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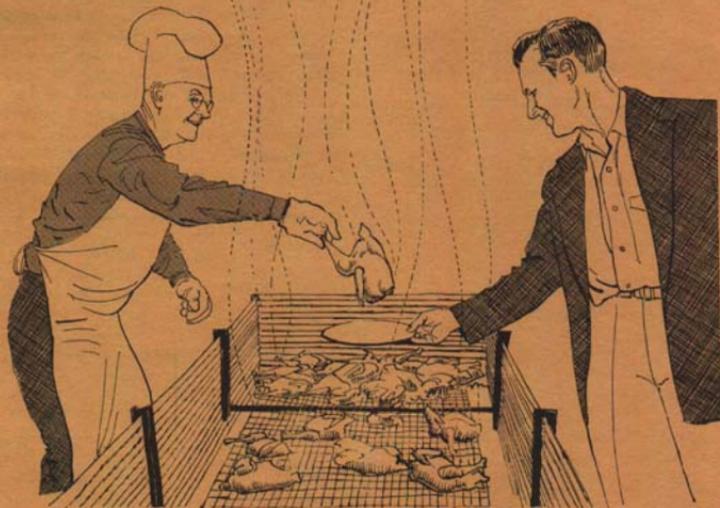
Charcoal Broiled Chicken
Michigan State University Extension Service
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CHARCOAL BROILED CHICKEN



CHARCOAL BROILED CHICKEN

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The mixed aroma of wood smoke hovering lazily over pits and grills, and of brown crusted chicken oozing with spicy goodness — butter basted, charcoal-broiled chicken is a gourmet's delight.

Appetites are sharpened by the fresh air and bright sunshine. Fall seems ideal for outdoor chicken barbecues, but more and more people are enjoying this delicacy year 'round. Folks seem to develop "outside" appetites for a meal in the open. The taste for barbecuing is inherited — from way back when the cavemen discovered that woodland herbs, roots, and berries added to the savor of cooked meats. Since then, in all ages, barbecues have had a special appeal.

CONTENTS

Before You Begin	3
The Pit	3
The Grids	4
Cleaning Grids	4
The Fire	6
The Chicken	6
Equipment Needed	6
The Barbecue	7
Gloves	7
Turning the Chicken	7
Racking the Chicken	7
Basting the Chicken	7
Salting the Chicken	7
Testing for Doneness	7
Serving the Chicken	8
SUGGESTED MENUS	8
COMMITTEE ORGANIZATION	8

CHICKEN BARBECUE is great fun for all ages — it turns an ordinary picnic into a feast! Broilers properly cooked over charcoal are delicious and nutritious. Follow the simple directions and you will have a successful chicken barbecue.

A common mistake in broiling chicken in the open is to cook it too quickly and with a fire much too hot. An undercooked chicken, even though it may be pleasing in appearance, spoils appetites and discourages future attempts. This poor reaction is hard to overcome, but a tantalizingly flavored, juicy, well-cooked bird will highlight the meal.

There are many publications concerning charcoal-broiled chicken. This bulletin covers one phase, the large barbecue, but the principles can be applied to the small home barbecue.

This bulletin describes the procedures involved in a large charcoal chicken broil. Many service clubs, churches, and civic organizations use the charcoal chicken barbecue to raise money for their organizations. They charge from \$1.50 to \$2.25 per person for the typical menu listed on the last page of this bulletin.

BEFORE YOU BEGIN

Just one or two ideas need to be explored before planning to serve a large group. First, you must have adequate and dependable help. They don't need to be experts — just dependable, be there when needed. Second, you ought to have two people who know what they are doing when serving a large (500 to 5,000 servings) group. One man must watch the chicken after it has been loaded on the pits to determine what must be done and the other man must be the fireman. The fire is most important. It can get too hot or too cold. Some experience is necessary but neither of these jobs requires a great deal of experience.

The Michigan Allied Poultry Industries, Inc., Poultry Science Department of Michigan State University, East Lansing, Michigan 48823, conducts a charcoal chicken barbecue school usually on the first Saturday in May to help you become an "expert." At least two members of the sponsoring organization should attend this school.

An outdoor fireplace is nice for those who have one or can use one at parks and picnic grounds, but it really isn't necessary. Anyone can make his own outdoor pit by borrowing one or more steel racks from the family oven, setting them up on bricks or even green forked sticks driven into the ground. You'll probably be more satisfied with the results if you use one of the following arrangements when broiling chicken, because a "no-draft" pit is preferred.

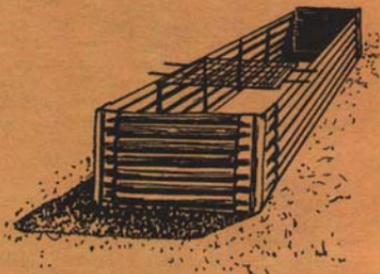


Fig. 1. Portable corrugated metal pit.

THE "PIT"

Corrugated metal "pits" can be built so that they are portable (Figure 1). If you build one, you can use grids or grills across the top.

To help make it portable, coated wing nuts on the bolts will speed the setting-up process. You can drive metal posts into the ground and bolt the metal sides to them, or use self-supporting posts. Place a little dirt around the bottom of the metal sides to seal off drafts.

For the home, you can build a more elaborate pit to suit your own taste. Keep in mind, however, that for chicken barbecuing, two feet should be allowed between the charcoal and the chicken.

In pits longer than 15 feet, use a baffle in the middle of the pit. Otherwise, when the pit is covered with chicken, the whole pit will act as a chimney and it will be very hot in the center. Also certain wind conditions will make heat distribution poor in a large pit.

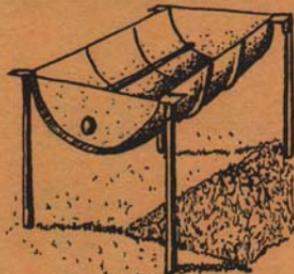


Fig. 2. Pit made from steel drum.

A half-barrel made from a 55-gallon steel drum makes a satisfactory pit (Figure 2). Weld 32-inch legs to the half barrel to bring the pit up to a good working height. The size is just right for a 2- by 3-foot grid. Half barrels are a little more difficult to use than some other equipment. The charcoal tends to be held in the center of the bottom of the barrel and this does not distribute the heat well. By locating an angle iron strip halfway up on both sides, you can spread the charcoal over a wider area. The chicken can also be moved on the grid to keep the cooking even.

Cinder-block pits are common (Figure 3). Build them three 8- by 8- by 16-inch blocks high (without mortar) and wide enough to accommodate a 2- by 3-foot grid. Cinder block is preferred to cement-type block. The heat does not hurt the block to any extent. If you use 4-inch blocks, drive a few stakes down through the blocks to keep them steady in the stacked position.

In placing the pit, use a place as level as possible, to avoid draft-making cracks. Choose a spot where you don't mind hurting the lawn. Remove the grass to avoid delay in getting rid of smoke. Unless the

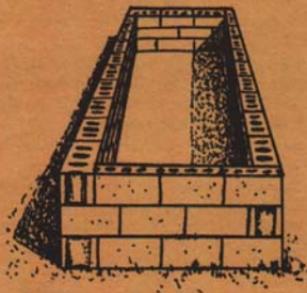


Fig. 3. Cinder block pit.

ground is level, place a little dirt around the bottom of the pit to prevent drafts. A roadway works fine if no tar products are present.

Caution—Do not build on concrete—it may explode!

Table 1 shows the number of blocks to use in your pit. One 2- by 3-foot grid will hold 25 chicken halves.

Small commercial barbecue pits are a familiar sight (Figure 4). Most commercial barbecue pits do not allow enough space between the fire and chicken. The chicken tends to get too hot.

Keep the maximum distance between the fire and the chicken. Most people tend to have too hot a fire; keep in mind that you can add briquets later, but the important object is to broil the chicken slowly and thoroughly.

THE GRIDS

You can make the grids by covering a frame of $\frac{3}{8}$ -inch bar stock with 1- by 2-inch welded poultry wire (Figure 5). (Plans are available from the Department of Poultry Science at Michigan State University). Add handles to make turning easy.

Make an extra grid so you can turn 25 halves at a time by making a "sandwich." You can have small lugs welded to the edges to prevent chickens from falling out while you turn them. Having the "bar-stock" side of the grid next to the chicken will help prevent the chicken from sliding out when turning. Move the chickens over the other grids while turning to prevent those that may fall out from going into the fire.

Turning the grids uses the same principle as swinging a bucket of water in a circle. If you do it quickly centrifugal force will keep the chicken against the grid. The two people turning the chickens cross their arms, grasp the handles, and give the grids a quick flip over. This is a good technique, and practice will perfect it so no accidents happen. (Figure 6).

CLEANING THE GRIDS

Soaking the grids in hot water will help loosen the fat and meat particles from the grids so you can brush them easier. You can build a special "soaking tank" for this purpose, especially if a lot of grids will be cleaned from time to time.

Table 1.—Number of blocks per grid, and grid capacity.

Grids	1	2	3	4	5	6	7	8	9	10	20
Total blocks	30	39	48	57	66	75	84	93	102	111	222
Chicken halves	25	50	75	100	125	150	175	200	225	250	500

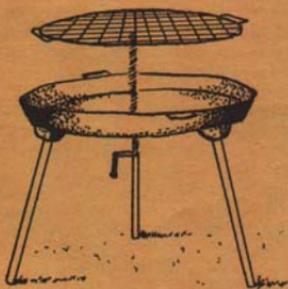


Fig. 4. Commercial barbecue pit.

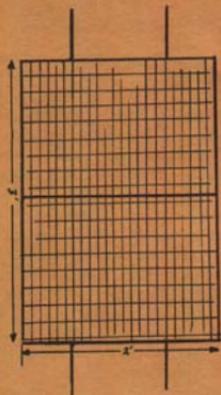


Fig. 5. Grid made of welded poultry wire and steel bar.



Fig. 6. To turn grids, make a "sandwich" and flip quickly.

THE FIRE

Fire control is very important—a little charcoal makes a lot of heat.

Chunk charcoal or charcoal briquets burn at a high heat for a long time, giving off little or no smoke. The briquets should not be more than *one layer deep* and should be about one inch apart. They will burn progressively from a small gray spot, giving off plenty of even heat.

Figure on $\frac{3}{4}$ pound of charcoal per chicken half for the cooking process on small barbecues. The more chicken halves, the less charcoal needed—down to $\frac{1}{2}$ pound per chicken half. You won't need to start all of this at once—perhaps two-thirds of it. About 45 minutes before your schedule calls for serving, lift up a corner of the grid and scatter the rest of the briquets over the fire. They will start easily on contact with the other briquets and will finish broiling the halves nicely.

You can use fuel oil, kerosene, or commercial mixtures to start the fire quickly (Figure 7). You can use kindling to start piles of charcoal, then transfer the coals by shovel to the pit. If you start it in a pit by this method, place the charcoal in a long narrow pile, sprinkle a *little* fuel oil on the pile, and then carefully ignite it. Paper will help keep the flames going until some of the briquets show a gray spot. You can use a rake to spread the coals and to move the unlit briquets in contact with those showing gray.

This careful raking will get most of the briquets lit faster. Therefore, you won't need much fuel oil.

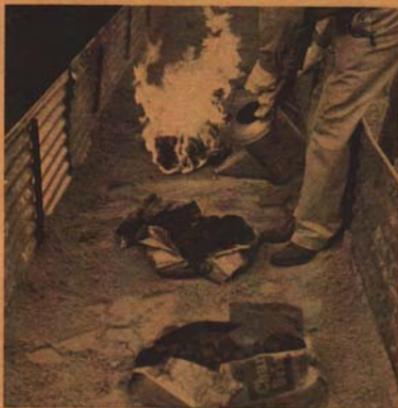


Fig. 7. Fuel oil, kerosene, or commercial fluids give a quick start.

When spreading coals, make sure all areas are covered, especially around the edges. Be sure no briquet is on top of another.

Let the fuel burn at least 15 minutes before putting on the chicken to let fuel oil fumes escape.

Fuel oil is a fire hazard—be careful with it! Do not use gasoline or alcohol.

A sprinkling can or sprayer full of water will cut down the heat if the fire is too hot. When water is used, a fine charcoal ash will be raised which will discolor the chicken halves. Therefore, it would be better to keep the fire small.

Often, if the fire seems too low as cooking is nearly done, you can obtain a little more heat by brushing the white ash from the top of the dying coals.

Even the best cooks can't all cook well over coals. What came naturally to our ancestors—making a cooking fire—has been almost entirely replaced by the use of gas and electricity. Actually, the task should be a simple one, but fire care takes experience—atmosphere conditions, soil moisture, and method of storing charcoal all affect the performance of the fire.

THE CHICKEN

The ideal weight of chicken to be barbecued is $2\frac{1}{2}$ pounds dressed. Birds up to three pounds are satisfactory, as are smaller weights. It is quite important, however, to get all the birds as nearly the same weight as possible for uniform cooking and servings.

Split the chicken down the back and breast into two equal sections. The giblets and necks are not barbecued. Check the birds carefully and get them in perfect condition. Protect and ice them until the barbecue.

EQUIPMENT CHECK-OFF LIST

- ___ Chef's hat and apron
- ___ 2 pair white canvas gloves
- ___ Two 2-qt. sauce pans
- ___ Dish mop
- ___ Rake
- ___ Shovel
- ___ Charcoal ($\frac{3}{4}$ pound per chicken half)
- ___ Butter (2 pounds per 100 halves)
- ___ Salt (1 pound per 100 halves)
- ___ Work table
- ___ Starter fuel

THE ACTUAL BARBECUE

Now that we have gathered the equipment and chicken, and have discussed some basic principles, let us actually begin the barbecue.

With experience and more reading, you may want to change your timing, but there is a suggested time schedule in order to eat at 6 p.m.:

- 3:45 p.m. Start fire.
- 4:15 p.m. Put grids on fire (with chicken).
Turn grids every 10 minutes or as necessary.
Baste after turning.
- 5:15 p.m. Increase fire slightly.
(Boost heat under chicken halves not cooking well, such as those along edges.)
- 5:45 p.m. Start testing for doneness.
- 6:00 p.m. Ready to eat. (Make sure the guests are served promptly.)

Don't serve until the birds are done. People don't usually mind waiting—particularly to get good chicken, well done. Don't plan a firm schedule that has to be met. Too many factors (temperature, humidity, and charcoal) can change your hour of being "done."

GLOVES

Use your clean, white gloves at all times when handling the chicken. It will save your hands from burns and gives a sanitary appearance. Be sure to change to a new pair before serving.

TURNING THE CHICKEN

One of the main things to watch for in barbecuing is the indication of too much heat. That shows up when the bird's skin begins to blister. If this happens, turn *all* the birds, and keep doing it if necessary. Constant checking of the birds will show the blistering and will point out "hot spots" which you will have to watch more closely.

When inspecting the birds, pick them up by the wing to inspect one side and by the backbone to inspect the other. At later stages of cooking, the skin might break away from the meat if the bird is picked up carelessly, and some juices will be lost. (We want to preserve this juiciness—that's why we don't use forks or other tools to handle the halves.)

RACKING THE CHICKEN

In placing the chicken on the grid on the "frame side" (not the screen side), be sure that the skin side is up—that is, away from the fire. The juices should be driven toward the barrier of the skin while the "cut" side is being sealed. Place the birds as close

together as possible to conserve heat, *but do not overlap*. They will shrink somewhat, so you don't have to worry about their being too close.

Twenty to twenty-five halves will fill a 2- by 3-foot grid very well.

BASTING THE CHICKEN

Use butter for basting. A clean rag dish mop is best for applying the butter—it holds a good quantity of butter (Figure 8). You also may use a pastry brush, paint brush, or even a sprayer (for large barbecues). In basting with a mop, just give the halves a "lick and a promise," as speed is important.



Fig. 8. Apply butter with a clean, rag dish mop.

SALTING THE CHICKEN

After basting, sprinkle salt on each side of the chicken. Salt it about three times from about two to three feet above the chicken for evenness of salting. Your next basting will wash some of it off, so allow it to cook on for a while. Probably one pound of salt will be enough for 125 to 150 halves for average tastes. About three times on each side should be enough, but again, experience will tell.

TESTING FOR DONENESS

The most important step is to be sure the chicken is *thoroughly done!* Nothing will discourage future barbecues more than serving undercooked chicken. People just don't like raw chicken!

Test for doneness by twisting the thigh joint. (Another thick portion is near the breast and wing, but

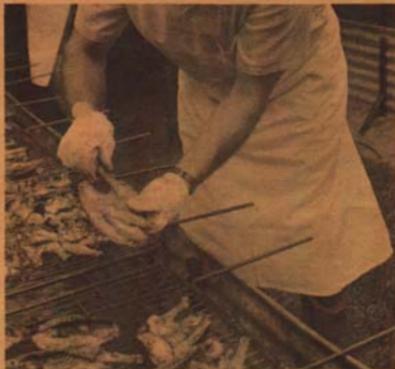


Fig. 9. Twist the thigh joint for test for doneness.

you can feel that joint weaken as you handle the birds.) In testing, grasp the thigh joint between your thumb and index finger and, with your other hand, turn the leg bone. If the joint is broken loose, you can assume that all of the chicken half is well-cooked, (Figure 9).

You will have hot spots in your fire. Move the large pieces from the edges to these hot spots, to be sure that they are well cooked. Check each half for doneness, if possible, but usually if several are done, most others will also be ready. If on some halves the leg is pale, taut, and smooth, check these carefully, early, to note their progress. You may want to move whole grids of chicken to hotter areas.

SERVING THE CHICKEN

Organize your barbecue so that the chicken is served after all the other food and directly from the fire. Any delay in eating after it has been cooked results in loss of maximum goodness. You will want to check on this important point, although you can keep the birds hot on the barbecue fire for a while.

Arrange to have plenty of serving tables on hand, so you can set up more than one serving line if necessary. Serving the other food will be a bad "bottleneck" if this isn't well planned, as chicken can be placed very quickly on the plate.

Another "bottleneck" is the beverage and dessert serving. Rather than having your guests juggle a cup of coffee and a paper plate of food, let them come back to a designated place for coffee, milk, and ice cream after they have found a place to eat.

To separate the chicken into quarters, for serving half-portions to children, grasp the cooked chicken along the backbone and break the backbone just ahead of the thigh.

SUGGESTED MENUS

SUMMER

Bulk potato chips or your favorite potato salad or baked beans		
Barbecued chicken		
Cole slaw		Relishes
Buttered rolls		Coffee and milk
	Ice Cream (Cookie)	

FALL

Potato salad or baked beans and potato chips		
Barbecued chicken		
Relishes in season:		
Cucumber slices, tomato slices, green peppers, carrot sticks	dill pickles, green onions, radishes, celery	
Buttered rolls		Coffee and milk
	Ice cream (cookie)	

COMMITTEE ORGANIZATION

Committees, appointed well ahead of the date of the barbecue, can handle details better than a few persons. You will want a carefully planned and orderly operation.

Suggested Committees:

- Publicity - Advertise and publicize
- Finance - Accounting, selling, and collecting tickets
- Food - Ordering food and charcoal, preparation of food
- Pit, tables, equipment - Blocks, wire, tables, chairs, pans, knives, forks, etc.
- Parking - To park cars
- Barbecuing - To do actual cooking
- Serving - To organize serving
- Cleanup - To put everything in good order.

Don't attempt a large barbecue without adequate help at the pits. Helpers tend to drift away as the fire is started and birds begin to cook. Assign two men (turners) to each 10 to 12 grids (250 to 300 halves). Don't allow them to roam. They should be responsible only for 10 to 12 particular grids - nothing else - at least until the chicken is done. Another person (preferably one who knows something about charcoal fire) should be assigned to the fire. The tending fireman can make or break your serving schedule.