



Building the Low-Tech Landscape

Part 2: Overlords and Cities for *GURPS*

by Matt Riggsby

Having dealt with [the peasants](#), it's time to start looking up the ladder to consider the relationship between peasants and the people and institutions who employ and rule them and with the centers of civilization they support.

Tax Revenues and Sharecropping

There are a few different ways peasant produce made its way up the ladder. One approach is to regard taxes as a fraction of the peasant's income. This approach is suitable for relatively free or wealthy peasants. Even free peasants could be taxed up to a third of their total income. That's the *total* tax burden. Not all of it goes to political overlords; a significant amount of money often goes to religious institutions. In many societies, from Mesopotamia to Ancient Greece to Medieval China and Europe, churches and temples were major recipients of worldly goods. In other words, their might be two groups collecting taxes; whether they get an equal share or if one gets more than the other is up to the GM.

With the taxation approach, assume taxes are included in a household's cost of living rather than an additional expense. Households which are Struggling or better can be taxed at up to 30%. However, Poor households can't pay more than 10% of their cost of living in taxes. They simply can't afford to pay more than that.

In various times and places, though, many peasants were what we'd call tenant farmers or sharecroppers, working a plot of someone else's land in return for a small portion of the crops. From a modern point of view, the distinction might be between running one's own farm versus working as an employee on someone else's, although this does start to get into the complex issue of property rights.

One way to treat this is to have the sharecropper take an appropriate level of income for himself and paying some level of taxes based on that, but assume that he actually produces as much income (and uses as much land) as someone at a higher level of wealth, with the excess going to an overlord. A sharecropper will almost always be Poor, so at TL3, that suggests that each sharecropper nets his lord about \$200 per month. However, it's fairly clear that peasants working directly for their own benefit are *much* more diligent and efficient than peasants working for someone else and an overlord gets far less income per acre. It would not be at all unreasonable to rule that the landlord gets only *half* of the difference between income levels, or even less. At TL3, an overlord with Poor tenants would probably get only \$100 per tenant, along with some more conventional taxation. Clearly, sharecropping is a much better deal for the ruler than for the individual peasant, but not nearly as good for the economy as a whole. A sharecropper may end up paying taxes as well, though given his poverty, he probably won't be paying much.

In historical texts, this sort of peasant could have gone by a number of names: villain, servus, serf. However, not all serfs are sharecroppers and not all sharecroppers are serfs. The term "serf" implies a relationship as much political as it is economic. A serf is tied to the land, obligated to work it and prohibited from leaving it behind without permission from his overlord. In most cases, serfs were also very poor; those who could become wealthier would often buy their way out of their obligations. However, in some periods, as serfdom became rarer, those who did hang on to old feudal ties might have a closer relationship with the manor than their "free" neighbors, which could easily mean superior access to the political system and economic resources. Moreover, sharecroppers could just as easily be wage labor, employed for a season or a few years until they get their own land rather than permanent subjects. Sharecroppers can be free, even if it only means being free to starve.

In actual practice, some peasants may work only their own land and others will be pure sharecroppers, but many will be somewhere in between, combining relatively free holdings with labor on someone else's fields. To handle this, the GM may want to introduce fractional wealth levels, discussed below. A sharecropper will probably be Poor, Struggling-2, or Struggling-1, and will net their overlord an amount equal to half the difference between his monthly income and that for a character no more than one full level of wealth higher.

Of course, sharecroppers don't have to work for noblemen. This same arrangement can be used to handle people working for wealthier but still common land owners. Given the limited amount of land a single family could farm, someone with a lot of land and not enough hands would have to bring in additional labor. Running the numbers in the previous article, it should become clear that it would be difficult for a single peasant household to rise much above Struggling wealth. However, in various times and places, there was a small rural middle class, below the titled nobility (and without their political clout and military obligations) but above the poorest dirt farmers. A farmer by himself might produce enough wealth to be Struggling, but with a few hirelings, their additional production could easily boost him to Average wealth.

Sharecroppers can likewise work for institutions. Temples and monasteries across the Old World received bequests of land from people hoping to curry divine favor. Sometimes, the land came with peasants who would pay the temple either with taxes or as sharecroppers. Other times, though, lower-class monks and other minor church members would be the ones working the land, receiving very little of their own produce and supporting their brethren.

This could create a complex picture for taxation. The poor hiring might produce a sizable amount of income for his employer, generate tax income for his overlord, and provide support for a nearby church or temple.

Forms of Taxation

Income makes its way from the peasants to overlords in many different forms. First, there are payments in kind, a share of whatever crops, livestock, or other products are raised: sacks of grain, bushels of fruits and vegetables, cheeses, wool, and so on. In most periods, the overwhelming majority of direct taxes are payments in kind. They're relatively easy to obtain, and while it will take a few steps to convert a storehouse full of wheat into a sword or a horse, they'll keep the landlord fed.

Second, there are rents, fees, and other payments to be made in money. Typical fees include charges for using the village mill, payment for permission to marry or to plow fields, fees for rendering criminal judgments and settling local disputes, or surcharges for growing particular kinds of crops. Monetary payments are extremely useful, since they provide maximum liquidity, but peasants can't provide a lot of it in most periods.

Third, peasants often owe labor services, which may or may not be specific (some peasants might be required to, say, thresh grain for four days in October, while others might be subject to one day a week of doing whatever their lord commands). Nobles and governments tend to be major landowners, and in addition to growing their own crops, peasants may be required to spend a certain amount of time working in their lord's fields. This gives the landlord certain advantages. Because the potential productivity and pool of available labor vastly outstrips what he needs for bare subsistence, he can afford to grow certain kinds of valuable crops that a peasant couldn't. For example, a peasant couldn't live off of a harvest of grapes, nor can he wait for several years for vines to start producing. A lord, however, can grow enough grain to ensure that he has more than enough to eat and have more than enough land and labor left over to cultivate high-value and labor-intensive crops.

Complicating the picture even more is the existence of forced loans and forced sales. An indirect means of taxation used by many governments was to require people to sell certain goods at specified prices, typically well below market value. In practical terms, this can probably be regarded as a less efficient means of getting taxes in money or in kind, but ultimately with the same economic effects as a direct tax.

It's certainly easier to treat tax and sharecropping income abstractly, assuming that the overlord can convert whatever income he has into whatever form he needs it in. However, GMs eager for detail can break taxes and sharecropping income down into the categories of kind, money, and labor, which the overlord can then use as he sees fit. The value of income in kind can be applied directly against the overlord's cost of living, just as peasant farmer income. Income in the form of labor is typically used for farming, which means that it's really income in kind. However, an overlord could use it instead for unskilled non-agricultural labor, such as digging moats or irrigation trenches or building roads (some of it could be used to build fortifications, mills, and the like, but most of that labor requires significant skills). An overlord might even be allowed to use income in labor to raise levies of troops, although most peasants will be unskilled and deeply unenthusiastic fighters. No more than 1% of a Poor peasant's taxes can be taken in money, and no more than 20% of taxes from Struggling or Average farmers.

Limits on Labor

Players may be tempted to treat the lands their characters come to rule as if they were resources in a simulation like *Civilization* or *Warcraft*, having the residents build universities, directing them to tear up the wheat fields to plant grape vines, or training them as ninjas. This will not work.

First, the peasants will starve long before anything useful happens. If peasants don't farm, which is a full-time occupation through most of the year, nobody eats. That includes any PCs dependent on the peasants for food on their tables.

Second, no matter what landlords think, peasants are not endlessly compliant to the demands of their social betters. Even friendly peasants wholly dependent on their lord for protection in uncertain times aren't going to turn their lives upside down for an outlandish batch of unproven ideas. They still, in most societies

Historically, taxes and rents were expressed in specific fixed amounts: a bushel of barley, a week of plowing, three pieces of silver, and so on. The percentages presented here are a summary for the convenience of modern gamers, not calculations ever performed by anyone levying or paying them. In the short term, the fixed amounts meant stability and ease of computation for everyone, and since inflation was extremely low by modern standards, the value of taxes and tribute stayed at a stable level for the authorities. It was also a boon to a largely illiterate and innumerate society not to have to compute and document a twelfth of the oats, a seventeenth of the year's cheese production, and the like after every harvest.

Still, even though tax amounts were theoretically fixed, there was, in practice, some variability. From the peasant's point of view, there were still ways to play the system. If one was obligated to give his lord, say, a cheese of a certain size or a sheep, it didn't have to be his best cheese or his best sheep. He could rid himself of goods of slightly inferior quality, if that was possible. There was also room for self-improvement. If a peasant managed to be more productive one year than in the previous one, his taxes wouldn't increase. Regardless of how much he produced, he'd owe his lord the same amount (though he would take on new obligations if he acquired new land). If the weather was good and he had a bumper crop, so much the better for him.

For landlords, though, it could become a problem if economies changed. Improving economies (which increased the importance of money over goods) and changing technology (which changed the relative value agricultural produce) meant that those fixed taxes could become worth less and less to the lords who collected them. Over a lifetime, the effect was small, but over centuries, it became considerable. The average production of peasants might increase, but the proportion of that taken in by landlords as well of the value of that portion would drop. At higher TLs, the landlords who remained wealthy through such changes were those who controlled large areas directly and employed workers rather than relying on traditional taxation, particularly the ones who focused on what were relatively luxury trades like stock raising and wine production.

Absentee Landlords

As if the many different forms of income weren't enough, landlords were allowed a long list of rents, fees, and duties, just as modern people might pay a long, long list of fees and taxes including rent or mortgage payments, property taxes, fees for driving, fishing, hunting, and marriage licenses, sales taxes, etc. Worse for the ancient landlords, they didn't have large, powerful bureaucracies to collect them, or, often, even written laws indicating what taxes were due and when. In order to get them everything owed to them, someone had to remember what the taxes and fees were and when they were to be collected. In *GURPS* terms, this requires a lot of work and a high level of Administration skill. These are not requirements designed to attract the average aristocrat.

Any number of lords and clergy in Europe and beyond, particularly those involved in a central government or other large organization, had little or nothing to do with the lands from which they drew their income. The actual day-to-day work of administering the holding would be handed over to a local agent, whom we'll call a bailiff (though the term is Medieval, the concept isn't; Roman patricians would leave the administration of his villa's slaves to a foreman most of the time). The bailiff, usually a commoner, was the ancient equivalent of a city manager. He was a sort of professional administrator, deputized to take care of the daily operations of a fief by the duly constituted but less inclined and, often enough, less competent authorities. He wouldn't have the rights and privileges of a nobleman, but he would have authority to administer justice to the peasants he oversaw and, usually, the right to whatever additional income he could squeeze out of his jurisdiction after a fixed amount of revenue had been passed on up the ladder.

An Independent Income in a low-tech campaign would almost certainly have a bailiff lurking behind it, and it's entirely realistic for more cosmopolitan noblemen and clerics to have such an income. A number of early English students at the University of Paris were priests with sinecures, who were taking advantage of their essentially unstoppable income to leave their parishes and study for a better job. However, relying on a bailiff to administer one's holdings isn't always an independent income. Depending on the circumstances of one's employment, the authority who awarded it might be empowered and, more importantly, inclined to take it away in case of poor performance, making that income simply income from a job rather than the Independent Income advantage. The kings of Kongo, for example, used less favored noblemen to collect taxes and oversee private lands for the royal purse and redistributed those revenues to the nobility they employed. Noblemen who are Filthy Rich or better already employ such overseers and administer their administrators more than day-to-day work. Many Very Wealthy and some Wealthy characters may employ them as well.

(certainly all of western Europe), retain rights, owing their lord a limited list of duties. Anything beyond that, so far as the peasants are concerned, is money out of their purses, bread out of their mouths, or time away from their friends. Even if a lord can intimidate his peasants into extra work, the peasants can effectively retaliate in the same ways disgruntled workers always have: strikes, slowdowns, sick-outs, and intentionally doing a horrible job. The more a lord pushes his peasants, the less effective they'll be.

What a lord *can* do is to administer his domain more or less within the bounds of the system. The system is tilted in his favor, of course. He can get away with abusing his underlings to some extent, and the administration of justice can be quite bloody. However, anything that requires active cooperation of the peasantry will require more delicate handling. The GM should never forget, even if their rulers do, that peasants are still people, not counters in a game played by their rulers.

Landlord Examples

So what might this look like in play? Let's take two rulers with very similar attributes and see how their domains might be very different. One is Patrician Omnibus, a retired senator of a wealthy republic who derives his income from a large, profitable, and picturesque villa set in a lightly rolling landscape at TL2. The other is Laird Angus McSporran, chieftain of a chilly, rainy land in the far northern highlands in TL3. Both are Status 4 and Very Wealthy.

Patrician Omnibus (an ancient legislator famed for the invention of the "Omnibus bill"), with an income of \$13,500/month (\$162,000/year), employs a great deal of slave labor, who count as sharecroppers. Their income is effectively Poor (\$100 month or \$1,200/year), but they produce at the level of being Struggling-1 (\$270/month, of which Omnibus sees \$85/month, or \$1,020/year). Omnibus receives no "taxes" from his slaves, though they might contribute to a nearby temple. Omnibus needs 159 slaves to get enough income.

For themselves, the slaves grow mostly barley and millet (with an average yield of 850 lbs./acre) and beans (with an average yield of 450 lbs./acre). Each slave can get by with about an acre of the former and 0.8 acres of the latter. With two-field rotation, that's 3.2 acres per slave, or about 574 acres altogether. For the senator they grow wheat (at 400 lbs./acre) and tend vines (producing \$15/gallon wines at 50 gallons/acre) and olive groves (producing 440 pints of oil/acre). On average, they tend 0.7 acres of wheat, 0.05 of olives, and 0.1 of vines. Including fallow land, that's 1.55 (the olive groves and vineyards don't need fallow), but since it's being tended by sharecroppers, it produces less efficiently, so that's really 3.1 acres per slave, for a total of nearly 493 acres. Ignoring possible pasturage for sheep and the use of nearby waste land for wild resources, that's around 1,065 acres. Omnibus's territory is small enough that everyone could be housed in a single large compound, probably with a luxurious country home for Omnibus on a gentle slope overlooking the fields, about eight acres of olive trees on one side, nearly 16 of grape vines on the other, and barns and less comfortable quarters for the slaves in back.

Laird McSporran is in a very different situation. McSporran is the nominal but not particularly powerful ruler of a territory of free peasants. They are, on average, Struggling, with an income of \$300/month (\$3,600/year). His people are more productive than Omnibus's, but McSporran sees less of it. Worse yet, despite a higher level of agricultural technology, the land and climate are much worse. McSporran, with an income of \$14,000/month (\$168,000/year) gets 20% of his peasants' income in taxes, requiring about 233 peasant households.

In McSporran's domain, barley comes in at 780 lbs./acre, wheat at 300 lbs./acre, oats at 400 lbs./acre, and legumes at 340 lbs./acre; olives and vines wouldn't last a week there. The average household cultivates 2.2 acres of barley, 1.5 of wheat, 1 of oats, and 2 of legumes. That's 6.7 acres under cultivation at any given time, or about 10 acres per household including fallow. Again ignoring room for animals (and McSporran's people probably keep a lot of sheep or goats), that's over 2,300 acres, well over the maximum size of a single village. The GM could easily rule that McSporran's peasants are spread out over five or six small settlements, clinging to hillsides and keeping the valley floors open for cultivation.

Shipping to the City

Now we get to figure out how many city-dwellers a countryside full of farmers can feed. Although peasant farmers consume the bulk of what they grow, the remainder is sold to other people. It is that surplus which feeds cities and towns. In general, the total value of the cost of living in a city must be equal to or less than the total value of produce provided from its agricultural hinterland (we'll assume that nutritional standards are met in the process). To figure out how many people can be supported, we must figure out how much excess is created, how far it has to travel, and how much is consumed on the way.

Wealthier farmers (and landowning noblemen definitely fall into this category) eat proportionately less of their produce and send proportionately more of it to market, where it can feed craftsmen, bureaucrats, priests, soldiers, and everyone else who doesn't make a living by tilling the soil, so the amount of excess put on the market depends on the wealth of the growers. We'll assume the following: Poor farmers sell 2% of their produce, Struggling farmers sell 20%, Average farmers sell 50%, and farmers (or, more likely, landholders) sell 75% of their produce. Sharecroppers should be counted at the level of their actual income, not the level used to calculate effective income for their landlord. A Struggling farmer produces \$3,600 worth of produce a year, of which \$720 can be sent to market. A Poor farmer would be able to market a mere \$24 a year.

But not all of that produce will make it to the city. Transporting food for consumption elsewhere faces diminishing returns, since the people (and animals, if any) moving the goods must consume some agricultural produce in the course of shipping it. How much depends on how goods are moved and over what kind of terrain. Animal carts carrying grain and other inexpensive agricultural produce over reasonably good roads consume about 1% of the value of the produce they carry per mile (this only applies to bulk food shipping; since the cost is ultimately a function of weight or volume, shipping costs proportionately far less for goods with a high value for weight like spices and manufactured goods). Beasts of burden without carts and human bearers are less efficient (beasts because of mechanical inefficiency, humans because they'd like

to be paid more than mere subsistence), in the 1.5-2% range, and a lack of roads or the presence of rough terrain can push transport costs easily as high as 4%. Water transport, however, is far more efficient. Transport by river costs half to a quarter as much as overland, while ocean transport is up to a sixteenth of the cost of overland transport.

This table lists the total value of agricultural produce which can reach an urban center per month, assuming a population density of one farm per square mile and an average production of \$60 of marketable goods per month per farm (in other words, the peasants are, on average, Struggling). Although the table lists vast distances, such catchment areas are extremely unlikely. Even during the early Middle Ages, sparsely populated Britain's modest towns were hardly more than 50 or 60 miles apart (which means a catchment radius of no more than 30 miles or so), and the cities and towns of the Italian Renaissance were even closer together than that.

Marketable Goods by Area and Transport Cost

Radius	Transport Cost (as a % of value of goods shipped)									
	4%	3%	2%	1.5%	1%	.75%	.5%	.25%	.125%	.0625%
5	6,466	6,715	6,964	7,088	7,213	7,275	7,337	7,399	7,430	7,446
10	21,886	23,876	25,866	26,861	27,855	28,353	28,850	29,348	29,596	29,721
15	40,291	47,006	53,721	57,079	60,436	62,115	63,794	65,473	66,312	66,732
20	55,711	71,628	87,546	95,504	103,463	107,442	111,422	115,401	117,391	118,386
25	62,177	93,266	124,355	139,899	155,443	163,216	170,988	178,760	182,646	184,589
30		107,442	161,164	188,024	214,885	228,315	241,746	255,176	261,891	265,249
35		109,681	194,988	237,642	280,296	301,622	322,949	344,276	354,939	360,271
40			222,844	286,513	350,183	382,018	413,852	445,687	461,605	469,563
45			241,746	332,400	423,055	468,382	513,709	559,037	581,700	593,032
50			248,709	373,064	497,419	559,596	621,774	683,951	715,040	730,584
60				429,770	644,655	752,097	859,540	966,982	1,020,703	1,047,564
75					839,394	1,049,243	1,259,091	1,468,940	1,573,864	1,626,326
100					994,838	1,492,257	1,989,675	2,487,094	2,735,804	2,860,158
125						1,748,738	2,720,259	3,691,780	4,177,541	4,420,421
150							3,357,577	5,036,366	5,875,760	6,295,457
200							3,979,351	7,958,701	9,948,377	10,943,214
250								10,881,037	14,767,122	16,710,164
300								13,430,309	20,145,463	23,503,040
350								15,233,452	25,896,868	31,228,576
400								15,917,403	31,834,806	39,793,507
450									37,772,743	49,104,566
500									43,524,148	59,068,487
600									53,721,234	80,581,852
700									60,933,808	103,587,473
800									63,669,611	127,339,222
900										151,090,972
1000										174,096,593
1200										214,884,938
1400										243,735,230
1600										254,678,444

The GM must decide on the cost of transportation and the radius of the area from which the urban center can be supplied. To get the total value of agricultural produce available to an urban center, cross-index the transport cost and the radius of the catchment area and multiply by a desired average number of farms per square mile. One farm per square mile works out to about 5 people per square mile, which isn't very much.

These values can (and, in many cases, should) be adjusted for more or less productive farmers. For farmers who are on average richer or poorer, multiply the value of the produce by (average monthly value of marketable produce)/60. For example, if 90% of the farms in a region are Struggling (marketing \$60/month) and 10% are Average (marketing \$350/month), multiply the amount on the table by 89/60, or, if you're feeling lazy, 1.5.

The chart also presents a mathematically idealized picture which is unlikely to

Do Your Own Math

If your economic and technological assumptions are different, the charts won't work for you. If you're inclined to do your own math, here are some formulas for you to build your own charts. The value of agricultural produce available to a town is:

apply in reality. It is a best-case scenario which assumes that farmers are evenly distributed through a circular surrounding area, without variations in production or cost of transport, and send their goods directly to market in the urban center. Obviously, those assumptions won't hold any real case. Goods could easily zigzag around the countryside, and peasants and food merchants met to collect goods at village market days. Variations in the quality of land could mean patches of higher or lower production scattered unevenly around the region, and politics will ensure that the areas cities draw from will be very oddly shaped indeed, and far from the maximum the chart allows. Another very large factor is changes in ease of transport along the way. Unless farmers are very close to a city, they will, if at all possible, transport their goods to the nearest river, canal, or seaport, where they will be shipped to their final destination. This means the cost of transportation can vary wildly across the various legs of a journey. This is a very real issue, since just about every city of any size is on a river, and most very large cities are on or near the sea.

These calculations, then, should be taken as something like the speed of light. You can get arbitrarily close, but the closer you get, the harder it is to get even closer, and you'll never get there entirely. In practice, urban centers will get significantly less than is indicated here. A few rules of thumb can be adopted: The GM should feel free to come up with an approximate catchment area of a size which appears appropriate, ignoring any little bits of territory which stick out beyond the edges of a circle which covers most of the appropriate land (You *could* map out concentric circles and wedges of different levels of wealth and transportation cost in order to get a more accurate picture, but wouldn't you have more fun playing **GURPS?**). Any city with reasonably good access to a river network has an average transportation cost of about 0.5% of goods transported, while a city with reasonable access to a seacoast has a transportation cost of about 0.25% of goods transported. Very good networks of rivers and canals, favorable sea conditions, and high levels of nautical technology can push the cost even lower.

Feeding the City

One of the nigh-universal facts of history, particularly before the 20th century, is that people who live in cities are richer than people who live in the countryside and have a higher standard of living. Cities are the homes of rulers, chief religious officials, merchant princes, and the professional administrators, craftsmen, and bureaucrats who support them. Certainly, every city has its poor, but unlike the countryside where *everyone* is poor, the cities have significant concentrations of rich people who push up the average. That goes double for particularly large cities. Mid-sized towns will have Average and handful of Comfortable craftsmen and a few Wealthy and Very Wealthy clergy and rulers, but major cities will have individuals who are Filthy Rich and beyond.

On the other hand, it's clear that going up the scale of wealth, people spent proportionately less of their income on food, particularly food which could be provided by nearby farmers. High church officials and noblemen in Europe would eat bread made from wheat flour rather than gruel made from barley and millet, and most meat production was destined for their tables, but at a certain point they had to look far beyond in order to meet their needs and preferences: saltwater fish imported from seaports, imported wines, spices from faraway lands, and so on. Small towns, where demands are more likely to be met locally, will have an average cost of living in the \$600-800/month range. Large cities, where a larger class of wealthy people will send abroad for their more extravagant requirements, may have an average cost of living twice as high, but local produce will need to supply only \$900-1,000/month of that demand.

To get the approximate number of households the city can support, divide the total potential supply of agricultural produce by the average cost of living there. To get the total population, multiply the number of households by the average household size. Since city-dwellers are, on average, wealthier than peasants, they're likely to have larger families. Average household size in a city is probably at least six and may be as high as seven or eight.

In addition to those non-farmers, there can be some farmers still living in town. Indeed, in smaller towns, many residents will make at least some of their living from farming nearby fields. A majority of the residents of TL1 towns, or at least as many of them as can plow surrounding fields, are likely to be farmers, and smaller towns through other TLs often maintain a significant number of farmers. As cities become larger and wealthier, though, the cost of living within the walls tends to crowd farmers out.

City/Town Population Example

The town of Camford draws produce from a 10-mile radius. Most of it comes

$$2\pi \times D \times (G \times R^2)/2 - (C \times R^3)/3)$$

where:

D = population density (farms per square mile). In the chart, D = 1.

G = value of marketable goods per person. In the chart, G = \$60.

C = value of goods consumed by transportation per mile. In the chart, C is value derived from a percentage of G. For example, if G is \$60 and 1% of the value of goods is consumed per mile, C = \$0.60.

R = radius of catchment area in miles.

Physical Size

overland, but a few streams are large enough for barge travel, so the GM decides that transport costs 0.75% per mile. At a density of one farm per square mile and Struggling farmers, that's \$28,353 of produce per month. The GM further decides that the area is a bit more densely populated than that, but not much. At three farms per square mile, the total produce the town can bring in is \$85,059/month. At a cost of living of \$600/month, the town can support about 141 households, or around 850 people at an average household size of six people.

The grand city of Venzepoli, home of wealthy merchant princes, draws produce from a small hinterland and a broad area of coastline. The GM decides that this is equivalent to an area with a 60-mile radius, although the shape doesn't look anything like a circle. It has access to the sea and sits at the end of a large river system, so the GM decides transport costs 0.25% per mile, with a density of 10 farms per square mile (again, all, on average, Struggling). That's \$9,669,820 worth of produce per month. At an average cost of living of \$900/month, that's 10,744 households, which translates into nearly 65,000 people.

Fractional Wealth

The wealth levels in **GURPS** are fine for putting a character in a general economic ballpark, but may be regarded as a bit coarse-grained for this kind of work. **GURPS** has character wealth increasing by factors of two or three or more, when in reality there's a broad range of levels of income. The GM may also want to allow fractional wealth levels to reflect a fuller spectrum of incomes, as detailed here:

Fractional Wealth and Status

Level	Points	Starting wealth and monthly pay multiplier
Poor	-15	1/5
Struggling -2	-14	1/3
Struggling -1	-12	2/5
Struggling	-10	1/2
Average -2	-8	2/3
Average -1	-4	3/4
Average	0	1
Average +1	4	1 1/3
Average +2	8	1 2/3
Comfortable	10	2
Comfortable +1	14	3
Comfortable +2	17	4
Wealthy	20	5
Wealthy +1	24	10
Wealthy +2	27	15
Very Wealthy	30	20
Very Wealthy +1	54	30
Very Wealthy +2	88	40
Filthy Rich	100	50

This is useful for dealing with small gradations both among poor peasants and other workers and among more powerful figures. The difference between a count and a baron, for example, might not be a quantum leap in income and direct holdings, but rather a slightly higher income and the allegiance of several lesser noblemen. The count might have an Ally Group, Wealth (Wealthy+1), and a few points in Independent Income where subordinates simply have Wealth (Wealthy).

If a character takes a fractional wealth level, the GM may want to impose a similar fractional Status adjustment: 2 points for Status +1/3, and 4 points for Status +2/3. Each level of fractional Status increases monthly Cost of Living by 1/3 of the amount of the difference between the higher and lower levels of Status. Status +1/3 provides a +1 Reaction bonus to people of the same Status in circumstances where Status would normally apply. Status +2/3 provides a +1 Reaction bonus to people of the same Status or a Status one lower. The difference is too subtle for people with more distant Status to discern.

Further Reading

- Braudel, Ferdinand, *The Mediterranean and the Mediterranean World in the Age of Philip II*
- Bray, Francesca, *The Rice Economies*

- Chapelot, Jean and Robert Fossier, *The Village and House in the Middle Ages*
- Dube, S. C., *Indian Village*
- Duby, Georges, *Rural Economy and Country Life in the Medieval West*
- Dyer, Christopher, *Living Standards in the Later Middle Ages*
- Greene, Kevin, *Archaeology of the Roman Economy*
- Herlihy, David, *Medieval Households*
- Russel, Josiah, *Medieval Demography*
- Wolf, Eric R., *Peasants*

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