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**TOO MANY WORKERS OR NOT ENOUGH LAND?
WHY LAND REFORM FAILS IN SPAIN DURING THE 1930s**

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Abstract

On the eve of the Second Republic there was a broad consensus among most contemporaries that some form of land reform was necessary for Spain's southern provinces. Enormous estates were believed to be under-cultivated by their absentee owners, denying landless workers employment, and leading to widespread rural poverty. The slow implementation of land reform deeply divided Spanish society, and is often cited as a cause of the outbreak of the Civil War. This paper, using a large sample of farm level information collected by the Institute of Agrarian Reform for the estates expropriated in the region of Extremadura, questions the possibilities of land reform as a means to raise farm output to solve rural poverty.

Key words: land reform, rural conflict, Extremadura, Spain, Second Republic.

Resumen

En vísperas de la Segunda República existía un amplio consenso entre la mayoría de los contemporáneos de que era necesario algún tipo de reforma agraria para las provincias del sur de España. Se creía que las grandes propiedades estaban siendo cultivadas de manera demasiado extensiva por propietarios generalmente absentistas, negándoles así a numerosos trabajadores el acceso al trabajo, lo que llevaría a una extensa pobreza rural. La lenta implementación de la reforma agraria dividió profundamente a la sociedad española, y se ha considerado como la causa de la Guerra Civil. En este trabajo, a través del uso de una amplia muestra de información a nivel de explotaciones individuales recogida por el Instituto de Reforma Agraria para las propiedades expropiadas en la región de Extremadura, se arguye que los intentos de reforma agraria no solo eran un sistema ineficiente para incrementar la producción y la productividad, sino que fracasaron en proporcionar una solución adecuada a la pobreza rural.

Palabras clave: reforma agraria, conflicto rural, Extremadura, España, Segunda República.

JEL Codes: N54; O13; Q15; R52

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Too many workers or not enough land? Why land reform fails in Spain during the 1930s¹

James Simpson y Juan Carmona

The failure to carry out a comprehensive land reform and break-up the large estates in southern Spain is often cited as a major cause of the outbreak of the Civil War (1936-9). Malefakis, for example, wrote that the agrarian problem, given its ‘overwhelming political importance’, implies that its study is at ‘the same time an examination of the origins of the Spanish Civil War’; while Paul Preston notes that ‘no single area of social or ideological confrontation during the 1930s matched in scope or impact the agrarian problem’.² The failure of land reform is usually attributed to a combination of lack of political will on the part of the Azaña government (1931-33), the concerted opposition by the Right, and the self-imposed budgetary constraints caused by a failure to break with orthodox economic policies.³

Yet there were other reasons for the failure. López Ontiveros and Mata Olmo, in a study of agronomists’ proposals for land reform in the fertile Guadalquivir valley (*Campiña*) around Cordoba, showed that many large estates were already intensely cultivated, especially those close to urban settlements, and there were few obvious possibilities to increase output and employment in the short-run. As a result, the government’s leading agronomist in the province argued that considerably more land had to be expropriated if all the landless were to be settled.⁴ Few contemporaries, and perhaps even fewer historians, have accepted these restrictions, and even those that questioned the possibilities of settling large numbers on the capital intensive farms of the *Campiña*, believed that there were significant possibilities on the hills and upland regions of southern Spain (especially in Extremadura, Western Mancha and Sierra Morena), where cultivation was much more extensive.⁵ This paper looks at land settlements in Extremadura where farming in the 1930s was still labour intensive and large areas of pastures existed that contemporaries believed could be converted to arable. In addition, and unlike the

¹ Earlier versions of this work were presented at the IV Workshop, *Cooperación y conflicto en el mundo rural*, Universidad Carlos III de Madrid, 2014; *EHS Conference*, Wolverhampton, 2015; *Agricliometrics II*, Zaragoza, 2015, and Rural History, Girona 2015. We thank Pilar Bravo Lledó and Pedro Jiménez Clemente in the *Archivo de la Reforma Agraria*. The authors have benefited from financial assistance Ministerio de Ciencia e Innovación ECO2012-36213.

² Malefakis, 1970, p.6 and Preston, 1984, p. 160.

³ Some opposition was also found within the government agency for carrying out the land reform (IRA). Robledo Hernández, 2014. For budgetary restrictions, see Robledo Hernández, 2010, p. 137-44. By contrast, Palafox, 1991, p. 282, argues that the frequent strike action and demands for higher wages increased political tensions. Naredo & Molina, 2002, pp.99-100, discuss the contractions of land reform to resolve short and long-term problems.

⁴ López Ontiveros & Mata Olmo, 1993, pp. 90, 106, and 127.

⁵ See for example Candu and de la Puerta who, writing in 1919, clearly distinguished between the different possibilities for settling landless in the *Campiña* and the sierra, in Florencio Puntas, 1994, p. 320.

landless workers found on the *Campiña*, a significant number of the poor were tenants or sharecroppers and therefore already accustomed to organizing farm production. The region also experienced land invasions in 1932 and 1936, which suggests an active interest in land reform that was sometimes missing in Andalucía.⁶ Despite these apparently favourable conditions, this paper argues that land reform failed, just as on the *Campiña*, because of the lack of suitable land to settle sufficient workers. Using farm-level studies carried out by agronomists for the state organisation, the *Instituto de Reforma Agraria* (hereafter IRA), after 1932, it argues that there were few possibilities to extend the area under the plough, while the opportunities to intensify cultivation were also limited and the extensive rotations practised were usually considered as perfectly rational by the agronomists of the day. In part this was because the agronomists could offer few technical possibilities for increasing output, but also because landless workers were settled on plots that were too small to support a family and settlers could not use the land as collateral. Therefore the positive incentives to good cultivation which are often associated with the independent, family farm were absent, and the state was required to assume many of the functions that the absentee landowners had previously performed. The result was that land reform implied the substitution of one absentee landlord for another. The manner by which land reform was implemented therefore created significant costs, as well as creating tensions between the often contradictory political demands to resolve the problems of low productivity and poverty with those of a long-term need to increase output, problems which were unlikely to have been resolved even if the Civil War had not halted its progress.

This paper has four sections. The first considers briefly the economic logic behind a land reform, and examines the Spanish experience in the 1930s. This is followed by a study of land availability and the numbers that needed to be settled. The state had poor information on both, but a truly massive redistribution of property would have been necessary if workers were to be given sufficient land to cover basic subsistence. Section three examines the implementation of land reform in the province of Badajoz in the Extremadura region, and shows that there were limited possibilities to increase output by intensifying cultivation. Finally, section four argues that the failure to give each family sufficient land resulted in the underemployment of labour, work animals and farm machinery, changing the nature of transaction costs associated with using labour, rather than reducing them. The last section concludes.

⁶ For the reluctance of the anarchist landless workers to be settled in Jerez de la Frontera, Caro Cancela, 2001, pp. 196-208.

1. Why land reform? Poverty and property ownership in southern Spain

The agronomist Pascual Carrión in 1919 advanced ideas for a land reform which echo some of those used by institutional economists today.⁷ Farm work, unlike industrial work he argued, was highly diverse, and it was difficult to create an incentive structure for wage workers to carry out the tasks quickly and with the necessary care. By contrast, owner-occupiers or tenant farmers enjoyed strong incentives, and were willing to work long hours to maximise their output. This situation was especially true in southern Spain, where labour militancy and union activity increased costs further, as one Socialist noted in 1925:

In order to give his comrades a chance, the labourer begins late, works slowly, and tries to make his rests as frequent and long as the vigilance of the ganger will allow; as a result output falls. As he so often says, “What are we to do? If we work hard, there will be too many of us by half”.⁸

Therefore land reform, by creating small family farms, promised greater work opportunities and allowed farmers to use their entrepreneurial abilities to boost output per hectare and worker, even though hourly productivity was inevitably lower. The fact that large farmers faced much lower costs to access capital markets was less important because of the limited use of physical capital in traditional agriculture.⁹ Economic theory suggests therefore that the break-up of large estate into small family farms would lead to an increase in output, improve income distribution, and raise efficiency.

The level of land concentration in southern Spain in the 1930s was significant, but not as great as had been in earlier periods, or in some parts of Eastern Europe at this time.¹⁰ Malefakis, using the partly complete cadastre of the period, estimates that farms of over 250 hectares numbered just 0.3 per cent of the total, but accounted for 41.2 per cent of the total area and 27.8 per cent of the taxable income.¹¹ Some of the highest land concentration was found on the rich cereal lands of the Guadalquivir valley (*Campiña*), as well as the huge *dehesas* farms in the less populated hills and upland areas. Carrión argued that these *latifundios* had created ‘low population densities; under-cultivation; low wages; high rents; few and rickety livestock and, in general, a precarious situation over a third of the country’.¹² From the turn of the twentieth century, a growing number of urban intellectuals argued that by expropriating and giving the

⁷ Carrión, in *El Sol*, 15 de junio, 1919.

⁸ De los Rios, 1925, p. 844.

⁹ As Lipton argues, the inverse relationship between farm size and average annual output per hectare is more important in low income economies than the ‘positive relationship between farm size and average output per hour of work’ found on large estates Lipton, 2009, p.6.

¹⁰ For size of latifundios, see Bernal, 1979, Bernal, 1988, López Ontiveros & Mata Olmo, 1993 and Carmona, Roses, & Simpson, 2015. In Eastern Europe, see Dovring, 1965, 239-57.

¹¹ Malefakis, 1970, Table 3.

¹² Carrión 1932: 1975, p. 347. Limited evidence is actually provided as shown below.

land to those who actually worked it, would increase output, alleviate rural poverty, and stimulate economic growth and the modernization of Spanish society.¹³

Spain on the eve of the Republic was in the process of rapid structural change, as agriculture's share of the total labour force fell from around 65 per cent in 1910 to 50 per cent or less by 1930, and labour productivity increased by 56 per cent and output per hectare by 20 per cent over the same period.¹⁴ However labour was slower to leave agriculture in the south and, cyclical unemployment appears to have increased significantly after 1931. Following the free elections in 1931, there was a massive shift in political power away from landowners to landless labourers and small farmers, which raised the demands for land reform. After passing laws which changed fundamentally how rural labour and rental markets operated, the government turned to land reform itself.¹⁵

The Land Reform law of September 1932 promised much, with the Socialists talking of settling 100-150,000 peasants each year, although even the government's more modest goal of 60-75,000 settlers in November 1931 had been dropped by the time it was finally passed.¹⁶ By December 1933, 'two and one-half years after the proclamation of the Republic, only 45,000 hectares had changed hands to the benefit of just 6000 or 7000 peasants'. In countries where land reforms have been successful, the state has often owned large areas of uncultivated lands that could be settled, or been able to confiscate properties without compensation from landowners who had been politically discredited or shown to have acquired their properties illegally.¹⁷ In Spain there was very little empty land that could be brought into cultivation. Instead, the government linked the *grandees* to the failed 'Sanjurjo' military coup in 1932 and used this as an excuse to expropriate their lands without compensation. However this traditional nobility, rather than owning 'half of Andalusia' as many initially believed, turned out to possess a much more modest 1.2 or 1.3 million hectares throughout the country, or 'no more than 6 per cent of the 21 million hectares that are normally cultivated'.¹⁸ In addition, the agronomists quickly found that the *grandees'* estates offered limited opportunities to increase the area cultivated and create employment. Attempts to expropriate other estates, even with compensation, failed, and the electoral victory of the centre-right led to a new, very restrictive reform bill in 1935.

The situation change dramatically following the Popular Front's electoral victory in February 1936. The Socialist rural syndicate (FNTT) authorized its Badajoz Federation to launch a massive invasion on 25 March, with 60,000 or more than half the adult male rural

¹³ For a recent survey, González de Molina, 2014, pp. 23-59.

¹⁴ Simpson, 1995.

¹⁵ For a recent survey, see Robledo Hernández, 2014.

¹⁶ Malefakis, 1970, pp.178 and 196. Malefakis argues that numbers were cut for budgetary reasons.

¹⁷ Griffin, Rahman Khan, & Ickowitz, 2002.

¹⁸ Malefakis 1970, p. 73.

population, occupying 3000 previously selected farms and in ‘ a single decisive act the peasants had occupied far more land than had been granted to them in the previous five years’.¹⁹ The new government responded by settling around 712,070 hectares between 16 February and 17 July 1936, with 219,128 hectares being found in Extremadura.²⁰ The state also looked to find other property to redistribute, and on the eve of the Civil War the Cortes was beginning the proceedings to recover old common lands, many of which were believed to have been illegally sold over the long nineteenth century.²¹

2. Too many workers or not enough land?

Contemporaries in 1931 lacked detailed information on both the numbers that needed to be settled and the potential area of land that was available. This was not an accident, but rather the combination of a disinterested state which until the late 1920s lacked the administrative organisation to collect basic information on land ownership and employment statistics, and strong local politicians (*caciques*) who had often successfully challenged the intrusion of central government in what they believed to be their areas of influence.²²

The publication of Pascual Carrión’s highly influential book in 1932 provided statistical information from the cadastre, which by this date was complete for eight of the 14 latifundio provinces (‘southern Spain’), and well advanced in the remaining five.²³ For southern Spain, Carrión calculated that some 5.9 million hectares were needed to settle 930,000 families (Table 1).²⁴ Carrión believed that 10.4 million hectares could be made available by expropriating all the land found on estates of over 250 hectares, and assumed that half could be cultivated.²⁵ In fact Carrión greatly exaggerated both the numbers of families requiring land, and the availability of land that could be cultivated.

To implement the Land Reform Act in September 1932, the central government required the land registries to provide information for the land that could be expropriated, a figure that reached 4.65 million hectares.²⁶ It also instructed each village to create a census (*Censo de*

¹⁹ Malefakis, 1970, p.370.

²⁰ *Boletín del Instituto de Reforma Agraria* (hereafter, BIRA), September 1936, p.357. For a discussion on the figures, see also (Malefakis, 1970), pp. 377-378.

²¹ See Beltrán-Tapia, Iriarte-Goñi, & Lana-Berasain, 2014.

²² For a general background on the question of state capacity, see especially, Scott, 1998 and Besley & Persson, 2011, and for Spain, Simpson & Carmona, in preparation, chapter 4.

²³ It was virtually complete in Albacete, Cadiz, Ciudad Real, Cordoba, Granada, Jaen, Malaga and Toledo, and 94% complete in Seville, 83% in Badajoz, 73% in Huelva, 67% in Almeria, 59% in Caceres, and 51% in Salamanca. Carrión, 1932: 1975, cuadro 3.

²⁴ Carrión, 1932: 1975, p. 362. According to this study, 250,000 landless families required 10 hectares each, and a further 680,000 families with insufficient land required five hectares each.

²⁵ Carrión, 1932: 1975, cuadro 65.

²⁶ Robledo Hernández, 2010, p. 126. Carrion’s figures included all the land on the large estates, while the 1932 Land Reform allowed owners to keep a part. There were thirteen different categories under which land could be expropriated, and the same piece of land could be liable for expropriation for a variety of reasons. See Malefakis, 1970, chapter 8.

campesinos) of the poor landless workers, small owners and tenants.²⁷ In addition to the difficulties of deciding exactly which workers should be helped, there were widespread complaints of abuse in compiling the *Censo* and many villages across the country failed to carry it out.²⁸ Despite these short-comings, the *Censo de campesinos* gives the best indicator of the numbers of landless and poor, and was probably the source used by Vazquez Humasqué, the director of the government's *Instituto de Reforma Agraria* (IRA), in his estimate of 407,000 families in 1934.²⁹

Table 1. Estimates of available land and peasants to be settled in southern Spain and Badajoz

	Total land area available	Estimated families to be settled	Hectares per family	Estimated net output per hectare	Output per family	Hectares required for 2000 pesetas
SOUTHERN SPAIN						
Carrion (1932)	5,900,000	930	6.3	250	2500	8
Vazquez Humasqué(34)	3,660,000	407	9.0	67	600	30
Robledo (2015)	4,650,000	407	11.4			
BADAJOZ						
Vazquez Humasqué(34)	399	57	7	86	600	23
Simpson (1995b)	1,602,000*			171 gross		11.7
Badajoz (20 farms)**	17,082	2,18	7.8	102.5	803	19.5

* Refers to the whole province in 1931; ** IRA plans for future settlements (see below)

Sources: Carrión, 1932: 1975; *El Sol* 17 de mayo 1934; Robledo Hernández, 2014; Simpson, 1995b and AIRA, various cajas.

Despite the fact that Vazquez Humasqué and Carrión projected transfers of between 32 and 52 per cent of *all* farm land in southern Spain, there was still insufficient to allow families to be financially independent even by their calculations (Table 1).³⁰ Carrión believed an average of 10 hectares was needed, and both authors recognized the necessity for families to supplement their incomes working elsewhere. Vazquez Humasqué argued that in the short-term income could be transferred from owners to settlers, but hoped that in the long run revenues would increase from an intensification of dry-farming. This, he argues, also depended on external factors, such as the development of new crops and techniques, as well as the possibilities of finding markets and

²⁷ Farmers working their own land were eligible if they paid less than 50 pesetas tax, equivalent to about 10 hectares of cereal land. Malefakis 1970, pp.111-2 and Espinoza, Robledo, Brel, & Villar, 2007, p. 310.

²⁸ For peasant lists, Espinoza et al., 2007 and Corrionero Salinero, 1986. There were strong incentives for local authorities, whether of the Left or Right, to create lists which rewarded their political followers.

²⁹ Vazquez Humasqué, *El Sol*, 17 de mayo 1934. A recent estimate gives 570,000 landless adult male workers, a figure which perhaps is not too different to the 407,000 families. Carmona et al., 2015.

³⁰ The total physical area of the 14 provinces was 18.3 million hectares, of which 11.28 can be considered as farm land in 1931. Simpson, 1995b.

remunerative prices for labour intensive crops such as maize, cotton and melons. Interestingly, Vazquez Humasqué makes no mention of the possibility of planting olive trees or vineyards, reflecting the difficulties facing these labour intensive crops in the 1930s.³¹

Yet in theory at least, sufficient land was available in southern Spain to settle most, if not all farm workers, and provide them with a subsistence income. If all the land that produced a taxable income of over 5,000 pesetas was redistributed to those employed in agriculture and who earned less than this figure, then the average net income per family of this group would increase in southern Spain from 1,922 to 2,221 pesetas (see Appendix 1 for details). In other words, confiscating the land from fewer than 13,871 owners, equivalent to 2.7 per cent of the total farm population, and distributing it to the landless and near landless could in theory have increased their average annual incomes by 16 per cent.³² Agronomists at this time estimated the needs of a family farm at 5-6,000 pesetas gross a year which, deducting rent, interest on capital, and taxes (but not labour), left a net income of between 2 and 3,000 pesetas.³³ As land reform did not contemplate a transfer of ownership from landowner to the state, rent was required to be paid by the settlers.

Huge amounts of land were needed to be transferred if all families were going to have sufficient to produce even a subsistence income, and many would still have been totally dependent on the state for working capital.³⁴ Even ignoring the fierce political opposition from landowners, a land reform of this calibre was not feasible in *any* country, but especially not in one that struggled to even measure the potential area of land available for redistribution, or the numbers that needed to be settled. The Spanish state lacked administrative capacity, with only 60 agronomists for the whole country as late as 1933.³⁵ Spreading reform over a period of several decades was theoretically possible, but seriously risked that the agenda for settlement would be set by those groups which faced the lowest costs to organize, rather than what the government or technicians considered necessary. Indeed, there is a close correlation between the areas in southern Spain which experienced land invasions in 1932 and 1936, and those where workers were settled in greatest numbers.³⁶ It also helps explain why both Socialist and Anarchist syndicates demanded that the criteria for settling the land be left to their local workers' associations and not the state technicians. Given the lack of unused land that the government could distribute, the fatal combination of a weak state capacity; strong legal

³¹ *El Sol*, 17 de mayo 1934.

³² This figure is an upper bound, as the income and wages earned by workers and small farmers who rented plots of land from farm owners earning a taxable income of more than 5,000 pesetas a year is unknown, but should be discounted.

³³ Carrión 1932: 1975, p. 342 (p.392). As cereals produced 500 and 600 pesetas gross per hectare, or 300 pesetas net, implying farms needed to be 10 hectares.

³⁴ For Badajoz, see below.

³⁵ There were also 15 forestry experts, 7 vets and a number of other assistants. Macarro Vera, 2000, p.220. For a more optimistic view, Pan-Montojo, 2005.

³⁶ Carmona & Simpson, 2015b.

resistance by landowners; and the legitimate demands of rural syndicates to improve members' living standards, made land reform impossible in a democratic society such as found in Spain in the 1930s.³⁷

3. The dehesa economy and possibilities for increasing output

Some believed that even if there was insufficient land to settle all the landless, land reform would change farmers' incentives and lead to an increase in output, especially as undercultivation was believed to be common.³⁸ Land reform was attempted on two very different types of latifundios, namely the large cereal farms (*cortijos*), found especially in the fertile Guadalquivir river basin (*Campiña*), and on the *dehesas*, lands of poorer quality soils in upland areas of Andalucía and throughout Extremadura (Badajoz and Cáceres).³⁹ Land reform on the *cortijos* required asset-poor landless workers to become entrepreneurs, but on the *dehesas* many already owned draft animals and farm equipment and were experienced at organizing themselves in small groups to rent land to cultivate.⁴⁰ Furthermore, and unlike the *Campiña* in Andalucía, there were no significant technological and capital barriers to intensification on the *dehesas*,⁴¹ a fact that helps explain why they experienced most of Spain's land invasion before the Civil War. The rest of this paper looks at detail at the experience of land reform on the *dehesas* in the province of Badajoz where 34 per cent of land was found in farms of more than 250 hectares, and output per hectare was 171 pesetas, or 52 per cent the national average.⁴² A total of 30 settlements were created under the 1932 Land Reform Act, which ranged in size from 1.8 to 2,855 hectares.⁴³ The fact that all these settlements had previously belonged to grandees presents an obvious bias in our study, but it was precisely on the land of this group of absentee landowners that contemporaries believed offered the best opportunities to improve cultivation.

The large *dehesas*, despite the extensive nature of cultivation and low livestock densities, were complex economic organizations. The seasonal nature of the region's rainfall implied that there were abundant pastures from the autumn to the spring, but relatively little

³⁷ For democracy and the capacity for collective action among landowners, see Albertus, Brambor, & Ceneviva, 2014.

³⁸ Carrión, 1932: 1975, pp. 336-37 and 392, believed that average output per hectare in dry farming regions could triple from 200 to 600 pesetas per hectare.

³⁹ For example, Juan Lara in April 1936, the government's agronomist for Córdoba, argued for future settlements in the province to be on the *dehesas* and *Campiña*, and planed none in the olive growing regions where family operations were already the norm. AIRA, Córdoba 14, 0-1.

⁴⁰ Land reforms that provide land to the tiller rather than landless labourers have historically tended to be more successful. See, for example, Griffin et al., 2002.

⁴¹ In particular, there was a need to plough at a greater depth on the heavy, fertile soils. Sumpsi, 1978.

⁴² Carrión, 1932:75 cuadro 3, and Simpson, 1994, p.212. Only Albacete (165 pesetas), Cáceres (141), Huesca (163) and Teruel (114) had lower figures.

⁴³ Numbers are imprecise because land reform in some cases joined neighbouring estates, and divided others (see Appendix 2). Another three communities, *Montelobo*, *Mariana*, and *Nava*, had existed since 1924; AIRA, Caja 6.7, Monografías.

during the long summer months. This created significant fluctuations in the number of animals that could be kept during the year, and landowners often rented the whole *dehesa* to large livestock owners from outside the province, who removed their animals to more northerly provinces during the summer months, just as the members of the Mesta had done previously for centuries.⁴⁴ These large tenants in turn sublet or sharecropped part of the land to local villagers to plant cereals and legumes.⁴⁵ Leases were for only two or three years, and livestock owners benefited from both the rent and the fact that cultivation improved pasture quality.⁴⁶ The sub-tenants and sharecroppers had few legal rights, but they usually could expect to receive a new plot elsewhere on the *dehesa* when their contracts expired. Finally, tree crops were important, not just for wood and charcoal, but holm oaks that provided fodder for pigs in the autumn, and the region was one of Europe's leading cork producers.⁴⁷ The diversity of the *dehesa* can be seen from the agronomists' plans to settle six estates in the 1930s; and cereals and legumes contributed half or less of the total product of the *dehesa* in two cases (Table 2).

Table 2. Estimates for future income on six settlements in Badajoz (in %).

	arable	livestock	tree crops	total
Año y vez without pastures				
Las Cabras	82,7	10,1	7,2	100
Merinillas	96,1	3,9	0,0	100
Dehesas with pastures				
Margaritas	50,8	34,6	14,6	100
Pulgosa, La	35,2	49,5	15,4	100
Tablado y Capilla	77,1	22,0	1,0	100
Zarzoso, El	45,0	47,6	7,4	100
average settlements %	68,0	25,4	6,6	100

Sources: Archivo del Instituto de Reforma Agraria: La Pulgosa, CAJA 6.37; Merinilla Altas, CAJA 6.XX; Las Cabras, CAJA 6.24; Las Margaritas, CAJA 6.9; Zarzoso, CAJA 6.42.

The intensity of cultivation depended on soil fertility, farm-gate prices, and the distance that workers had to travel from their villages to reach the fields. In the province of Badajoz

⁴⁴ The *Jurados Mixtos de la Propiedad de Cáceres* specifically name the provinces of León, Avila and Segovia.

⁴⁵ Carmona & Simpson, 2014a and Riesco Roche, 2006.

⁴⁶ Balabanian, 1980 and Campos Palacín, 1983.

⁴⁷ The charcoal industry employed between 15 and 20,000 families part-time, essentially for the national market, but output had dropped significantly from the First World War. Rosique Navarro, 1988, pp.57 and 70.

between 1910 and 1930, the growing use of artificial fertilizers and high cereal prices led to the area of cereals and legumes increasing 68 per cent, from 258 to 434,000 hectares, although it is impossible to determine to what extent this took place on the *dehesas* as oppose to the richer soils of the interior such as the Tierra de Barros.⁴⁸ There is, however, some evidence to suggest that high wheat prices had led to rotations being dangerously shortened on the *dehesas* even before the Second Republic.⁴⁹ At the same time, the total live weight of animals increased by 60 per cent between 1905/10 and 1929/33, increasing demand for pasture and fodder.⁵⁰

Population density in Badajoz was just 32.3 per square kilometre, even including the provincial capital. Agriculture employment was highly seasonal, so most workers lived in large villages to be close to information concerning work opportunities in both the formal and informal sectors.⁵¹ For the 28 settlements for which information is available, only three were found within a kilometre of the nearest village, but 17 (or 61 per cent of the total) were five kilometres or more, discouraging intensive cultivation. In 1932 the state had virtually no information on either how farms were actually being cultivated, or their potential to increase output without leading to soil mining. Carrión surprisingly gives only one example of a supposedly poorly cultivated farm in his book, a *dehesa* in Trujillo in Caceres. On this 444 hectare farm, 20 per cent of the land was under permanent pasture, 40 per cent lay in unsown fallow, 20 per cent ploughed fallow, and just 20 per cent sown with wheat, barley, and oats. Yields and livestock densities were low, and gross output was just 116 pesetas per hectare, or 37 pesetas net. Carrion argued that these figures were similar ‘over much of Badajoz’, and argued that there was significant potential for increasing output and employment through a shortening of the fallow (Table 3).⁵² However, he offers virtually no information concerning ecological restrictions, farm gate prices, or the practical problems associated with settling large numbers of workers at a significant distance from their homes.⁵³

⁴⁸ Zapata, 1986, pp. 1413-1416.

⁴⁹ Carmona & Simpson, 2015b.

⁵⁰ Zapata, 1986, Table 3.12.

⁵¹ Wheat cultivation required just 16.2 days’ work per hectare on the *dehesas*, and the preparation of the fallow a further seven days. Instituto de Reforma Agraria, 1934, p.89.

⁵² Carrión, 1932: 75, pp. 328-32 (1932: 348-509). Arable accounted for 78 per cent of income. A second *dehesa* is also described, but it raised only sheep, goats and pigs

⁵³ Vazquez Humasqué believed in 1931 that all workers, ‘every one of them’, were able to run a farm and therefore the agrarian problem could be solved by dividing the estates and giving labourers work tools. Cited in Robledo Hernández, 2007, p. 107.

Table 3. Output and input in cereal and legume production in Andalusia and Extremadura (in pesetas)⁵⁴

	OUTPUT	INPUTS (except labour)				total inputs	% inputs/ output	Ricardian rent	labour
		seeds and fertilizers	work animals	interest, insurance					
Cereal año y vez	350	60	50	20	130	37%	120	100	
Al tercio	225	35	30	15	80	36%	75	70	
Al cuarto	160	25	20	12	57	36%	53	50	
Al quinto	98	20	15	8	43	44%	20	35	
Trujillo farm	116	20	25	4.5	49.5	43%	17	29.2	
BADAJOSZ (1)	156	NA	NA	NA	NA	NA	38	NA	

Sources: Based on cadastral records, in Carrión, 1932:75, p.324.

(1) Badajoz, only cereals and cereals area. GEHR, 1983a and Simpson, 1995b.

Following the 1932 Land Reform Act, agronomists began to draw up plans for new settlements (*planes de asentamiento*) on the confiscated estates, which contained information on how the farms were currently being run; proposals for future improvements; and a simple accounting exercise to show projected future income.⁵⁵ For the 20 proposals that can be used for Badajoz, seven corresponded to estates that planned *año y vez* (where half the land was planted with cereals, and the other half left fallow); another seven with cereals planted once every three years (*al tercio*); and with cultivation even more extensive on the remaining six. Interestingly, the agronomists proposed very few changes in the rotations, and about half their reports contained no suggestions for improvements at all. Their criticism in general was limited to the insufficient use of fertilizers (but in only two cases); the presence of grama grass suggesting poor cultivation (again, two cases); the planting oats on the stubble (four cases);⁵⁶ or the lack of legumes being sown in the fallow, even though this was already being done on 13 out of the 20 farms.⁵⁷ They made no proposals to plant new crops such as maize or cotton or increase the livestock density.⁵⁸ The overall picture from these twenty farms is that agronomists believed

⁵⁴ The Cadastral rent was a fiscal estimate, essentially equivalent to the Ricardian rent, and did not necessarily match the market rent.

⁵⁵ Information was required to determine the number of workers who could be settled, as well as the compensation that had to be paid to the previous owners for the standing crops, work animals, and farm instruments. The *planes de asentamiento* were perhaps the first attempt by a Spanish government to systematically collect farm level information. For a description, see López Ontiveros & Mata Olmo, 1993, ch.5.

⁵⁶ This, the *resiembra* or *relva*, was highly criticised by agronomists despite the use of chemical fertilizers.

⁵⁷ By contrast, on a farm in Trujillo, very close to Carrión's example, the IRA's agronomist proposed to reduce the intensity of planting from once every three to once every four years, as the soil was becoming exhausted and only keep one sheep per hectare. AIRA, Caja 10.0.01.

⁵⁸ The agronomist noted for the *Señorio y Taldaroba* estate that the introduction of cotton or maize would require constant supervision by technicians and was impractical in the short-run given their current workloads. AIRA, Caja, 6.37, p. vii.

that only minimal changes could be introduced, at least in the short term. One possible explanation for this pessimism is that the agronomists were often making plans for farms that had already seen an increase in the area cultivated following the 1932 *Intensificación de cultivos* decree which, by March 1933 in Badajoz, had seen 53,146 hectares, equivalent to a tenth of the total area sown, given to workers to cultivate for two years in small.⁵⁹ However, according to Vazquez Humasqué, this land simply compensated that which landowners had failed to cultivate, and total output remained unchanged.⁶⁰

Table 4. Production proposals by agronomists for 20 settlements in Badajoz. Pesetas per hectare

	settlements	wheat yields (1)	OUTPUT (2)	INPUT					cadastral rent
				seeds and fertilizers	working animals	interest, insurance	total inputs	% inputs/output	
Cereal año y vez	7	13.4	412	62	51	22	134	33%	43.6
al tercio	7	11.8	216	31	33	10	74	35%	40
al cuarto	3	10.0	168	23	23	8	55	33%	37
al quinto y con pastos	3	7.3	122	13	14	4	30	25%	34
Average 20 settlements	20	11.4	263	38.0	35.0	13.0	85.0	32%	40.0
BADAJOZ PROVINCE		7.8	156	NA	NA	NA	NA	NA	38.0

(1) in quintals per hectare; (2) refers to cereals and legumes

(2) Sources: AIRA various cajas

Yet although agronomists recommended few changes, and overall projected wheat yields that would be 46 per cent higher and output per hectare 76 per cent greater than the provincial average after reform. However, according to the cadastral, average land quality was only five per cent better than the provincial average (Table 4). On the ‘best’ seven estates, agronomists appear to have been too optimistic, planning cereal output of over 400 pesetas per hectare on land that, according to the cadastral was of only of fourth or fifth quality.⁶¹ In conclusion, the agronomists predicted high levels of output with minimum production changes

⁵⁹ BIRA, October 1933, pp. 52-60, Malefakis, 1970, pp. 236-43 and (GEHR, 1983b), p. 308. Workers were given on average a fifth of the farm area. Malefakis, 1970, p.281, notes that ‘the only real accomplishment of the Azaña regime in land redistribution was the Intensification of Cultivation decrees. But although these settled some forty thousand peasants, and significantly transformed agricultural life in Badajoz and Caceres, they were only temporary measures. The yunteros were given use of the land only until the harvest of 1934.’

⁶⁰ BIRA, March 1933, p. 261.

⁶¹ Cereal production producing 350 pesetas per hectare per year corresponded to a cadastral rent of 120 pesetas, while the figure for the settlements on which agronomists planned a production of over 400 pesetas had cadastral rents of between 25 pesetas (*Represa*) and 82 pesetas per hectare (*Fuente Omendo*). *Fuente Omendo*, for example, was a farm of 300 hectares that was projected to produce 600 pesetas per hectare under dry farming, despite producing only traditional products such wheat, barley, rye and legumes. Livestock products are excluded.

on relatively poor soils. The source of error is not easy to identify. One possibility is that the agronomists believed that greater labour inputs following reform would lead to higher yields, a possibility that is considered below. Another is that the cadastral contains errors. There is no evidence that this is the case, although the continued strength of vertical clientelistic networks perhaps should not rule out this possibility for some farms.⁶²

A final possibility is that agronomists simply extrapolated the yields found on the best lands to those poorer soils of the farm. For example, the agronomist proposed *año y vez* rotations for the *Castillo de Guadajira* estate, but sufficiently fertile soils were found on only a sixth of the farm.⁶³ On the 596 hectare *Merinillas* estate, *año y vez* was already practiced (wheat or barley, followed by chickpeas and beans) before expropriation, but the agronomist now proposed eliminating the barley (despite yields of 1.8 tonnes per hectare), and extend the rotation to the 120 hectares of pasture by increasing the use of superphosphates to 300 kilos per hectare.⁶⁴ Production in the first year was very mediocre, with wheat yields of only 0.75 tonnes against an expected 1.75 to 2.20 tonnes.⁶⁵

It is clear that that the extensive cultivation techniques found in Badajoz in the early 1930s were more a consequence of natural resource endowments and farm prices, than supposed inefficiencies caused by absentee landowners. However, the optimism of IRA's agronomists could perhaps be explained if the new settlements, by increasing significantly the amount of labour, could compensate in some way for the poor quality soils. In fact, as we shall consider now, work incentives remained poor and there is no evidence that significantly higher yields were possible.

⁶² Major changes in farm prices cannot be the cause as the cadastral in Badajoz was carried out after the First World War.

⁶³ The cadastral figure for the farm (36 pesetas per hectare) was the average of very different soil qualities: on the best (in reality only second class) the figure was 63 pesetas per hectare and represented 17 per cent of the total estate; 40 per cent were third and fourth class (between 40 and 48 pesetas); and 30 per cent between fifth and seventh (16-30 pesetas), which explains why before being expropriated only a third of the fallow was sown.

⁶⁴ This pasture had been previously given to 122 *senareros* to cultivate. AIRA, Caja 6.59, pp. ii-iv.

⁶⁵ In Badajoz, wheat yields fell from 1.3 to 7.8 tonnes or 40 per cent between 1934 and 1935. (GEHR, 1991), pp. 226 and 230).

Table 5. Statistical description of the 30 Badajoz Settlements (1934-1936).

	30 settlements	Province of Badajoz (1930)	settlements (4)			
			minimum	maximum	average	median
area in hectares	17082	2.164.672	1,8	2.855	632	437
permanent pasture and forest	1882		0	305	70	33
% total	11%		0%	60%	14%	7%
total output * (in pesetas) (1)	3.472.600	274.270.000	750	460.000	128.600	75.610
per hectare *	203,3	127	92	497	234	174
livestock and cork share of total output *	8%	35%	0%	66%	18%	15%
output net of inputs (except labor) and rent *	1.751.200	191.270.000	8.000	193.500	63.850	33.500
per hectare	102,5	88,4	44	347	120,4	91,8
Net income (cadastral assesment) (2)	730.280	83.000.000	267	120.000	27.047	19.100
per hectare	42,8	38,3	31,3	256,3	49	41
SETTLERS						
number of settlers/families (3)	2.180	105.337	2	560	81	32
hectares per settler	7,8	20,5	0,9	44,1	13,9	12,8
output per settler (net of inputs but with rents) *	1.593	2.604	195	3.512	1.827	1.714
output per settler excluded rents *	803	1.816	145	3.029	1.315	1.212
hectares needed per settler to get a net income of 2,000 pesetas *	19,5		5,7	45,5	26,5	21,8
hectares needed per settler to get a net income of 1,300 pesetas *	12,7		3,7	29,5	17,2	14,2

(1) net of seeds

(2) Badajoz adjusted.

(3) Badajoz figures in Carrión (1932,)

(4) minimum, maximum, average and median within the 30/22 (when indicated) settlements figures

Sources: AIRA, 22 cajas.

Map 1. Settlements location.



4. The experience of land reform in Badajoz

Successful land reforms, such as undertaken in Japan or Taiwan following the Second World War, led to tenants receiving full property rights to the land, thereby increasing both their ability to access credit markets and providing incentives to cultivate it more efficiently.⁶⁶ This did not happen in Spain. Instead, landless workers became tenants of the IRA, and consequently were unable to sell or mortgage the land. Despite this problem, the fact that workers were guaranteed continuous access to the land might still have led to greater output. However, to succeed, three major problems traditionally associated with community arrangements needed to be resolved: the threat of exit by high-ability members; adverse selection (the attraction of low-ability members); and shirking.⁶⁷ The evidence suggests that these problems were significant in Badajoz, and the IRA was required to intervene extensively for settlements to remain viable.

A major decision facing the government was the number of families to settle on each farm. Manuel Azaña, the President of the Republic, rejected a carefully prepared proposal by the Ministry of Agriculture to provide land and a government loan of 12,000 pesetas apiece, equivalent to a subsistence income for six years, to 4,000 families.⁶⁸ The same fate met the plan to settle 23 workers, each with their own plough team and producing a gross income of 7,600 pesetas per family, on the 596 hectare *Merinillas Altas* estate in Badajoz. Projects that converted a relatively small number of asset-poor labourers into prosperous family farmers would fail to solve the severe regional unemployment, and therefore considered politically unacceptable. Instead, land was assigned to cover a family's basic needs, rather than reducing their dependence on labour markets for seasonal employment. On *Merinillas Altas*, 119 instead of 23 families were settled, each with five hectares producing an estimated net income of 1,467 pesetas (2,346 pesetas gross).

In a few cases the problems of selecting suitable individuals and creating new organizations to coordinate large numbers of workers were reduced by delegating to existing independent associations.⁶⁹ In Zahinos, the local syndicate *El Progress* claimed to have cultivated *Las Cabras* since 1908, and was allowed to continue.⁷⁰ Likewise in Higuera de Vargas, where all the villagers belonged to the *La Benéfica* association and 560, or a quarter of its membership, were permitted to stay on *Ramira Alta* which they had rented since 1928, each with less than two hectares.⁷¹ In Torremejía, two distinct associations in May 1936 were authorized to cultivate *Señorío y Torralba*: the socialist syndicate with 180 members were given

⁶⁶ Griffin et al., 2002, p.303.

⁶⁷ Abramitzky, 2011.

⁶⁸ 6th July 1933, in Azaña, 1997, p.383. He complained that loans were for everything, from a pair of mules to two water jars for each settler. The farm was probably in Andalusia.

⁶⁹ Article 12c of the 1932 Land Reform Law gave preference to 'collective cultivators' for settlement on uncultivated land. Malefakis, 1970, p.229.

⁷⁰ AIRA, Caja.6.24.

⁷¹ The association had 2,209 members and cultivated a number of farms. Letter dated 19 May 1934. AIRA, Caja 6.38.

340 hectares and the second, possibly Catholic, syndicate, given 960 hectares for its 65 members. The fact that Torremejía's population was 1,200 suggests that a member in each agricultural household belonged to one or the other. On none of these three estates did the average plot exceed five hectares, but the associations argued that this type of policy helped alleviate local unemployment, and for the IRA it had the advantage that the settlers actually owned their own farm equipment.⁷² However, it also permitted some individuals access to land who otherwise would have failed to meet the selection criteria of the *Censo de campesinos*. Furthermore, the associations were now expected to follow rules imposed by the IRA, rather than their own informal norms on how farm operations were to be carried out and by whom, and their members were collectively responsible for all debts.

In Badajoz, the number of settlers was almost double that which was initially recommended by the agronomists, either because land was rented to local associations, or because of the political demands to maximise numbers.⁷³ The estimated net family income on each farm ranged from 145 on *Ramira Alta* to 3,029 on *Represa*, with an average of 1,315 peasants (Table 5). Given that agronomists sometimes exaggerated the farm's production potential, the real figures would be lower still. A combination of large families and small plots implied that workers were forced to seek off-farm employment making it hard to monitor their effort on the settlements, and leading to complaints about workers' underperforming or simply disappearing.⁷⁴ On *Ramira Alta*, 153 settlers were expelled for absenteeism, while another 53 were fined for not working their plots adequately.⁷⁵

Except for the tenant associations, individual settlers were usually chosen from the nearest village according to a rough indicator of economic need, with the Catholic *Acción Social* selecting household heads with the greatest number of individuals over 12 years in their care from the *Censo de campesinos*.⁷⁶ This avoided any obvious political bias, but resulted in an average age of almost fifty (Table 6). In 1930 male illiteracy in Badajoz was 40 per cent, but

⁷² The report for *Merinillas Altas*, speaks of the need to create 'the greatest number of lots to maximise the number of beneficiaries and avoid discontent which would surely be produced by excluding large numbers of peasants from Valverde de Leganés.' AIRA, Caja 6.59, *plan de asentamiento de Merinillas Altas*, p.v. Settlers on *Señorio y Taldarrobas* already possessed work animals. AIRA, Caja 6.37.

⁷³ The figure is reduced to 14 per cent if *Cabra Alta* and *Baja* and *Ramira Alta* are excluded.

⁷⁴ On *La Pulgosa*, for example, Román Pérez in December 1938 simply disappeared to look after his sheep and goats, while Francisco Rodríguez wanted to leave to dedicate time to his own land. Other members also had abandoned their plots, but in these cases it was probably for political rather than economic reasons. AIRA, Caja 6-66. See also for *Egido Nuevo* (Caja 10.36) and divisions among settlers on *Matadero* (Caja 10.6). See also, (Carmona & Simpson, 2015a).

⁷⁵ AIRA, Caja, 6.38. Following the tragic events after 18th July 1936, which saw Franco's troops rapidly sweep across large areas of Extremadura, some workers fled the newly created settlements, and others were evicted or shot. In Badajoz in 1938, only 1,221 of the original 2,040 workers selected remained, with 350 having rejected the opportunity to join the farms, 145 'disappearing', and 33 being expelled.

⁷⁶ Some settlements also recruited specialist workers, such as shepherds to tend the village flock. The 1932 Land Reform Act (*Base 11*) gave preference to cultivators with families, and within this category, those with most children.

figures could vary significantly in neighbouring villages.⁷⁷ There were also important differences between the new settlements, with no workers being able to sign their names on the *Zarzoso* estate, but 72 per cent on *La Pulgosa*.⁷⁸ The fact that the numbers of those receiving land who could sign their names were sometimes higher than average village literacy, and that some settlers owned work animals, farm tools, or small plots of land, suggests that it was not always the poorest peasants who were selected.⁷⁹

Table 6. Demographic features of the settlers of 6 *asentamientos*.

	households number	average age of the household head	total households members	children older than 14 years	average per household	settlers literacy rate	male literacy in the same village
Pulgosa, La	39	56	289	181	4,6	72	57
Tablado y Capilla	17	42,6		16	0,9		
Zarzoso, El	14	50,2		36	2,6	0	17
Naveperas	31	50,5	180	44	1,4	45	57
Merinillas altas 1	61	51,4	388	83	1,4	41	69
Quinto de Almadén	33	44,8	166	35	1,1	54	52
Total	195	49,3		395	2,7		

Sources: Archivo del Instituto de Reforma Agraria: La Pulgosa, Caja 6.66; Tablado y Capilla, Caja 6.40; El Zarzoso, Caja 6.42 bis; Naveperas, Caja 6.36; Merinillas altas (1), Caja 6.59; Quinto de Almadén, Caja 6.38. España. Dirección General del Instituto Geográfico, 1932.

Table 7. Estimated income per settler in Badajoz, 1935.

	cultivated area (hectares)	projected total yearly income according to agronomists	number of settlers	cultivated area per settler (hectares)	projected total income per settler (pesetas)
NUMBER OF SETTLERS IN THE ORIGINAL PROJECT					
La Pulgosa	680	90.657	28	24,3	3.238
Merinillas altas	596	279.155	23	25,9	12.137
Las Cabras (Baja and Alta)	2581	537.590	235	11,0	2.288
Las Margaritas	430	66.124	32	13,4	2.066
Zarzoso	193	37.595	14	13,8	2.685
Señorío y Taldarrobas	2855	612.408	250	11,4	2.450
Ramira Alta	982	166.012	560	1,8	296

⁷⁷ The gender gap was very large, and total illiteracy reached almost two-thirds for the province. (Instituto de Reforma Agraria, 1934), p.110.

⁷⁸ Information is available for most settlements, but it is sometimes difficult to always be sure who was signing the documents.

⁷⁹ In the case of *La Pulgosa*, not only could 72 per cent sign their name, but all had some work animals. AIRA, Caja 6.37.

28 settlements total	12.904	n.a.	1.172	11,0	n.a.
FINAL NUMBER OF SETTLERS (WHEN MODIFIED)					
La Pulgosa	680	90.657	39	17,4	2.325
Merinillas altas	596	279.155	119	5,0	2.346
Las Cabras (Baja and Alta)	2581	537.590	527	4,9	1.020
28 settlements total	12.904	n.a.	1.941	6,6	n.a.

Sources: AIRA: La Pulgosa, Caja 6.37; Merinilla Altas, Caja 6.59; Las Cabras, Caja 6.24; Las Margaritas, Caja 6.9; Zarzoso, Caja 6.42.

Many agronomists and labour syndicates argued that it was preferable to maintain the estates and work them as collectives, suggesting that they believed there were some economies of scale. Settlers by contrast, perhaps aware of the potential difficulties of working in groups with an average of 81 families, preferred to work the land individually.⁸⁰ The result was that a hybrid situation developed whereby each family cultivated their own plot on the open fields, but the organization of the village flock, the payment of rent, and the responsibility for repaying capital was a communal responsibility.⁸¹ The nature of agency problems and transaction costs were consequently changed rather than reduced, and the possibilities of increasing output through labour intensive improvements was limited to extending the *area* of subsistence cereals and collecting wood for charcoal production.

In Badajoz the IRA advanced capital to at least 25 of the 29 settlements to purchase farm machinery, and to 22 to buy work animals, equivalent together to 37 per cent of the total, with the rest being used to purchase livestock, especially sheep and pigs.⁸² In addition, on all but two farms, the IRA advanced personal loans to settlers to feed their families and work animals, seed corn, fertilizers until the harvest, an important function that landowners had often previously performed (Table 8). Neither the state nor settlers had experience in managing credit operations, increasing the confusion already caused by the fact that the settlement solicited the loan, but responsibly for the debt was individual.⁸³ As a result land reform, rather than creating a network of small independent family farms, simply changed workers' dependence on private landowners for the IRA. The fact that the foreman kept daily accounts of the work carried out by each settler, reinforced the idea that they were wage labourers rather than independent

⁸⁰ Figures refer to Badajoz. AIRA, Caja 6.7.

⁸¹ It was believed that workers would sell the land if they were given full possession. Following the 1935 Land Reform, the rent was paid to the old landowners. Sales were made collectively and any surplus distributed among settlers after rent and credit repayments had been made to the IRA. This differed to the *Intensificación de cultivos*, where settlers were individually responsible for rental payments. As the old cadastral rents were always much lower, this helped inflate production and could therefore justify a greater number of settlers.

⁸² Calculated from AIRA, Caja 6.7.

⁸³ For the Spanish government's lack of experience with rural banks, see Carmona & Simpson, 2014b.

farmers and in one case, in the province of Cadiz, workers actually went on strike for more pay.⁸⁴ On the projected settlements, capital inputs remained low.⁸⁵

Table 8. Loans advances by the IRA to settlers (1934-1936) (in current pesetas)

	institutional loans (1933-1936)						
	FIXED CAPITAL		WORKING CAPITAL				total loans
	machinery	livestock	seeds and fertilizers	to feed settlers	to feed animals	others	
TOTAL 28 SETTLEMENTS	160.110	829.702	390.752	450.422	319.514	176.997	2.327.497
%	6,9	35,6	16,8	19,4	13,7	7,6	100
FOUR LARGEST LOANS							
Cabras, Las (Alta & Baja)	0	199.378	74.635	0	14.000	44.127	332.140
%	0	60,0	22,5	0,0	4,2	13,3	100,0
Pulgosa, La	0	81.623	20.190	60.200	8.879	5.145	176.037
%	0,0	46,4	11,5	34,2	5,0	2,9	100,0
Merinillas altas	20.808	17.843	40.901	38.700	23.864	4.708	146.824
%	14,2	12,2	27,9	26,4	16,3	3,2	100,0
Margaritas	5.050	67.000	6.519	7.828	22.862	14.420	123.679
%	4,1	54,2	5,3	6,3	18,5	11,7	100,0
per household (28 settlements)	214	954	342	527	425	207	2.669
maximum (Zarzoso)	80	2.750	368	619	1.110	570	5.497
minimum (Ramira Alta)	0	71	56	33	3	3	166

Sources: AIRA, Caja 6.7, Monografías de las 33 comunidades de Badajoz, 1938. See Appendix 2. *Señorio y Taldarrobas* is excluded as it received none of the loans that it was granted in 1936.

The theoretical literature suggests that a successful land reform increases output because family-run farms have good incentives to work quickly and diligently, both crucial factors in the time-constrained activities found in agriculture. However, economic development in Spain by the 1930s perhaps had reached a level where there was no longer a clear inverse-relationship between farm size and land productivity, and capital requirements was becoming increasingly important.⁸⁶ With cereals, it was not clear how significantly greater output could be obtained with higher labour inputs without using more capital, and the important economics of scale found on the latifundios is reflected in the recommendations of both agronomists and

⁸⁴ Macarro Vera, 2000, p.233.

⁸⁵ On *Represa, Santisfolla* or *Merinillas*, capital inputs were lower than 30 per cent of net output, compared to the 37 per cent used in the cadastral.

⁸⁶ Lipton, 2009, p.65. The relationship still existed with specialised tree crops and irrigation, but not with cereals and extensive livestock farming. See Simpson & Carmona, in preparation.

syndicates to maintain the organizational structure on the confiscated estates. Intensive livestock farming was also theoretically possible on marginal cereal land and *dehesas*, but this required costly feed-inputs, as well as higher farm prices and a significantly better marketing organization if it was to be profitable.

The *dehesas* provided pasture for large numbers of animals during the winter months, that traditionally were rented, and some enjoyed a substantial income from cork. However, in both cases significant difficulties existed if the new settlements were going to integrate these activities within the community to reduce the levels of underemployed among their workers, rather than sub-contracting them to third parties, the preferred option of the IRA because of the greater security of payment.⁸⁷ The poor soils found on many *dehesas* implied that labour-intensive cereals were never going to significantly increase living standards, and cereal and legume production on the settlements were often small scale, and sufficient for little more than household needs.⁸⁸

Spain by the 1930s was perhaps too rich for a 'classic' land reform, and while the settling of large numbers of asset-poor workers redistributed incomes, it failed to increase either land or labour productivity. Land reform might have had a better chance of success if independent farms had been created with an annual turnover of around 7,500 pesetas as suggested by the IRA, but perhaps only a third of the poor would have benefitted, making the project not just excessively expensive but also politically unacceptable to those that were excluded. Instead, limiting reform to providing emergency relief for landless workers for one or two years, increased output in the short run, but ran the risk of exhausting soil fertility and the basis for future growth.

4. Conclusion: why land reform fails in Spain?

Land reform often has to try to meet two important, but often contradictory criteria, namely the alleviation of rural poverty by maximizing employment opportunities for workers, and increasing farm output and efficiency. Difficulties arise because the poorest member of rural society are often those least prepared to become rural entrepreneurs or participate in collectives given their lack of financial resources, poor physical condition, and illiteracy. Land reform in Spain failed not because the government necessarily lacked the will to carry it through or because of budgetary restrictions, but because there was insufficient uncultivated land available. Even if a third of all land had changed hands, there would have been insufficient for more than basic subsistence, even with significant help from the state, and workers remained dependent on off-farm work.

⁸⁷ Therefore on *La Pulgosa*, the harvesting of cork, a skilled task, continued to be carried out by outsiders. Carmona & Simpson, 2015a.

⁸⁸ See Carmona & Simpson, in preparation.

The historical literature on the Spanish land reform has often been highly critical of the Azaña government, as very little land was expropriated and settled, but workers' expectations and political tensions increased significantly. The government produced no feasibility studies for reform and, with the notable exception of the partly completed cadastre, had no farm-level information. This makes the information collected by the IRA exceptional to understand both the actual state of cultivation on the large estates before reform, and the potential to increase it after. On many of the large estates, cultivation in the 1930s was not abandoned as contemporaries often believed. Today most historians prefer Díaz del Moral's description in 1928 of rapid progress taking place in Andalucía to Pascual Carrión's criticism.⁸⁹ Change was perhaps slower on Extremadura's *dehesas*, but the IRA still faced the problem of having to settle asset-poor peasants on farms which were increasingly being run as capital intensive enterprises. Local workers were fully aware of these restrictions and to the limits of land reform, and this influenced how they responded to the possibilities created by the Second Republic and the new political power enjoyed by their syndicates. The slowness of reform, and the inability of workers' associations to influence the selection process of workers to be settled, provided syndicates with opportunities to recruit across the region, and culminated in widespread land invasions in 1936.⁹⁰

⁸⁹ Díaz del Moral was the Socialist notary from Bujalance (Córdoba), and in his classic work on rural protest wrote that 'El progreso agrícola, desde principios del siglo, ha sido enorme; el empleo de los abonos químicos y de la moderna maquinaria se ha difundido por todos los pueblos; algunas explotaciones se llevan, en cuanto a maquinaria al menos, con todo los adelantos de los países más progresivos; la producción de cereales y leguminosas se ha duplicado en los últimos veinte años'. Díaz del Moral, 1928: 1973, p. 37.

⁹⁰See Carmona & Simpson, 2015b and for land invasions see especially, Espinosa, 2007.

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APPENDIX 1.

Estimate of the impact on incomes of transfers of all lands paying more than 5,000 pesetas tax

	Badajoz	Extremadura	Southern Spain
1. Agricultural families	128,557	206,338	1,145,362
2. Output ('000s ptas)	274,278	450,821	2,544,039
3. Ricardian rent (33% output) '000	91,426	150,274	839,533
4. % rent to landowners > 5.000 ptas	60	58	40
5. total rent to landowners > 5.000	55,13	88,791	335,813
6. nett income per family without redistribution (ptas)	1,705	1,755	1,922
7. nett income per family with redistribution (ptas)	2,134	2,185	2,221
% increase	25%	25%	16%

Sources: Our calculations from Carrión, 1932: 1975 and Simpson, 1995b.

APENDIX 2		distance from the village (in kms)		area (in has.)		cultivated area (in has.)		cadastral assessment (ptas.)		number of settlers		cultivated area/settler (in has.)		cadastral assessment per settler (in ptas)		institutional loans (1933-1936)				
																fixed capital		working capital		
settlement	location					proposed	final			machinery	animals	seeds and fertilizers	settlers	fodder	others					
Borrachinas, Las	Alconchel	5	376	300	16.085	22	15	20,0	1072	4.425	22.259	11.526	16.200	17.015	4.097	75.522				
Cabras, Las (Alta y Baja)	Zahinos	8	2.704	2.600	107.000	235	527	4,9	203	0	199.378	74.635	0	14.000	44.127	332.140				
Castillo de Guadajira	Lobón	5	462	400	118.389	65	58	6,9	2041	2.110	6.224	1.867	10.708	3.305	1.324	25.538				
Cerrollano	Villanueva del Fresno	8	727	707	40.808	45	65	10,9	628	12.525	24.203	19.497	3.000	27.444	14.696	101.365				
Cuncos	Villanueva del Fresno	1	250	250	12.479	11	11	22,7	1134	3.420	14.812	4.992	5.850	7.773	10.497	47.344				
Dehesilla, La	Santo Domingo (Olivenza)	3	353	320	17.654	16	8	40,0	2207	846	18.892	3.980	0	3.308	973	27.999				
Frada, La	Valverde de Leganés	6	41	40	2.317	7	7	5,7	331	2.079	2.100	2.105	3.500	2.222	4.800	16.806				
Fresnillo y Pinel	Montijo	3	393	393	46.955	58	58	6,8	810	10.900	0	19.004	37.691	14.477	0	82.072				
Fuente Omendo	Valverde de Leganés	3	309	256	18.512	32	32	8,0	579	8.757	13.510	12.755	18.007	9.082	5.413	67.524				
Guaperal	Roca de la Sierra	2	279	279	8.737	20	20	14,0	437	7.300	21.460	5.887	16.690	8.562	940	60.839				
Lapas y Risquillos	Villanueva del Fresno	9	493	460	26.100	45	45	10,2	580	8.737	17.313	14.123	23.169	11.663	5.007	80.012				
Magistrada	Olivenza	8	103	64	3.232	3	3	21,3	1077	2.199	2.837	596	751	826	0	7.209				
Margaritas	Valle de Santa Ana	0,5	500	200	26.675	32	32	6,3	834	5.050	67.000	6.519	7.828	22.862	14.420	123.679				
Mata, La	Fuente de Cantos	3	430	430	21.179	19	19	22,6	1115	3.979	17.711	10.647	15.450	7.728	1.580	57.095				
Merinillas altas	Valverde de Leganés	2	596	596	29.798	119	119	5,0	250	20.808	17.843	40.901	38.700	23.864	4.708	146.824				
Monte Encinar de Villalba	Villalba de los Barros	4	435	435	29.110	24	24	18,1	1213	12.690	27.425	11.117	26.495	26.325	18.230	122.282				
Naveperas	Villanueva del Fresno	7	662	420	21.604	27	27	15,6	800	5.619	39.000	7.975	20.972	9.830	13.020	96.416				
Palacito	Roca de la Sierra	2,5	254	154	14.712	22	22	7,0	669	5.600	21.300	6.731	4.400	8.537	1.763	48.331				
Pedazo, El	Villar de Rey	6	316	316	17.000	23	23	13,7	739	2.443	30.125	4.178	17.530	14.467	1.372	70.115				
Pulgosa, La	Barcarrota	5	892	680	56.622	28	39	17,4	1452	0	81.623	20.190	60.200	8.879	5.145	176.037				
Quinto de Almadén	Alange	7	437	407	19.341	33	33	12,3	586	16.735	16.100	11.547	11.880	18.694	8.262	83.218				
Ramira Alta	Higuera de Vargas	8	1.004	1.004	35.603	71	560	1,8	64	0	40.000	31.219	18.325	1.477	1.680	92.701				
Represa	Villanueva del Fresno	5	629	629	21.860	78	70	9,0	312	0	0	21.299	36.655	0	476	58.430				
Santisfolla de la Rueda	Montijo	6	135	94	9.758	23	23	4,1	424	3.728	4.024	8.169	9.608	4.884	285	30.698				
Señorío y Taldarrobas *	Torremejías	0	2.855	1.776	87.143	250	250	4,1	424	38.070	45.000	29.689	80.809	29.000	3	354.361				
Tablado y Capilla	Jerez de los Caballeros		490	445	28.790	17	17	26,2	1694	2.744	41.659	6.281	13.375	13.826	259	78.144				
Tocinillos, Los	Fregenal de la Sierra	14	285	180	15.600	29	16	11,3	975	3.600	14.525	7.876	14.585	3.731	933	45.250				
Vadevesevilla del Monte/la																				
Rasa	Villanueva del Fresno	7	690	690	23.905	54	54	12,8	443	12.703	29.879	19.980	10.189	19.189	5.010	96.950				
Zaroso, El	Valle de Matamoros	7	262	155	25.806	14	14	11,1	1843	1.113	38.500	5.156	8.664	15.544	7.980	76.957				

* Loans were approved but not received.

Sources: AIRA, caja 6.7, Monografías.

