/8, Magistrate of Inanda Division, County Victoria, to SNA, 11 October 1858, p. 53.
18. PAR, *Natal Almanac* 1963, p. 45.
19. PAR, SNA 1/1/12 Ref 37, J.W. Shepstone to T. Shepstone, 8 April 1862
20. PAR, SNA 1/1/12 Ref 5, R. Struthers to T. Shepstone, 14 January 1862.
21. Dendroclimatological records confirm that the 1861/62 growing season was one of the driest on record. See M. Hall (1976). Dendroclimatology, Rainfall and Human Adaptation in the Later Iron Age of Natal and Zululand, *Annals of the Natal Museum* 22: 693–703.
22. *The South African Sugar Year Book and General Directory*, 1 (1930/31), p. 173.
23. *Zululand Times*, 11 October 1923.
24. *Official Yearbook of the Union of South Africa* 4 (1920).
25. *Official Yearbook of the Union of South Africa* 5 (1925).
26. *Zululand Times*, 2 April 1925. See also *Zululand Times*, 15 January 1925.
27. W.H. Scherffius (1925). On Union Cotton, *African Sugar and Cotton Planter* 1:9–12. The *Zululand Times* (28 June 1923) expected output to treble.
28. *Zululand Times*, 10 September 1925.
29. *Official Yearbook of the Union of South Africa* 17 (1935).
30. *Zululand Times*, 19 March 1925.
31. *Zululand Times*, 2 April 1925.

32. *Zululand Times*, 19 March 1925 and 2 April 1925.
33. *Zululand Times*, 17 December 1925.
34. *Zululand Times*, 12 March 1925.
35. *Zululand Times*, 18 February 1926 and 11 March 1926.
36. Hluhluwe Annual General Meeting, *Zululand Times*, 10 June 1926. See also National Archives, Tshwane (hereafter NA), Department of Entomology (hereafter CEN), Vol. 689 Ref E7638, Tobacco and Cotton Expert, Eshowe, Zululand, Powell to C. Haines, Entomologist, 23 March 1926.
37. *Zululand Times*, 10 June 1926.
38. *Zululand Times*, 23 December 1926.
39. *Zululand Times*, 29 July 1927.
40. *Zululand Times*, 24 March 1927. See also President's Report, Hluhluwe Farmers' Association, Annual General Meeting 1926, *Zululand Times*, 10 June 1926.
41. NA, Secretary for Agriculture (hereafter LBD), Vol. 4044 Ref QC15, F.F. Beaumont, Inspector of Lands to Secretary to the Land Board, 15 March 1925.
42. "Stressful Season", *African Sugar and Cotton Planter* 2, no. 3 (March 1926): 21.
43. "Cotton", *African Sugar and Cotton Journal* 1, no. 2 (May 1927): 1.

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